



GOVERNMENT POLYTECHNIC JAJPUR

**LECTURE NOTE
ON MLGS-II**

PREPARED BY-
SAAHIL EJAZ
(LECTURER IN MINING)

DEPARTMENT OF MINING ENGINEERING

CENTRAL ELECTRICITY AUTHORITY
(MEASURES RELATING TO SAFETY AND ELECTRIC SUPPLY)
REGULATIONS, 2010

GO TO INDEX

INDEX	
Chapter - I	Definitions
1	Short title and Commencement
2	Definitions
Chapter - II	
3	Designating person(s) to operate and carry out the work on electrical lines and apparatus
4	Inspection of designated officers and other safety measures
5	Electrical Safety Officer
6	Safety measures for operation and maintenance of electric plants
7	Safety measures for operation and maintenance of transmission, distribution systems
8	Keeping of records and inspection there of
9	Deposit of maps
10	Deposit of printed copies
11	Plan for area of supply to be made and kept open for inspection
Chapter - III	General safety requirements
12	General safety requirements, pertaining to construction, installation, protection, operation and maintenance of electric supply lines apparatus
13	Service lines and apparatus on consumer's premises
14	Switchgear on consumer's premises
15	Identification of earthed and earthed neutral conductors and position of switches and switchgear therein
16	Earthed terminal on consumer's premises
17	Accessibility of bare conductors
18	Danger Notices
19	Handling of electric supply lines and apparatus
20	Supply to vehicles and cranes
21	Cables for portable or transportable apparatus
22	Cables protected by bituminous materials
23	Street boxes
24	Distinction of different circuits
25	Distinction of the installations having more than one feed
26	Accidental charging
27	Provisions applicable to protective equipment
28	Display of instructions for resuscitation of persons suffering from electric shock
29	Precautions to be adopted by consumers, owners, occupiers, electrical contractors, electrical workmen and suppliers
30	Periodical inspection and-testing of Installations
31	Testing of consumer's installation
32	Installation and testing of generating units
Chapter - IV	General conditions relating to supply and use of electricity
33	Precautions against leakage before connection
34	Leakage on consumer's premises
35	Supply and use of electricity
36	Provisions for supply and use of electricity in multi-storied building more than 15 meters in height
37	Conditions applicable to installations of voltage exceeding 250 Volts
38	Appeal to Electrical Inspector in regard to defects
39	Precautions against failure of supply and notice of failures
Chapter - V	Safety Provisions for Electrical Installations and apparatus of voltage not exceeding 650 volts
40	Test for resistance of insulation
41	Connection with earth
42	Earth leakage protective device
Chapter - VI	Safety Provisions for Electrical Installations and apparatus of voltage exceeding 650 volts
43	Approval by Electrical Inspector

[Click Here To Go Back To Index](#)

44	Use of electricity at voltage exceeding 650 Volts
45	Inter-locks and protection for use of electricity at voltage exceeding 650 Volts
46	Testing, Operation and Maintenance
47	Precautions to be taken against excess leakage in case of metal sheathed electric supply lines
48	Connection with earth for apparatus exceeding 650V
49	General conditions as to transformation and control of electricity
50	Pole type sub-stations
51	Condensers
52	Supply to luminous tube sign installations of voltage exceeding 650 Volts but not exceeding 33 kV
53	Supply to electrode boilers of voltage exceeding 650 Volt but not exceeding 33 kV
54	Supply to X-ray and high frequency installations
Chapter - VII	Safety requirements for overhead lines, underground cables and generating stations
55	Material and strength
56	Joints
57	Maximum stresses and factors of safety
58	Clearance above ground of the lowest conductor of overhead lines
59	Clearance between conductors and trolley wires
60	Clearance from buildings of lines of voltage and service lines not exceeding 650 Volts
61	Clearances from buildings of lines of voltage exceeding 650 V
62	Conductors at different voltages on same supports
63	Erection or alteration of buildings, structures, flood banks and elevation of roads
64	Transporting and storing of material near overhead lines
65	General clearances
66	Routes proximity to aerodromes
67	Maximum interval between supports
68	Conditions to apply where telecommunication lines and power lines are carried on same supports
69	Lines crossing or approaching each other and lines crossing street and road
70	Guarding
71	Service lines from overhead lines
72	Earthing
73	Safety and protective devices
74	Protection against lightning
75	Unused overhead lines
76	Laying of cables
77	Protection against electromagnetic interference
Chapter - VIII	Safety requirements for Electric Traction
78	Application of chapter
79	Voltage of supply to vehicle
80	Insulation of lines
81	Insulation of returns
82	Proximity to metallic pipes
83	Difference of potential on return
84	Leakage on conduit system
85	Leakage on system other than conduit system
86	Passengers not to have access to electric circuit
87	Isolation of sections
88	Minimum size and strength of trolley wire
89	Height of trolley wire and length of span
90	Earthing of guard wires
91	Proximity to magnetic observatories and laboratories
92	Records
Chapter - IX	Safety requirements for mines and oil fields
93	Application of chapter
94	Responsibility for observance
95	Notices

[Click Here To Go Back To Index](#)

96	Plans
97	Lighting, overhead lines, communication and fire precautions
98	Isolation and fixing of transformer and switchgear
99	Method of earthing
100	Protective equipment
101	Earthing metals
102	Voltage limits
103	Transformers
104	Switchgear and terminals
105	Disconnection of supply
106	Cables
107	Flexible cables
108	Portable and transportable machines
109	Sundry precautions
110	Precautions where gas exists
111	Shot-firing
112	Signaling
113	Haulage
114	Earthing of neutral points
115	Supervision
Chapter - X	Miscellaneous
116	Deviations

[Click Here To Go Back To Index](#)

CENTRAL ELECTRICITY AUTHORITY
NOTIFICATION
New Delhi, the 20th September, 2010

No.CEVI/59/CEA/EL - In exercise of the powers conferred by section 177 of the Electricity Act, 2003 (36 of 2003); the Central Electricity Authority hereby makes the following regulations for Measures relating to Safety and Electric Supply, namely:-

Chapter I

1. Short title and Commencement: -

- (1) These regulations may be called the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010
- (2) They shall come into force on the date of their final publication in the Official Gazette

2. Definitions: -

- (1) In these regulations, unless the context otherwise requires
 - (a) "Act" means the Electricity Act, 2003
 - (b) "accessible" means within physical reach without the use of any appliance or special effort;
 - (c) "Ampere" means a unit of electric current and is a constant current which, flowing in two parallel straight conductors of infinite length of negligible cross section and placed at a distance of one meter apart in a vacuum will produce a force of 2×10^{-7} Newton per meter length between the conductors;
 - (d) "Apparatus" means electrical apparatus and includes all machines, fittings accessories and appliances in which conductors are used;
 - (e) "Bare" means not covered with insulating materials;
 - (f) "Cable" means a length of insulated single conductor (solid or stranded) or of two or more such conductors each provided with its own insulation, which are laid up together. Such insulated conductor or conductors may or may not be provided with an overall mechanical protective covering;
 - (g) "Circuit" means an arrangement of conductor or conductors for the purpose of conveying electricity and forming a system or a branch of a system;
 - (h) "Circuit breaker" means a device, capable of making and breaking the circuit under all conditions, and unless otherwise specified, so designed as to break the current automatically under abnormal conditions;
 - (i) "Concentric cable" means a composite cable comprising an inner conductor which is insulated and one or more outer conductors which are insulated from one another and are disposed over the insulation of and more or less around, the inner conductor;
 - (j) "conductor" means any wire, cable, bar, tube, rail or plate used for conducting electricity and so arranged as to be electrically connected to a system;
 - (k) "conduit" means rigid or flexible metallic tubing or mechanically strong and fire resisting non-metallic tubing into which a cable or cables may be drawn for the purpose of affording it or them mechanical protection
 - (l) "connected load" means the sum of the ratings of the electricity consuming apparatus connected to a consumer's installation;

[Click Here To Go Back To Index](#)

- (m) "covered, with insulating material" means adequately covered with insulating material of such quality and thickness as to prevent danger
- (n) "cut out" means any appliance for automatically interrupting the transmission of electricity through the conductor when the current rises above a pre-determined amount, and shall also include fusible cut-out
- (o) "danger" means danger to health or danger to life or any part of body from shock, burn or other injury to persons, or property, or from fire or explosion, attendant upon the generation, transmission, transformation, conversion, distribution or use of electricity;
- (p) "dead" means at or about earth potential and disconnected from any live system. It is used only with reference to current carrying parts when these parts are not live
- (q) "designated person" means a person designated under regulation 3;
- (r) "earthed" or "connected with earth" means connected with the general mass of earth in such manner as to ensure at all times an immediate discharge of electricity without danger;
- (s) "earthing system" means an electrical system in which all the conductors and appliances are earthed;
- (t) "enclosed sub station" means any premises or enclosure or part thereof being large enough to admit the entrance of a person after the apparatus therein is in position, containing apparatus for transforming or converting electricity to or from a voltage at or exceeding 650 V (other than transforming or converting solely for the operation of switch gear or instruments) with or without any other apparatus for switching, controlling or otherwise regulating the electricity, and includes the apparatus therein
- (u) "enclosed switch-station" means any premises or enclosure or part thereof being large enough to admit the entrance of a person after the apparatus therein is in position, containing apparatus for switching, controlling or otherwise regulating electricity at or exceeding 650V but not for transforming or converting electricity (other than for transforming or converting solely for the operation of switchgear or instruments) and includes the apparatus therein
- (v) "flameproof enclosure" means an enclosure for electrical machinery or apparatus that will withstand, when the covers, or other access doors are properly secured, an internal explosion of the inflammable gas or vapor which may enter or originate inside the enclosure, without suffering damage and without communicating the internal inflammation (or explosion) to the external inflammable gas or vapor in which it is designed to be used, through any joints or other structural openings in the enclosure
- (w) "flexible cable" means a cable consisting of one or more cores each formed of a group of wires, the diameter and the physical properties of the wires and insulating material being such as to afford flexibility.
- (x) "guarded" means covered, shielded, fenced or otherwise protected by means of suitable casings, barrier, rails or metal screens to remove the possibility of dangerous contact or approach by persons or objects to a point of danger;
- (y) "hand-held portable apparatus" means an apparatus which is so designed as to be capable of being held in the hands and moved while connected to a supply of electricity;

[Click Here To Go Back To Index](#)

- (z) "High Voltage Direct Current (HVDC)" means Direct Current (DC) voltage above 100000 Volts used for transmission of power;
- (za) "inspector of mines" means an Inspector appointed under the Mines Act,1952 (35 of 1952);
- (zb) "installation" means any composite electrical unit used for the purpose of generating, transforming, transmitting, converting, distributing or utilizing electricity;
- (zc) "intrinsically safe" as applied to apparatus or associated circuits shall denote that say sparking that may occur in normal working, is incapable of causing explosion of inflammable gas or vapor
- (zd) "increased safety type 'e' " means a-method of protection by which additional measures are applied so as to give increased security against the possibility of excessive temperatures and of occurrence of arcs and sparks in apparatus which does not produce arcs or sparks in nominal service;
- (ze) "lightning arrestor" means a device which has the property of diverting to earth any electrical surge of excessively high amplitude applied to its terminals and is capable of interrupting flow current if present and restoring itself thereafter to its original operating conditions
- (zf) "linked switch" means a switch with all the poles mechanically linked so as to operate simultaneously
- (zg) "live" means electrically charged;
- (zh) "metallic covering" means mechanically strong metal covering surrounding one or more conductors;
- (zi) "meter" means a device suitable for measuring, indicating and recording consumption of electricity or any other quantity related with electrical system and shall include, wherever applicable, other equipment such as Current Transformer (CT), Voltage Transformer (VT) or Capacitor Voltage Transformer (CVT) with necessary wiring and accessories
- (zj) "mine" has the same meaning as defined in the Mines Act, 1952 (35 of 1952);
- (zk) "neutral conductor" means that conductor of a multi-wire system, the voltage of which is normally intermediate between the voltages of the other conductors of the system and shall also include return wire of the single phase system;
- (zl) "occupier" means the owner or person in occupation of the premises where electricity is used or proposed to be used
- (zm) "ohm" means a unit of electrical resistance and is the electrical resistance between two points of a conductor when a constant potential difference of one volt, applied to these points produces a current of one ampere in the conductor provided no electromotive force is generated in the conductor
- (zn) "open sparking" means sparking which owing to the lack pf adequate provisions for preventing the ignition of" inflammable gas external to the apparatus would ignite such inflammable gas
- (zo) "overhead line" means any electric supply line which is placed above ground and in the open air but excluding live rails of a traction system;
- (zp) "owner" means the company or body corporate or association or body of individuals, whether incorporated or not or artificial juridical person which owns or operates or maintains Electric Plants and Lines;

[Click Here To Go Back To Index](#)

- (zq) "owner", "agent" and "manager" of a mine have the same meanings as are assigned to them in the Mines Act, 1952 (35 of 1952);
 - (zr) "poles" means the phase terminals of a Switch;
 - (zs) "portable apparatus" means an apparatus which is so designed as to be capable of being moved while in operation;
 - (zt) "portable hand lamp" means a portable light-fitting provided with suitable handle, guard and flexible cord connected to a plug;
 - (zu) "Schedule" means a schedule to these regulations;
 - (zv) "section" means a Section of the Act;
 - (zw) "span" means the horizontal distance between two adjacent supporting points of an overhead conductor;
 - (zx) "street box" means a totally enclosed structure, either above or below ground containing apparatus for transforming, switching, controlling or otherwise regulating electricity;
 - (zy) "supplier" means any generating company or licensee from whose system electricity flows into the system of another generating company or licensee or consumer;
 - (zz) "switch" means a manually operated device for opening and closing or for changing the connection of a circuit;
 - (zza) "switchboard" means an assembly including the switchgear for the control of electrical circuits, electric connections and the supporting frame;
 - (zzb) "switchgear" shall denote switches, circuit breakers, cut-outs and other apparatus used for the operation, regulation and control of circuits;
 - (zzc) "system" means an electrical system in which all the conductors and apparatus are electrically connected to a common source of electric supply;
 - (zzd) "transportable apparatus" means apparatus which is operated in a fixed position but which is so designed as to be capable of being moved readily from one place to another;
 - (zze) "volt" means a unit of potential difference of electro-motive force and is the difference of electric potential which exists between two points of a conductor carrying a constant current of one ampere, when the power dissipated between these points is one watt;
 - (zzf) "voltage" means the difference of electric potential measured in Volts between any two conductors or between any part of either conductor and the earth as measured by a voltmeter meeting Indian Standards;
 - (zzg) "watt" is a unit of active power and "MW" means megawatt and is equal to 10⁶ watts;
- (2) Words and expressions used and not defined in these regulations but defined in the Act shall have the meanings respectively assigned to them in the Act.

[Click Here To Go Back To Index](#)

Chapter II

3. Designating person(s) to operate and carry out the work on electrical lines and apparatus:-

- (1) A supplier or a consumer, or the owner, agent or manager of mine, or the agent of any company operating in an oil field or the owner of a drilled well in an oil field or a contractor who has entered into a contract with a supplier or a consumer to carry out duties incidental to the generation, transformation, transmission, conversion, distribution or use of electricity shall designate persons for the purpose to operate and carry out the work on electrical lines and apparatus.
- (2) The supplier or consumer, or the owner, agent or manager of a mine, or the agent of any company operating in an oil-field or the owner of a drilled well in an oil field or a contractor referred to on sub-regulation (1) shall maintain a register wherein the names of the designated persons and the purpose for which they are engaged, shall be entered
- (3) No person shall be designated under sub-regulation (1) unless, -
 - (i) he possesses a certificate of competency or electrical work permit, issued by the Appropriate Government
 - (ii) his name is entered in the register referred to in sub regulation (2)

4. Inspection of designated officers and other safety measures:-

- (1) The register maintained under sub-regulation (2) of regulation 3 shall be produced before the Electrical Inspector when required by him.
- (2) If on inspection, the Electrical Inspector finds that the designated person does not fulfill the required qualification, he shall recommend the removal of the name of such persons from the register.

5. Electrical Safety Officer:-

- (1) All suppliers of electricity including generating companies, transmission companies and distribution companies shall designate an Electrical Safety Officer for ensuring observance of safety measures specified under these regulations in their organisation for construction, operation and maintenance of power stations, sub-stations, transmission and distribution lines.
- (2) The Electrical Safety Officer shall be an Electrical Engineering degree holder with at least ten years of experience in operation and maintenance of electricity plants or an Electrical Engineering Diploma holder with at least fifteen years of experience in operation and maintenance of electric plant.

[Click Here To Go Back To Index](#)

- (3) The Electrical Safety Officer designated under sub-regulation (1) shall ensure periodic inspection of such installations, get them tested and keep a record thereof and such records shall be made available to the Electrical Inspector if and when required.
- (4) For every factory registered under Factory Act, 1948, where more than 250kW of electrical load is connected, the management of the factory shall designate a person having qualification specified in sub-regulation (2), for ensuring the observance of the safety provisions laid under the Act and the regulations made there under, who shall periodically inspect such installation, get them tested and keep a record thereof and such records shall be made available to the Electrical Inspector if and when required.

6. Safety measures for operation and maintenance of electric plants: -

- (1) Engineers and supervisors appointed to operate or under take maintenance of any part or whole of a thermal power generating station and a hydro power plant together with the associated sub-station shall hold diploma in Engineering from a recognized institute, or a degree in Engineering from a university.
- (2) The Technicians to assist engineers or supervisors shall possess a certificate in appropriate trade, preferably with A two years course from a Industrial Training Institute recognized by the Central Government or the State Government.
- (3) Engineers, supervisors and Technicians engaged for operation and maintenance of electric plants should have successfully undergone the type of training as specified in Schedule-I provided that the existing employees shall have to undergo the training mentioned in sub-regulation (3) within three years from the date of coming into force of these regulations.
- (4) The owner of every thermal power generating station and hydro power plant together with their associated substation shall arrange for training of personnel engaged in the operation and maintenance of his generating station along with associated sub-station in his own institute or any other institute recognized by the Central Government or the State Government provided that separate training shall be given to the persons engaged in operation and maintenance of thermal power stations and hydro power stations including associated sub-stations.

7. Safety measures for operation and maintenance of transmission, distribution systems:-

- (1) Engineers or supervisors engaged in operation and maintenance of transmission and distribution systems shall hold diploma in electrical, mechanical, electronics and instrumentation engineering from a recognized institute or university.

[Click Here To Go Back To Index](#)

- (2) The Technicians to assist engineers or supervisors shall possess a certificate in appropriate trade, preferably with a two years course from a Industrial Training institute recognized by the Central Government or State Government.
- (3) Engineers, supervisors and Technicians engaged for operation and maintenance of transmission and distribution systems electric plants should have successfully undergone the type of training as specified in Schedule-II

Provided that the existing employees shall have to undergo the training mentioned in sub-regulation (3) within three years from the date of coming into force of these regulations

- (4) Owner of every transmission or distribution system shall arrange for training of their personal engaged in the operation and maintenance of transmission and distribution system in his own institute or any other institute recognized by the Central Government or State Government.

8. Keeping of records and inspection there of: -

- (1) The generating company or licensee shall maintain records of the maps, plans and sections relating to supply or transmission of electricity and submit the same to the Electrical Inspector for inspection as and when required by him.
- (2) The Electrical Inspector shall supply a copy of the report of inspection referred to in sub-regulation (1), to the generating company or licensee, as the case may be.

9. Deposit of maps: -

When a license has been granted, two sets of maps showing, as regards such licensee, the particulars specified in application for license shall be signed and dated to correspond with the date of notification of the grant of the license by an officer designated by the Appropriate Commission in this behalf, one set of such maps shall be retained by the said officer and the other one shall be furnished to the licensee.

10. Deposit of printed copies: -

- (1) Every person who is granted a license, shall within thirty days of the grant thereof, have copies of the license and maps, showing the area of supply as specified in the license to Exhibit I same for public inspection at all reasonable times at his head office, his local offices, if any, and at the office of every local authority within the area of supply.
- (2) Every such licensee shall, within the aforesaid period of thirty days, supply free of charge one copy of the license along with the relevant maps to every local authority within the area of supply and shall also make necessary arrangement for the sale of printed copies of the license and maps to all persons applying for the same, at a price to be notified by the Appropriate Government from time to time.

[Click Here To Go Back To Index](#)

11. Plan for area of supply to be made and kept open for inspection:-

- (1) The licensee shall, after commencing to supply electricity, forthwith cause a plan, to be made in electronic form, of the area of supply, and shall cause to be marked thereon the alignment and in the case of underground works, the approximate depth below the surface of all the existing electric supply lines, street distributing boxes and other works, and shall once in every year cause that plan to be duly corrected so as to show the electric supply lines, street distributing boxes and other works for the time being in position and shall also, if so required by an Electrical Inspector, cause to be made sections showing the approximate level of all his existing underground works other than service lines.
- (2) Every plan shall be drawn to such horizontal and vertical scale as the Appropriate Commission may require.

Provided that no scale shall be required unless maps of the locality on that scale are for the time being available to the public

- (3) Every plan and section so made or corrected, or a copy thereof marked with the date when it was made or corrected, shall be kept by the licensee at his principal office or place of business within the area of supply, and shall at all reasonable times be open to the inspection of all applicants, and copies thereof shall be supplied.

Provided that existing and old plans and sections and underground distribution network shall be converted to electronic form within three years from the date of commencement of these regulations.

- (4) Global Positioning System (GPS) mapping or mapping through any other latest technology, of existing and old plans and sections shall be completed within five years from the date of commencement of these regulations and new plans and sections shall be compatible to the Global Positioning System mapping or mapping through any other latest technology.
- (5) The licensee shall, if required by an Electrical Inspector, and, where the licensee is not a local authority, by the local authority, if any, concerned, supply free of charge to such Electrical Inspector or local authority a duplicate copy of every such plan or section or a part of the same duly corrected.
- (6) The copies of plans and sections under this regulation shall be supplied by the licensee to every applicant on the payment of such fee as the Appropriate Commission may, by regulation, specify.

[Click Here To Go Back To Index](#)

Chapter III **General safety requirements**

12. General safety requirements, pertaining to construction, installation, protection, operation and maintenance of electric supply lines apparatus: -

- (1) All electric supply lines and apparatus shall be of sufficient rating for power, insulation and estimated fault current and of sufficient mechanical strength, for the duty cycle which they may be required to perform under the environmental conditions of installation, and shall be constructed, installed, protected, worked and maintained in such a manner as to ensure safety of human beings, animals and property.
- (2) Save as otherwise provided in these regulations, the relevant code of practice of the Bureau of Indian Standards or National Electrical Code, if any, may be followed to carry out the purposes of this regulation and in the event of any inconsistency, the provisions of these regulations shall prevail.
- (3) The material and apparatus used shall conform to the relevant specifications of the Bureau of Indian Standards or International Electro-Technical Commission where such specifications have already been laid down.
- (4) All electrical equipment shall be installed above the Mean Sea level (MSL) as declared by local Municipal Authorities and where such equipment is to be installed in the basement, consumer shall ensure that the design of the basement should be such that there is no seepage or leakage or logging of water in the basement.

13. Service lines and apparatus on consumer's premises: -

- (1) The supplier shall ensure that all electric supply lines, wires, Fittings and apparatus belonging to him or under his control, which are on a consumer's premises, are in a safe-condition and in all respects fit for supplying electricity and the supplier shall take precautions to avoid danger arising on such premises from such supply lines, wires, fittings and apparatus.
- (2) Service lines placed by the supplier on the premises of a consumer which are underground or which are accessible shall be so insulated and protected by the supplier as to be secured under all ordinary conditions against electrical, mechanical, chemical or other injury to the insulation.
- (3) The consumer shall, as far as circumstances permit, take precautions for the safe custody of the equipment on his premises belonging to the supplier.
- (4) The consumer shall also ensure that the installation under his control is, maintained in a safe condition.

[**Click Here To Go Back To Index**](#)

14. Switchgear on consumer's premises: -

- (1) The supplier shall provide a suitable switchgear in each conductor of every service line other than an earthed or earthed neutral conductor or the earthed external conductor of a concentric cable within a consumer's premises, in an accessible position and such switchgear shall be contained within an adequately enclosed fireproof receptacle:

Provided that where more than one consumer is supplied through a common service line, each such consumer shall be provided with an independent switchgear at the point of rigid junction to the common service.

- (2) Every electric supply line other than the earthed or earthed neutral conductor of any system or the earthed external conductor of a concentric cable shall be protected by suitable switchgear by its owner.

15. Identification of earthed and earthed neutral conductors and position of switches and switchgear therein: -

Where the conductors include an earthed conductor of a two-wire system or an earthed neutral conductor of a multi-wire system or a conductor which is to be connected thereto, the following conditions shall be complied with: -

- (i) an indication of a permanent nature shall be provided by the owner of the earthed or earthed neutral conductor, or the conductor which is to be connected thereto, to enable such conductor to be distinguished from any live conductor and such indication shall be provided-
 - (a) where the earthed or earthed neutral conductor is the property of the supplier, at or near the point of commencement of supply;
 - (b) where a conductor forming part of a consumer's system is to be connected to the supplier's earthed or earthed neutral conductor, at the point where such connection is to be made;
 - (c) in all other cases, at a point corresponding to the point of commencement of supply or at such other points as may be approved by an Electrical Inspector.
- (ii) no cut-out, link or switch other than a linked-switch arranged to operate simultaneously on the earthed or earthed neutral conductor and live conductors shall be inserted or remain inserted in any earthed or earthed neutral conductor of a two wire-system or in any earthed or earthed neutral conductor of a multi-wire system or in any conductor connected thereto

[Click Here To Go Back To Index](#)

Provided that the above requirement shall not apply in case of-

- (a) a link for testing purposes, or
- (b) a switch for use in controlling a generator or transformer

16. Earthed terminal on consumer's premises: -

- (1) The supplier shall provide and maintain on the consumer's premises for the consumer's use, a suitable earthed terminal in an accessible position at or near the point of commencement of supply.

Provided that in the case of installation of voltage exceeding 250V the consumer shall, in addition to the aforementioned earthing arrangement, provide his own earthing system with an independent electrode.

Provided further that the supplier may not provide any earthed terminal in the case of installations already connected to his system on or before the date to be specified by the State Government in this behalf if he is satisfied that the consumer's earthing arrangement is efficient.

- (2) The-consumer shall take all reasonable precautions to prevent mechanical damage to the earthed terminal and its lead belonging to the supplier.
- (3) The supplier may, recover from the consumer the cost of installation on the basis of schedule of charges published by him in advance and where such schedule of charges is not published, the procedure laid down, in regulation 63 shall apply.

Explanation: - For the purposes of sub-regulation (1), the expression "point of commencement of supply of electricity" shall mean the point at the incoming terminal of the switchgear installed by the consumer.

17. Accessibility of bare conductors: -

Where bare conductors are used in a building, the owner of such conductors shall,-

- (a) ensure that they are inaccessible;
- (b) provide in readily accessible position switches for rendering them dead whenever necessary; and
- (c) take such other safety measures as are specified in the relevant Indian Standards.

[Click Here To Go Back To Index](#)

18. Danger Notices: -

The owner of every installation of voltage exceeding 250V shall affix permanently in a conspicuous position a danger notice in Hindi or English and the local language of the District, with a sign of skull and bones of a design as per IS -2551 on-

- (a) every motor, generator, transformer and other electrical plant and equipment together with apparatus used for controlling or regulating the same;
- (b) all supports of overhead lines of voltage exceeding 650V which can be easily climbed upon without the aid of ladder or special appliances;
- (c) luminous tube sign requiring supply, X-ray and similar high frequency installations of voltage exceeding 550V but not exceeding 33kV:

Provided that where it is not possible to affix such notices on any generator, motor, transformer or other apparatus, they shall be affixed as near as possible thereto, or the word 'danger' and the voltage of the apparatus concerned shall be permanently painted on it:

Provided further that where the generator, motor, transformer or other apparatus is within an enclosure one notice affixed to the said enclosure shall be sufficient for the purposes of this regulation.

Explanation- For the purpose of clause (b) rails, tubular poles, wooden supports, reinforced cement concrete poles without steps, I-sections and channels, shall be deemed as supports which cannot be easily climbed upon.

19. Handling of electric supply lines and apparatus: -

- (1) Before any conductor or apparatus is handled, adequate precautions shall be taken, by earthing or other suitable means, to discharge electrically such conductor or apparatus, and any adjacent conductor or apparatus if there is danger there from, and to prevent any conductor or apparatus from being accidentally or inadvertently electrically charged when persons are working thereon.
- (2) Every person who is working on an electric supply line or apparatus or both shall be provided with tools and devices such as gloves, rubber shoes, safety belts, ladders, earthing devices, helmets, line testers, hand lines and the like for protecting him from mechanical and electrical injury and such tools and devices shall always be maintained in sound and efficient working condition.
- (3) No person shall work on any live electric supply line or apparatus and no person shall assist such person on such work, unless he is designated in that behalf and takes the safety precautions given in Schedule-III.

[Click Here To Go Back To Index](#)

- (4) Every telecommunication line on supports carrying a line of voltage exceeding 650V but not exceeding 33kV shall, for the purpose of working thereon, be deemed to be a line of voltage exceeding 650V.
- (5) All non-current carrying metal parts of switchgear and control panels shall be properly earthed and insulating floors or mat conforming to IS-15652: 2006, of appropriate voltage level shall be provided in front of the panels for the safety of operating personnel.
- (6) All panels shall be painted with the description of its identification at front and at the rear.

20. Supply to vehicles and cranes: -

Every person owning a vehicle, traveling crane, or the like to which electricity is supplied from an external source shall ensure that it is efficiently controlled by a suitable switch enabling all voltage to be cut off in one operation and, where such vehicle, traveling crane or the like runs on metal rails, the owner shall ensure that the rails are electrically continuous and earthed.

21. Cables for portable or transportable apparatus: -

- (1) Flexible cables shall not be used for portable or transportable motors, generators, transformers, rectifiers, electric drills, electric sprayers, welding sets or any other portable or transportable apparatus unless they are heavily insulated and adequately protected from mechanical injury.
- (2) Where the protection is by means of metallic covering, the covering shall be in metallic connection with the frame of any such apparatus and earthed.
- (3) The cables shall be three core type and four core type for portable and transportable apparatus working on single phase and three phase supply respectively and the wire meant to be used for ground connection shall be easily identifiable.

22. Cables protected by bituminous materials: -

- (1) Where the supplier or the owner has brought into use an electric supply line, other than an overhead line, which is not completely enclosed in a continuous metallic covering connected with earth and is insulated or protected in situ by composition or material of a bituminous character,-
 - (i) any pipe, conduit, or the like into which such electric supply line may have been drawn or placed shall, unless other arrangements are approved by the Electrical Inspector in any particular case, be effectively sealed at its point of entry into any street box so as to prevent any flow of gas to or from the street box, and;

[Click Here To Go Back To Index](#)

- (ii) such electric supply line shall be periodically inspected and tested where accessible, and the result of each such inspection and test shall be duly recorded by the supplier or the owner.
- (2) The supplier or the owner after the coming into force of these regulations shall not bring into use any further electric supply line as aforesaid which is insulated or protected in situ by any composition or material known to be liable to produce noxious or explosive gases on excessive heating.

23. Street boxes: -

- (1) Street boxes shall not contain gas pipes, and precautions shall be taken to prevent, as far as reasonably possible, any influx of water or gas.
- (2) Where electric supply lines forming part of different systems pass through the same street box, they shall be readily distinguishable from one another and all electric supply lines of voltage exceeding 650V at or in street boxes shall be adequately supported and protected so as to prevent risk of damage to or danger from adjacent electric supply lines.
- (3) All street boxes shall be regularly; inspected for the purpose of detecting the presence of gas and if any influx or accumulation is discovered, the owner shall give immediate notice to any authority or company who have gas mains in the neighborhood of the street box and in cases where a street box is large enough to admit the entrance of a person after the electric supply lines or apparatus therein have been placed in position, ample provision shall be made-
 - (i) to ensure that any gas which may by accident have obtained access to the box shall escape before a person is allowed to enter; and
 - (ii) for the prevention of danger from sparking.
- (4) The owners of all street boxes or pillars containing circuits or apparatus shall ensure that their covers and doors are kept closed and locked and are so provided that they can be opened only by means of a key or a special appliance.

24. Distinction of different circuits: -

The owner of every generating station, sub-station, junction-box or pillar in which there are any circuits or apparatus, whether intended for operation at different voltages or at the same voltage, shall ensure by means of indication of a permanent nature that the respective circuits are readily distinguishable from one another.

[Click Here To Go Back To Index](#)

25. Distinction of the installations having more than one feed: -

The owner of every installation including sub-station, double pole structure, four pole structure or any other structure having more than one feed, shall ensure by means of indication of permanent nature, that the installation is readily distinguishable from other installations.

26. Accidental charging: -

- (1) The owners of all circuits and apparatus shall so arrange them that there shall be no danger of any part thereof becoming accidentally charged to any voltage beyond the limits of voltage for which they are intended.
- (2) Where alternating current and direct current circuits are installed on the same box or support, they shall be so arranged and protected that they shall not come into contact with each other when live.

27. Provisions applicable to protective equipment.-

- (1) Fire buckets filled with clean dry sand and ready for immediate use for extinguishing fires in addition to fire extinguishers suitable for dealing with fires, shall be conspicuously marked and kept in all generating stations, enclosed sub-stations and switching-stations in convenient location
- (2) The fire extinguishers shall be tested for satisfactory operation as per relevant Indian Standard at least once a year and record of such tests shall be maintained.
- (3) First-aid boxes or cupboards conspicuously marked and equipped with such contents as the State Government may specify, shall be provided and maintained in every generating station, enclosed sub-station, enclosed switching station and in vehicles used for maintenance of lines so as to be readily accessible during all working hours and all such boxes and cupboards shall, except, in the case of unattended sub-stations and switching stations, be kept in charge of responsible persons' who are trained in first-aid treatment and one of such persons shall be available during working hours.
- (4) Two or more gas masks shall be provided conspicuously and installed and maintained at accessible places in every generating station with capacity of 5 MW and above and enclosed sub-station, with transformation capacity of 5 MVA and above for use in the event of fire or smoke;

Provided that where more than one generator with capacity of 5 MW and above is installed in a power station, each-generator shall be provided with at least two separate gas masks in an accessible and conspicuous place:-

Provided further that adequate number of gas masks shall be provided by the owner at every generating station and enclosed sub-station with capacity less than 5 MW and 5 MVA respectively

[Click Here To Go Back To Index](#)

28. Display of instructions for resuscitation of persons suffering from electric shock: -

- (1) Instructions, in English or Hindi and the local language of the District and where Hindi is the local language, in English and Hindi for the resuscitation of persons suffering from electric shock, shall be affixed; by the owner in a conspicuous place in every generating station, enclosed sub-station, enclosed switching station, mines and in every factory as defined in clause (m) of section 2 of the Factory Act, 1948 (63 of 1948) in which electricity is used and in such other premises where electricity is used as the. Electrical Inspector may, by notice in writing served on the owner, direct.
- (2) The owner of every generating station, enclosed sub-station, enclosed switching station and every factory or other premises to which these regulations apply shall ensure that all designated persons employed by him are acquainted with and are competent to apply the instructions referred to in sub-regulation (1).
- (3) In every manned generating station, sub-station or switching station of voltage exceeding 650 V, an artificial respirator shall be provided and kept in good working condition.

29. Precautions to be adopted by consumers, owners, occupiers, electrical contractors, electrical workmen and suppliers:-

- (1) No electrical installation work, including additions, alterations, repairs and adjustments to existing installations, except such replacement of lamps; fans, fuses, switches, domestic appliances of voltage not exceeding 250V and fittings as in no way alters its capacity or character, shall be carried out upon the premises of or on behalf of any consumer, supplier, owner or occupier for the purpose of supply to such consumer, supplier, owner or occupier except by an electrical contractor licensed in this behalf by the State Government and under the direct supervision of a person holding a certificate of competency and by a person holding a permit issued or recognised by the State Government.

Provided that in the case of works executed for or on behalf of the Central Government and in the case of installations in mines, oil fields and railways, the Central Government and in other cases the State Government, may, by notification in the Official Gazette, exempt on such conditions as it may impose, any such work described therein either generally or in the case of any specified class of consumers, suppliers, owners or occupiers.

- (2) No electrical installation work which has been carried out in contravention of sub-regulation (1) shall either be energised or connected to the works of any supplier.

30. Periodical inspection and testing of Installations: -

- (1) Where an installation is already connected to the supply system of the supplier or trader, every such installation shall be periodically inspected and tested at intervals not exceeding five years either by the Electrical Inspector or by the supplier as may be directed by the State Government in this behalf or in the case of installations belonging to, or under the control of the Central Government, and in the case of installation in mines, oilfields and railways, by the Central Government.

[Click Here To Go Back To Index](#)

- (2) The periodical inspection and testing of installations of voltage above 650 V belonging to the supplier, shall also be carried out at intervals not exceeding five years by the Electrical Inspector,
- (3) Where the supplier is directed by the Central or the State Government, as the case may be, to inspect and test the installation, he shall report on the condition of the installation to the consumer concerned in the Forms I, II and III as specified in Schedule-IV and shall submit a copy of such report to the Electrical Inspector,
- (4) The Electrical Inspector may, on receipt of such report, accept the report submitted by the supplier or record variations as the circumstances of each case may require and may recommend that the defects may be rectified as per report,
- (5) In the event of the failure of the owner of any installation to rectify the defects in his installation pointed out by the Electrical Inspector in his report and within the time indicated therein, such installation shall be liable to be disconnected under the directions of the Electrical Inspector after serving the owner of such installation with a notice for not less than forty eight hours.

Provided that the installation shall not be disconnected in case an appeal is made under sub-rule (1) of rule (8) of "Qualifications, Powers and Functions of Chief Electrical Inspector and Electrical Inspectors issued by Central Government vide GSR 481 (E).dated 17.08.2006 and the appellate authority has stayed the orders of disconnection.

31. Testing of consumer's installation: -

- (1) Upon receipt of an application for a new or additional supply of electricity and before connecting the supply or reconnecting the same after a period of six months, the supplier shall either test the installation himself or, accept the test results submitted by the consumer when the same has been duly signed by the licensed Elected Contractor.
- (2) The supplier shall maintain a record of test results obtained at each supply point to a consumer, in a Schedule-V.
- (3) If as a result of such inspection and test, the supplier is satisfied that the installation is likely to be dangerous, he shall serve, on the applicant a notice in writing requiring him to make such modifications as are necessary to render the installation safe and may refuse to connect or reconnect the supply until the required modifications have been completed.

32. Installation and testing of generating units: -

Capacity above which generating units will be required to be inspected by the Electrical Inspector before commissioning shall be as per the notification to be issued by the Appropriate Government, under clause (x) sub-section (2) of section 176 and sub-section (1) of section 162 of the Act.

[Click Here To Go Back To Index](#)

Chapter IV

General conditions relating to supply and use of electricity

33. Precautions against leakage before connection: -

- 1) The supplier shall not connect with his works the installation or apparatus on the premises of any applicant for supply unless he is reasonably satisfied that the connection will not at the time of making the connection cause a leakage from that installation or apparatus of a magnitude detrimental to safety which shall be checked by measuring the installation resistance as under,-
 - (i) all equipments shall have the insulation resistance (IR) value as stipulated in the relevant Indian Standards;
 - (ii) on application of 500 V DC between each live conductor and earth for a period of one minute the insulation resistance of installation and equipment of voltage not exceeding 650 V shall be at least 1 MEGA OHM or as specified in the relevant Indian Standard;
 - (iii) on application of 2.5 kV-DC between each live conductor and earth for a period of one minute, the insulation resistance, of installation and equipment of voltage exceeding 650 V but not exceeding 33 kV shall be at least 5 MEGA OHM or as specified in the relevant Indian Standard.
- (2) If the supplier declines to make a connection under the provisions of sub-regulation (1) he shall convey to the applicant, the reasons in writing for so declining.

34. Leakage on consumer's premises:-

- (1) If the Electrical Inspector or the supplier has reasons to believe that there is leakage in the system of a consumer which is likely to affect injuriously the use of electricity by the supplier or by other persons, or which is likely to cause danger, he may give the consumer notice in writing that he desires to inspect and test the consumer's installation.
- (2) If on such notice being given the consumer does not give all reasonable facilities for inspection and testing of his installation, or when an insulation resistance of the consumer's installation is so low as to prevent safe use of electricity, the supplier may, and if directed so to do by the Electrical Inspector shall discontinue the supply of electricity to the installation but only after giving to the consumer forty eight hours notice in writing of disconnection of supply and shall not recommence the supply until he or the Electrical Inspector is satisfied that the cause of the leakage has been removed.

35. Supply and use of electricity:-

- (1) The electricity shall not be supplied, transformed, converted, inverted or used or continued to be supplied, transformed, converted, inverted or used unless the conditions contained in sub-regulations (2) to (8) are complied with.

[Click Here To Go Back To Index](#)

- (2) The following controls of requisite capacity to carry and break the current shall be placed as near as possible after the point of commencement of supply so as to be readily accessible and capable of being easily operated to completely isolate the supply to the installation, such equipment being in addition to any equipment installed for controlling individual circuits or apparatus, namely: -
- (i) a linked switch with fuse or a circuit breaker by consumers of voltage which does not exceed 650 V;
 - (ii) a linked switch with fuse or a circuit breaker by a consumer of voltage exceeding 650V but not exceeding 33 kV having aggregate installed transformer or apparatus capacity up to 1000kVA to be supplied at voltage up to 11 kV and 2500kVA at higher voltages (above 11 kV and not exceeding 33 kV);
 - (iii) a circuit breaker by consumers at voltage exceeding 650 V but not exceeding 33 kV having an aggregate installed transformer and apparatus capacity above 1000kVA and supplied at voltage up to 11 kV and above 2500 KVA at higher voltages (above 11 kV and not exceeding 33 kV);
 - (iv) a circuit breaker by a consumer of voltage exceeding 33 kV.

Provided that where the point of commencement of supply and the consumer apparatus are near each other, one linked switch with fuse or circuit breaker near the point of commencement of supply shall be considered sufficient.

- (3) In case of every transformer the following shall be provided; namely: -

on primary side for transformers a linked switch with fuse or circuit breaker of adequate capacity:

Provided that the linked switch on the primary side of the transformer may be of such capacity as to carry the: full load current and to break only the magnetising current of the transformer:

Provided further that for all transformers:

- (a) having a capacity of 5000kVA and above installed before the year 2000; and
- (b) having a capacity 1000kVA and above installed in or after the year 2000, a circuit breaker shall be provided:

Provided also that the linked switch on the primary side of the transformer shall not required for the unit auxiliary transformer and generator transformer;

- (ii) in respect of all transformers installed in or after the year 2000, on the secondary side of all transformers a circuit breaker of adequate rating shall be installed:

[Click Here To Go Back To Index](#)

Provided that for suppliers transformers of capacity below 1000 KVA, a linked switch with fuse or circuit breaker of adequate rating shall be installed on secondary side.

- (4) Except in the case of composite control gear designed as a unit each distinct circuit is to be protected against excess energy by means of suitable cut-out or a circuit breaker of adequate breaking capacity suitably located and so constructed as to prevent danger from overheating, arcing or scattering of hot metal when it comes into operation and to permit for ready renewal of the fusible metal of the cut-out without danger.
- (5) The supply of electricity to each motor or a group of motors or other apparatus meant for operating one particular machine shall be controlled by a suitable linked switch or a circuit breaker or an emergency tripping device with manual reset of requisite capacity placed in such a position as to be adjacent to the motor or a group of motors or other apparatus readily accessible to and easily operated by the person in-charge and so connected in the circuit that by its means all supply of electricity can be cut off from the motor or group of motors or apparatus from any regulating switch, resistance of other device associated therewith.
- (6) All insulating materials shall be chosen with special regard to the circumstances of their proposed use and their mechanical strength shall be sufficient for their purpose and so far as is practicable of such a character or so protected as to maintain adequately their insulating property under all working conditions in respect of temperature and moisture; and
- (7) Adequate precautions shall be taken to ensure that no live parts are so exposed as to cause danger.
- (8) Every consumer shall use all reasonable means to ensure that where electricity is supplied by a supplier no person, other than the supplier shall interfere with service lines and apparatus placed by the supplier on the premises of the consumer.

36. Provisions for supply and use of electricity in multi-storied building more than 15 meters in height: -

- (1) The connected load and voltage of supply above which inspection is to be carried out by an Electrical Inspector for a multi-storied building of more than fifteen meters height shall be notified by the Appropriate Government.
- (2) Before making an application for commencement of supply or recommencement of supply after an installation has been disconnected for a period of six months or more, the owner or occupier of a multi-storied building shall give not less than thirty days notice in writing to the Electrical Inspector specify therein the particulars of installation and the supply of electricity shall not be commenced or recommenced within-this period, without the approval in writing of the Electrical Inspector.

[Click Here To Go Back To Index](#)

- (3) The supplier or owner of the installation shall provide at the point of commencement of supply; a suitable isolating device with cut-out or breaker to operate on all phases except neutral in the 3-phase, 4-wire circuit and fixed in a conspicuous position at not more than 1.70 meters above the ground so as to completely isolate the supply to the building in case of emergency.
- (4) The owner or occupier of a multi-storied building shall ensure that electrical installations and works inside the building are carried out and maintained in such a manner as to prevent danger due to shock, and fire hazards, and the installation is carried out in accordance with the relevant codes of practice.
- (5) No other service pipes and cables shall be taken along the ducts provided for laying power cables and all ducts provided for power cables and other services shall be provided with fire barrier at each floor crossing.

37. Conditions applicable to installations of voltage exceeding 250 Volts: -

The following conditions shall, be complied with where electricity of voltage above 250 V is supplied, converted, transformed or used; namely: -

- (i) all conductors, other than those of overhead lines, shall be completely enclosed in mechanically strong metal casing or metallic covering which is electrically and mechanically continuous and adequately protected against mechanical damage unless the said conductors are accessible only to an designated person or are installed and protected so as to prevent danger:
Provided that non-metallic conduits conforming to the relevant Indian Standard Specifications may be used for installations of voltage not exceeding 650 V
- (ii) all metal works, enclosing, supporting or associated with the installation, other than that designed to serve as a conductor shall be connected with an earthing system as per standards laid down in the Indian Standards in this regard and the provisions of regulation 41.
- (iii) Every switchboard shall comply with the following,-
 - (a) a clear space of not less than one meter in width shall be provided in front of the switchboard;
 - (b) if there are any attachments or bare connections at the back of the switchboard, the space, if any, behind the switchboard shall be either less than twenty centimeters or more than seventy five centimeters in width, measured from the farthest protruding part of any attachment or conductor;
 - (c) if the space behind the switchboard exceeds seventy five centimeters in width, there shall be a passage way from either end of the switchboard, clear to a height of 1.8 meters.

[Click Here To Go Back To Index](#)

- (iv) In case of installations provided in premises where inflammable materials including gases and chemicals are produced, handled or stored, the electrical installations, equipment and apparatus shall comply with the requirements of flame proof, dust tight, totally enclosed or any other suitable type of electrical fittings depending upon the hazardous zones as per the relevant Indian Standard Specifications.
- (v) Where an application has been made to a supplier for supply of electricity to any installation, he shall not commence the supply or where the supply has been discontinued for a period of six months and above, recommence the supply unless the consumer has complied with, in all respects the conditions of supply set out in these regulations.
- (vi) Where a supplier proposes to supply or use electricity at or to recommence supply of voltage exceeding 250 V but not exceeding 650 V after it has been discontinued for a period of six months, he shall, before connecting or reconnecting the supply, give notice in writing of such intention to the Electrical Inspector.
- (vii) If at any time after connecting the supply, the supplier is satisfied that any provision of these regulations are not being observed he shall give notice of the same in writing to the consumer and the Electrical Inspector, specifying how the provisions have not been observed and to rectify such defects in a reasonable time and if the consumer fails to rectify such defects pointed out, he may discontinue the supply after giving the consumer a reasonable opportunity of being heard and recording reasons in writing and the supply shall be discontinued only on written orders of an officer duly notified by the supplier in this behalf and shall be restored with all possible speed after such defects are rectified by the consumer to the satisfaction of the supplier.

38. Appeal to Electrical Inspector in regard to defects: -

- (1) If any applicant for a supply or a consumer is dissatisfied with the action of the supplier in declining to commence, to continue or to recommence the supply of electricity to his premises on the grounds that the installation is defective or is likely to be dangerous, he may appeal to the Electrical Inspector to test the installation and the supplier shall not, if the Electrical Inspector intimates that the installation is free from the defect or danger complained of, refuse supply to the consumer on the grounds aforesaid, and shall, within twenty four hours after the receipt of such, intimation from the Electrical Inspector, commence, continue or recommence the supply of electricity.
- (2) Any test for which application has been made under sub regulation (1) shall be carried out within seven days after the receipt of such application.

[Click Here To Go Back To Index](#)

39. Precautions against failure of supply and notice of failures: -

- (1) The layout of the electric supply lines of the supplier for the supply of electricity throughout his area of supply shall under normal working conditions be sectionalised and so arranged, and provided with switchgear or circuit breakers, so located, as to restrict within reasonable limits the extent of the portion of the system affected by any failure of supply.
- (2) The supplier shall take all reasonable precautions to avoid any accidental interruptions of supply, and also to avoid danger to the public or to any employee or designated person when engaged on any operation during and in connection with the installation, extension, replacement, repair and maintenance of any works.
- (3) The supplier shall send to the Electrical Inspector a notice of failure of supply of such kind as the Electrical Inspector may from time to time require to be notified to him, and such notice shall be sent by the earliest mode of communication after the failure occurs or after the failure becomes known to the supplier and shall be in the Form given in Schedule-VI.
- (4) For the purpose of testing or for any other purpose connected with the efficient working of the suppliers installations, the supply of electricity may be discontinued by the supplier for such period as may be necessary, subject to not less than twenty four hours notice being given by the supplier to all consumers likely to be affected by such discontinuance:

Provided that no such notice shall be given in cases of emergency

[Click Here To Go Back To Index](#)

Chapter V

Safety provisions for electrical installations and apparatus of voltage not exceeding 650 volts

40. Test for resistance of insulation: -

- (1) Where any electric supply line for use at voltages not exceeding 650 V has been disconnected from a system for the purpose of addition, alteration or repair, such electric supply line shall not be reconnected to the system until the supplier or the owner has applied the test prescribed under regulation 33.
- (2) The provision under sub-regulation (1) shall not apply to overhead lines except overhead insulated cables, unless the Electrical Inspector otherwise directs in any particular case.

41. Connection with earth: -

The following conditions shall apply to the connection with earth of systems at voltage normally exceeding 125 V but not exceeding 650 V, namely: -

- (i) neutral conductor of a 3-phase, 4-wire system and the middle conductor of a 2-phase, 3-wire system shall be earthed by not less than two separate and distinct connections with a minimum of two different earth electrodes or such large number as may be necessary to bring the earth resistance to a satisfactory value both at the generating station and at the sub-station.
- (ii) the earth electrodes so provided, shall be inter-connected to reduce earth resistance.
- (iii) neutral conductor shall also be earthed at one or more points along the distribution system or service line in addition to any connection with earth which may be at the consumer's premises.
- (iv) in the case of a system comprising electric supply lines having concentric cables, the external conductor of such cables, shall be earthed by two separate and distinct connections with earth.
- (v) the connection with earth may include a link by means of which the connection may be temporarily interrupted for the purpose of testing or for locating fault.
- (vi) in a direct current three wire system, the middle conductor shall be earthed at the generating station only and the current from the middle conductor to earth shall be continuously recorded by means of a recording ammeter, and if at any time the current exceeds one-thousandth part of the maximum supply current, immediate steps shall be taken to improve the insulation of the system.
- (vii) where the middle conductor is earthed by means of a circuit breaker with a resistance connected in parallel, the resistance shall not exceed ten ohms and on the opening of the circuit breaker, immediate steps shall be taken to improve the insulation of the system, and the circuit breaker shall be re-closed as soon as possible.

[Click Here To Go Back To Index](#)

- (viii) the resistance shall be used only as a protection for the ammeter in case of earths on the system and until such earths are removed and immediate steps shall be taken to locate and remove the earth.
- (ix) in the case of an alternating current system, there shall not be inserted in the, connection with earth any impedance, other than that required solely for the operation of switchgear or instruments, cut-out or circuit breaker, and the result of any test made to ascertain whether the current, if any, passing through the connection with earth is normal, shall be duly recorded by the supplier.
- (x) no person shall make connection with earth by the aid of, nor shall he keep it in contact with, any water mains not belonging to him except with the consent of the owner thereof and of the Electrical Inspector.
- (xi) alternating current systems which are connected with earth as aforesaid shall be electrically interconnected:

Provided that each connection with earth is bonded to the metal sheathing and metallic armouring, if any, of the electric supply lines concerned.

- (xii) the frame of every generator, stationary motor, portable motor, and the metallic parts, not intended as conductors, of all transformers and any other apparatus used for regulating or controlling electricity, and all electricity consuming apparatus, of voltage exceeding 250 V but not exceeding 650 V shall be earthed by the owner by two separate and distinct connections with earth.
- (xiii) neutral point of every generator and transformer shall be earthed by connecting it to the earthing system by not less than two separate and distinct connections.
- (xiv) all metal casing or metallic coverings containing or protecting any electric supply line or apparatus shall be connected with earth and shall be so joined and connected across all junction boxes and other openings as to make good mechanical and electrical connection throughout their whole length:

Provided that conditions mentioned in this regulation shall not apply, where the supply voltage does not exceed 250 V and the apparatus consists of wall tubes or brackets, electroliers, switches, ceiling fans or other fittings,, other than portable hand lamps and portable and transportable apparatus, unless provided with earth terminal and to class-II apparatus and appliances:

Provided further that where the supply voltage is not exceeding 250 V and where the installations are either new or renovated, all plug sockets shall be of the three pin type, and the third pin shall be permanently and efficiently earthed.

- (xv) All earthing systems shall, -

[Click Here To Go Back To Index](#)

- (a) consist of equipotential bonding conductors capable of carrying the prospective earth fault current and a group of pipes, rods and plate electrodes for dissipating the current to the general mass of earth without exceeding the allowable temperature limits as per relevant Indian Standards in order to maintain all non-current carrying metal works reasonably at earth potential and to avoid dangerous contact potentials being developed on such metal works;
 - (b) limit earth resistance sufficiently low to permit adequate fault current for the operation of protective devices in time and to reduce neutral shifting;
 - (c) be mechanically strong, withstand corrosion and retain electrical continuity during the life of the installation and all earthing systems shall be tested to ensure efficient earthing, before the electric supply lines or apparatus are energised.
- (xvi) all earthing systems belonging to the supplier shall in addition, be tested for resistance on dry day during the dry season not less than once every two years.
- (xvii) a record of every earth test made and the result thereof shall be kept by the supplier for a period of not less than two years after the day of testing and shall be available to the Electrical Inspector when required.

Explanation: - The expression "Class-II apparatus and appliance" shall have the same meaning as is assigned to it in the relevant Indian Standards.

42. Earth leakage protective device: -

The supply of electricity to every electrical installation other than voltage not exceeding 250 V below 5 kW and those installations of voltage not exceeding 250 V which do not attract provisions of section 54 of the Act, shall be controlled by an earth leakage protective device so as to disconnect the supply instantly on the occurrence of earth fault or leakage of current:

Provided that such earth leakage protective device shall not be required for overhead supply lines having protective devices which are effectively bonded to the neutral of supply transformers and conforming to regulation 73.

[Click Here To Go Back To Index](#)

Chapter VI

Safety provisions for electrical installations and apparatus of voltage exceeding 650 volts

43. Approval by Electrical Inspector: -

- (1) Voltage above' which electrical installations will be required to be inspected by the Electrical Inspector before commencement of supply or recommencement after shutdown for six months and above shall be as per the notification to be issued by the Appropriate Government, under clause (x) of sub-section (2) of section 176, and sub-section (1) of section 162 of the Act.
- (2) Before making an application to the Electrical Inspector for permission to commence or recommence supply after an installation has been disconnected for six months and above at voltage exceeding 650 V to any person, the supplier shall ensure that electric supply lines or apparatus of voltage exceeding 650 V belonging to him are placed in position, properly joined and duly completed and examined and the supply of electricity shall not be commenced by the supplier for installations of voltage needing inspection under these regulations unless the provisions of regulations 12 to 29, 33 to 35, 44 to 51 and 55 to 77 have been complied with and the approval in writing of the Electrical Inspector has been obtained by him:

Provided that the supplier may energise the aforesaid electric supply lines or apparatus for the purpose of tests specified in regulation 46

- (3) The owner of any installation of voltage exceeding 650 V shall, before making application to the Electrical Inspector for approval of his installation or additions thereto, test every circuit of voltage exceeding 650 V or additions thereto, other than an overhead line, and satisfy him self that they withstand the application of the testing voltage set out in sub-regulation (1) of regulation 46 and shall duly record the results of such tests and forward them to the Electrical Inspector:

Provided that an Electrical Inspector may direct such owner to carry out such tests as he deems necessary or accept the manufacturer's certified tests in respect of any particular apparatus in place of the tests required by this regulation

- (4) The owner of any installation of voltage exceeding 650 V who makes any addition or alteration to his installation shall not connect to the supply his apparatus or electric supply lines, comprising the said alterations or additions unless and until such alteration or addition has been approved in writing by the Electrical Inspector.

44. Use of electricity at voltage exceeding 650 Volts: -

- (1) The Electrical Inspector shall not authorise the supplier to commence supply or where the supply has been discontinued for a period of six months and above, to recommence the supply at voltage exceeding 650 V to any consumer unless-
 - (i) all conductors and apparatus situated on the premises of the consumer are so placed as to be inaccessible except to a designated person and all operations in connection with the said conductors and apparatus are carried out by a designated person;

[Click Here To Go Back To Index](#)

- (ii) the consumer has provided and agrees to maintain a separate building or a locked weather proof and fire proof enclosure of agreed design and location, to which the supplier at all times shall have access for the purpose of housing his apparatus and metering equipment, or where the provision for a separate building or enclosure is impracticable the consumer has segregated the aforesaid apparatus of the supplier from any other part of his own apparatus:

Provided that such segregation shall be by the provision of fire proof walls, if the Electrical Inspector considers it to be necessary:

Provided further that in the case of an outdoor installation the consumer shall suitably segregate the aforesaid apparatus belonging to the supplier from his own;

- (iii) all pole type sub-stations are constructed and maintained in accordance with regulation 50.

- (2) The owner shall observe the following conditions, where electricity at voltage exceeding 650 V is supplied, converted, transformed or used,-

- (i) he shall maintain safety clearances for electrical apparatus as per Bureau of Indian Standard specification so that sufficient space is available for easy operation and maintenance without any hazard to the operating and maintenance personnel working near the equipment and for ensuring adequate ventilation;
- (ii) he shall not allow any encroachment below such installation:

Provided that where the Electrical Inspector comes across any such encroachment, he shall direct the owner to remove such encroachments;

- (iii) the minimum safety working clearances specified in Schedule-VII shall be maintained for the bare conductors or live parts of any apparatus in outdoor sub-stations excluding overhead lines of installations of voltage exceeding 650 V;
- (iv) he shall ensure that the windings of motors or other apparatus within reach from any position in which a person may require to be, are suitably protected so as to prevent danger;
- (v) he shall ensure that where a transformer or transformers are used, suitable provision shall be made, either by connecting with earth, a point of the circuit at the lower voltage or otherwise to guard against danger by reason of the said circuit becoming accidentally charged above its normal voltage by leakage from or contact with the circuit at the higher voltage;
- (vi) a sub-station or a switching station with apparatus having more than 2000 liters of oil shall not be located in the basement where proper oil draining arrangement cannot be provided;

[Click Here To Go Back To Index](#)

- (vii) where a sub-station or a switching station with apparatus having more than 2000 litres of oil is installed, whether indoor or outdoors, he shall take the following measures, namely:-
- (a) the baffle walls of four hours fire rating shall be provided between the apparatus,-
 - (i) where there is a single phase transformer banks in the switch-yards of generating stations and sub-stations;
 - (ii) on the consumer premises;
 - (iii) where adequate clearance between the units is not available.
 - (b) provisions shall be made for suitable oil soak pit and where use of more than 9000 litres of oil in any one oil tank, receptacle or chamber is involved, provision shall be made for the draining away or removal of any oil which may leak or escape from the tank, receptacle or chamber containing the same, and special precautions shall be taken to prevent the spread of any fire resulting from the ignition of the oil from any cause and adequate provision shall be made for extinguishing any fire which may occur;
 - (c) spare oil shall not be stored in the vicinity of any oil filled equipment in any such sub-station or switching station;
 - (d) all the transformers and switchgears shall be maintained in accordance with the maintenance schedules prepared in accordance with the relevant codes of practice of Bureau of Indian Standards;
 - (e) dry type of transformers only shall be used for installations inside the residential and commercial buildings;
- (viii) without prejudice to the above measures, he shall take adequate fire protection arrangement for quenching the fire in the apparatus;
- (ix) he shall ensure that the transformers of 10 MVA and above rating or in case of oil filled transformers with oil-capacity of more than 2000 litres are provided with fire fighting system as per IS - 3034: 1993 or with Nitrogen Injection Fire Protection system;
- (x) where it is necessary to locate the sub-station, or switching station in the basement, he shall take the following measures, namely:-
- (a) the room shall necessarily be in the first basement at the periphery of the basement;
 - (b) the entrances to the room shall be provided with fire resisting doors of 2 hour fire rating and the door shall always be kept closed and a notice of this effect shall be affixed on outer side of the door;

[Click Here To Go Back To Index](#)

- (c) a curb (sill) of a suitable height shall be provided at the entrance in order to prevent the flow of oil from a ruptured transformer into other parts of the basement;
 - (d) direct access to the transformer room shall be provided from outside and the surrounding walls shall be lined with fire bricks;
 - (e) the cables to primary side and secondary side shall have sealing at all floors and wall opening of at least two hours rating;
 - (f) Fire Retardant Low Smoke (FRLS) cable of two hours rating shall be used.
- (xi) he shall ensure that oil filled transformers installed indoors in other than residential or commercial buildings are placed at the ground floor or not below the first basement;
 - (xii) he shall ensure that cable trenches inside the sub-stations and switching stations containing cables are filled with sand, pebbles or similar non-inflammable materials or completely covered with non inflammable slabs;
 - (xiii) he shall ensure that unless the conditions are such that all the conductors and apparatus may be made dead at the same time for the purpose of cleaning or for other work, the said conductors and apparatus shall be so arranged that these may be made dead in sections, and that work on any such section may be carried on by a designated person without danger,
 - (xiv) only persons designated under sub-regulation (1) of regulation 3, shall carry out the work on live lines and apparatus.
- (3) All apparatus shall be protected against lightning and apparatus exceeding 220 kV shall also be protected against switching over voltages.
 - (4) The equipment used for protection and switching shall be adequately co-ordinated with the protected apparatus to ensure safe operation and to maintain the stability of the inter-connected units of the power system.
 - (5) The minimum clearances specified in Schedule-VIII shall be maintained for bare conductors or live parts of any apparatus in outdoor sub-stations, excluding overhead lines of High Voltage Direct Current installations.
 - (6) There shall not be tapping of another transmission line from the main line for 66 kV and above class of lines.

45. Inter-locks and protection for use of electricity at voltage exceeding 650 Volts: -

- (1) The owner shall ensure the following, namely:-
 - (i) isolators and the controlling circuit breakers shall be interlocked so that the isolators cannot be operated unless the corresponding breaker is in open position;

[Click Here To Go Back To Index](#)

- (ii) isolators and the corresponding earthing switches shall be inter-locked so that no earthing switch can be closed unless and until the corresponding isolator is in open position;
 - (iii) where two or more supplies are not intended to be operated in parallel, the respective circuit breakers or linked switches controlling the supplies shall be inter-locked to prevent possibility of any inadvertent paralleling or feedback;
 - (iv) when two or more transformers are operated in parallel, the system shall be so arranged as to trip the secondary breaker of a transformer in case the primary breaker of that transformer trips;
 - (v) all gates or doors which give access to live parts of an installation shall be inter-locked in such a way that these cannot be opened unless the live parts are made dead and proper discharging and earthing of these parts should be ensured before any person comes in close proximity of such parts;
 - (vi) where two or more generators operate-t in parallel and neutral switching is adopted, inter-lock shall be provided to ensure that generator breaker cannot be closed unless one of the neutrals is connected to the earthing system.
- (2) The following protection shall be provided in all systems and circuits to automatically disconnect the supply under abnormal conditions, namely: -
- (i) over current protection to disconnect the supply automatically if the rated current of the equipment, cable or supply line is exceeded for a time which the equipment, cable or supply line is not designed to withstand;
 - (ii) earth fault or earth leakage protection to disconnect the supply automatically if the earth fault current exceeds the limit of current for keeping the contact potential within the reasonable values;
 - (iii) gas pressure type and winding and oil temperature protection to give alarm and tripping shall be provided on all transformers of ratings 1000 kVA and above;
 - (iv) transformers of capacity 10 MVA and above shall be protected against incipient faults by differential protection;
 - (v) all generators with rating of 100 kVA and above shall be protected against earth fault or leakage;
 - (vi) all generators of rating 1000 kVA and above shall be protected against faults within the generator winding using restricted earth fault protection or differential protection or by both;
 - (vii) high speed bus bar differential protection along with local breaker back up protection shall be commissioned and shall always be available at all 132 kV and above voltage sub-stations and switching stations and generating stations connected with the grid:

[Click Here To Go Back To Index](#)

Provided that in respect of existing 132 kV sub-stations and switching stations having more than one incoming feeders, the high speed bus bar differential protection along with local breaker back up protection, shall be commissioned and shall always be available;

- (viii) every generating station and sub-station connected to the grid at 220 kV and above shall be provided with disturbance recording and event logging facilities and all such equipment shall be provided with time synchronization facility for global common time reference but wherever numerical relays with provision of recording fault data are installed, disturbance recorder and event logger may not be installed;
- (ix) distance protection and carrier communication protection shall be provided for all lines connecting to 400/220 kV substation.

46. Testing, Operation and Maintenance: -

- (1) Before approval is accorded by the Electrical Inspector under regulation 43 the manufacturer's test certificates shall, if required, be produced for all the routine tests as required under the relevant Indian Standards.
- (2) No new apparatus, cable or supply line of voltage exceeding 650 Volts shall be commissioned unless such apparatus, cable or supply line are subjected to site tests as per relevant code of practice of the Bureau of Indian Standards.
- (3) No apparatus, cable or supply line of voltage exceeding 650 V which has been kept disconnected, for a period of six months or more, from the system for alterations or repair, shall be connected to the system until such apparatus, cable or supply line are subjected to the relevant tests as per code of practice of Bureau of Indian Standards.
- (4) Notwithstanding the provisions of this regulation, the Electrical Inspector may require certain tests to be carried out before or after charging the installations.
- (5) All apparatus, cables and supply lines shall be maintained in healthy conditions and tests shall be carried out periodically as per the relevant code of practice of the Bureau of Indian Standards.
- (6) Records of all tests, tripping, maintenance works and repairs of all equipments cables and supply lines shall be duly kept in such a way that these records can be compared with earlier ones.
- (7) It shall be the responsibility of the owner of all installations of voltage exceeding 650 V to maintain and operate the installations in a condition free from danger and as recommended by the manufacturer or by the relevant codes of practice of the Bureau of Indian Standards.

[Click Here To Go Back To Index](#)

- (8) Failures of transformers and reactors of 20 MVA or MVAR and higher capacity shall be reported by the consumer and the suppliers of electricity, within forty eight hours of the occurrence of the failure, to the Central Electricity Authority and the reasons for failure and measures to be taken to avoid recurrence of failure shall be sent to the Central Electricity Authority within one month of the occurrence in the format given in Schedule-IX.

47. Precautions to be taken against excess leakage in case of metal sheathed electric supply lines: -

The following precautions shall be taken in case of electric supply lines other than overhead lines, for use at voltage exceeding 650 V; namely:-

- (i) the conductors of the cable except the cable with thermoplastic insulation without any metallic screen or armour shall be enclosed in metal sheathing which shall be electrically continuous and connected with earth, and the conductivity of the metal sheathing shall be maintained and reasonable precautions taken where necessary to avoid corrosion of the sheathing;
- (ii) the resistance of the earth connection with metallic sheath shall be kept low enough to permit the controlling circuit breaker or cut-out to operate in the event of any failure of insulation between the metallic sheath and the conductor.

Explanation- For the purpose of this regulation;

- (a) in the case of thermoplastic insulated and sheathed cables with metallic armour the metallic wire or tape armour, shall be considered as metal sheathing,
- (b) where an electric supply line as aforesaid has concentric cables and the external conductor is insulated from an outer metal sheathing and connected with earth, the external conductor may be regarded as the metal sheathing for the purposes of this regulation provided that the foregoing provisions as to conductivity are complied with.

48. Connection with earth for apparatus exceeding 650V: -

- (1) All non-current carrying metal parts associated with an installation of voltage exceeding 650 V shall be effectively earthed to a grounding system or mat which shall,-
 - (i) limit the touch and step potential to tolerable values;
 - (ii) limit the ground potential rise to tolerable values so as to prevent danger due to transfer of potential through ground, earth wires, cable sheath, fences, pipe lines, etc.;
 - (iii) maintain the resistance of the earth connection to such a value as to make operation of the protective device effective;

[Click Here To Go Back To Index](#)

(2) In the case of star connected system with earthed neutrals or delta connected system with earthed artificial neutral point,-

- (i) the neutral point of every generator and transformer shall be earthed by connecting it to the earthing system not by less than two separate and distinct connections:

Provided, that the neutral point of a generator may be connected to the, earthing system through an impedance to limit the fault current to the earth:

Provided further that in the case of multi-machine systems neutral switching may be resorted to, for limiting the injurious effect of harmonic current circulation in the system;

- (ii) the generator or transformer neutral shall be earthed through a suitable impedance where an appreciable harmonic current flowing in the neutral connection causes interference, with communication circuits;
- (iii) in case of the delta connected system the neutral point shall be obtained by the insertion of a grounding transformer and current limiting resistance or impedance wherever considered necessary at the commencement of such a system.
- (3) In case of generating stations, sub-stations and industrial installations of voltage exceeding 33 kV, the system neutral earthing and protective frame earthing may be, if system design so warrants integrated into common earthing grid provided the resistance to earth of combined mat does not cause the step and touch potential to exceed its permissible values.
- (4) Single phase systems of voltage exceeding 650 V shall be effectively earthed.
- (5) In the case of a system comprising electric supply lines having concentric cables, the external conductor shall be connected with earth.
- (6) Where a supplier proposes to connect with earth an existing system for use at voltage exceeding 650 V which has not hitherto been so connected with earth, he shall give not less than fourteen days notice in writing together with particulars of the proposed connection with earth to the telegraph-authority established under the Indian Telegraph Act, 1885 (13 of 1885).
- (7) Where the earthing lead and earth connection are used only in connection with earthing guards erected under overhead lines of voltage exceeding 650 V where they cross a telecommunication line or a railway line, and where such lines are equipped with earth leakage, the earth resistance shall not exceed twenty five ohms and the project authorities shall obtain No Objection Certificate (NOC) from Railway Authorities and Power and Telecommunication Co-ordination Committee before energisation of the facilities.

[Click Here To Go Back To Index](#)

- (8) Every earthing system belonging to either the supplier or the consumer shall be tested for its resistance to earth on a dry day during dry season not less than once a year and records of such tests shall be maintained and produced, if so required, before the Electrical Inspector.

49. General conditions as to transformation and control of electricity: -

- (1) Where electricity of voltage exceeding 650 V is transformed, converted, regulated or otherwise controlled in sub-stations or switching stations including outdoor sub-stations and outdoor switching stations to be transformed or in street boxes constructed underground, the following provisions shall be observed, namely:-
- (i) substations and switching stations shall preferably be erected above ground, but where necessarily constructed; underground due provisions for ventilation and drainage shall be made and any space housing switchgear shall not be used for storage of any materials especially inflammable and combustible materials or refuse;
 - (ii) outdoor sub-stations except pole type sub-stations and outdoor switching stations shall, unless the apparatus is completely enclosed in a metal covering connected with earth, the said apparatus also being connected with the system by armoured cables, be efficiently protected by fencing not less than 1.8 metres in height or other means so as to prevent access to the electric supply lines and apparatus therein by an undesignated person and the fencing of such area shall be earthed efficiently;
 - (iii) underground street boxes, other than sub-stations, which contain transformers shall not contain switches or other apparatus, and switches, cut-outs or other apparatus required for controlling or other purposes shall be fixed in separate receptacle above ground wherever practicable.
- (2) Where electricity is transformed, suitable connection shall be made by connecting with earth a point of the system at the lower voltage and also to guard against danger by reason of the said system becoming accidentally charged above its normal voltage by leakage from a contact with the system at the higher voltage.

50. Pole type sub-stations: -

Where platform type construction is used for a pole type sub-station and sufficient space, for a person to stand on the platform is provided, a substantial hand rail shall be built around the said platform and if the hand rail is of metal it shall be connected with earth;

Provided that in the case of pole type sub-station on wooden supports and wooden platform the metal hand-rail shall not be connected with earth,

51. Condensers: -

Suitable arrangement shall be made for immediate and automatic or manual discharge of every static condenser on disconnection of supply.

[Click Here To Go Back To Index](#)

52. Supply to luminous tube sign installations of voltage exceeding 650 Volts but not exceeding 33 kV:

- (1) Any person who proposes to use or who is using electricity for the purpose of operating a luminous tube sign installation, or who proposes to transform or is transforming electricity to a voltage exceeding 650 V but not exceeding 33 kV for any such purpose shall comply with the following conditions, namely:-
- (i) all live parts of the installation, including all apparatus and live conductors in the secondary circuit, but excluding the tubes except in the neighbourhood of their terminals, shall be inaccessible to undesignated persons and such parts shall be effectively screened;
 - (ii) irrespective of the method of obtaining the voltage of the circuit which feeds the luminous discharge tube sign, no part of any conductor of such circuit shall be in metallic connection, except in respect of its connection with earth, with any conductor of the supply system or with the primary winding of the transformer;
 - (iii) all live parts of an exterior installation shall be so disposed as to protect them against the effects of the weather and such installation shall be so arranged and separated from the surroundings as to limit, as far as possible, the spreading of fire;
 - (iv) the secondary circuit shall be permanently earthed at the transformer and the core of every transformer shall be earthed;
 - (v) where the conductors of the primary circuit are not in metallic connection with the supply conductors, one phase of such primary circuit shall be permanently earthed at the motor generator or converter, or at the transformer and an earth leakage circuit breaker of sufficient rating shall be provided on the side of voltage not exceeding 250 V to detect the leakage in such luminous tube sign installations;
 - (vi) a sub-circuit which forms the primary circuit of a fixed luminous discharge tube sign installation shall be reserved solely for such purpose;
 - (vii) a separate primary final sub-circuit shall be provided ,for each transformer or each group of transformers having an aggregate input not exceeding 1,000 volt-amperes, of a fixed luminous discharge tube sign installation;
 - (viii) an interior installation shall be provided with suitable adjacent means for disconnecting all phases of the supply except the "neutral" in a 3-phase, 4-wire circuit;
 - (ix) for installations on the exterior of a building a. suitable emergency fire-proof linked switch to operate on all phases except the neutral in a 3-phase, 4-wire circuit shall be provided and fixed in a conspicuous position at not more than 1.70 meters above the ground;

[Click Here To Go Back To Index](#)

- (x) a special "caution" notice shall be affixed in a conspicuous place on the door of every enclosure of voltage exceeding 650 V but not exceeding 33 kV to the effect that the supply must be cut off before the enclosure is opened;
 - (xi) where static condensers are used, they shall be installed on the load side of the fuses and the primary side of the transformers where the voltage does not exceed 250 V;
 - (xii) where static condensers are used on primary side, provision shall be made for automatic or manual discharging of the condensers when the supply is cut off;
 - (xiii) before using the static condensers or any interrupting device on the voltage exceeding 650 V, the executing agencies shall test and ensure that automatic discharging device is functional thereon.
- (2) The owner or user of any luminous tube sign or similar installation of voltage exceeding 650 V but not exceeding 33 kV shall not bring the same into use without giving to the Electrical Inspector not less than fourteen days notice in writing of his intention so to do

53. Supply to electrode boilers of voltage exceeding 650 Volt but not exceeding 33 kV: -

- (1) Where a system having a point connected with earth is used for supply of electricity to an electrode boiler of voltage exceeding 650 V which is also connected with earth, the owner or user of electrode boiler shall comply with the following conditions, namely:-
- (i) the metal work of the electrode boiler shall be efficiently connected to the metal sheathing and metallic armouring if any, of the electric supply line of voltage exceeding 650 V but not exceeding 33 kV whereby electricity is supplied to the electrode boiler;
 - (ii) the supply of electricity at voltage exceeding 650 V to the electrode boiler shall be controlled by a suitable circuit-breaker so set as to operate in the event of the phase currents becoming unbalanced to the extent of ten per cent of the rated current consumption of the electrode boiler under normal conditions of operation:

Provided that if in any case a higher setting is essential to ensure stability of operation of the electrode boiler, the setting may be increased so as not to exceed fifteen per cent of the rated current consumption of the electrode boiler under normal conditions of operation;
 - (iii) an inverse time element device may be used in conjunction with the aforesaid circuit breaker to prevent the operation thereof unnecessarily on the occurrence of unbalanced phase currents of momentary or short duration;
 - (iv) the supplier or owner shall serve a notice in writing on the telegraph-authority at least seven days prior to the date on which such supply of electricity is to be afforded specifying the location of every point, including the earth connection of the electrode boiler, at which the system is connected with earth.

[Click Here To Go Back To Index](#)

- (2) The owner or user of any electrode boiler of voltage exceeding 650 V shall not bring the same into use without giving the Electrical Inspector not less than fourteen days notice in writing of his intention so to do.

54. Supply to X-ray and high frequency installations: -

- (1) Any person, who proposes to use or who is using electricity for the purpose of operating an X-ray or similar high-frequency installation, other than portable units or shock-proof self contained and stationary units shall comply the following conditions, namely:-
- (i) mechanical barriers shall be provided to prevent too close an approach to any parts of the X-ray apparatus of voltage exceeding 650 V but not exceeding 33 kV, except the X-ray tube and its leads, unless such parts of voltage exceeding 650 V but not exceeding 33 kV have been rendered shock proof by being shielded by earthed metal or adequate insulating material;
 - (ii) where generators operating at 300 kV peak or more are used, such generators shall be installed in rooms separate from those containing the other equipment and any step-up transformer employed shall be so installed and protected as to prevent danger;
 - (iii) a suitable switch shall be provided to control the circuit supplying a generator, and shall be so arranged as to be open except while the door of the room housing the generator is locked from the outside;
 - (iv) X-ray tubes used in therapy shall be mounted in an earthed metal enclosure;
 - (v) every X-ray machine shall be provided with a milliammeter or other suitable measuring instruments readily visible from the control position and connected, if practicable, in the earthed lead, but guarded if connected in the lead of voltage: exceeding 650 V but not exceeding 33 kV:

Provided that earth leakage circuit breaker of sufficient rating shall be provided on the side wherein voltage does not exceed 250 V to detect the leakage in such X-ray installations.

Explanation; - For the purpose of this regulation "shock proof \ as applied to X-ray and high-frequency equipment, :shall mean that such equipment is guarded with earthed metal so that no person may come into contact with any live part.

- (2)
- (i) in the case of non-shock proof equipment, overhead conductors of voltage exceeding 650 V but not exceeding 33 kV, unless suitably guarded against personal contact, shall be adequately spaced and high voltage leads on tilting tables and fluoroscopes shall be adequately insulated or so ; surrounded by barriers as to prevent inadvertent contact;

[Click Here To Go Back To Index](#)

- (ii) the circuit of voltage not exceeding 250 V of the step up transformer shall contain a manually operated control device having overload protection, in addition to the over current device for circuit protection, and these devices shall have no exposed live parts and for diagnostic work there shall be an additional switch in the said circuit, which shall be of one of the following types:-
 - (a) a switch with a spring or other mechanism that will open automatically except while held close by the operator, or,
 - (b) a time switch which will open automatically after a definite period of time for which it has been set;
 - (iii) if more than one piece of apparatus be operated from the same source of voltage exceeding 650 V, each shall be provided with a switch of voltage exceeding 650 V to give independent control;
 - (iv) low frequency current-carrying parts of a machine of the quenched- gap or open gap type shall be so insulated or guarded that they cannot be touched during operation but the high frequency circuit-proper which delivers high-frequency current normally for the therapeutic purposes shall be exempt from such insulation;
 - (v) all X-ray generators having capacitors shall have suitable means for discharging the capacitors manually;
 - (vi) except in the case of self-contained units, all 200 kV peak or higher X-ray generators shall have a sphere gap installed in the system of voltage exceeding 650 V but not exceeding 33 kV adjusted so that it will break down on over voltage surges.
- (3)
- (i) all non-current carrying metal parts of tube stands, fluoroscopes and other apparatus shall be properly earthed and insulating floors, mats or platforms shall be provided for operators in proximity to parts of voltage exceeding 650V unless such parts have been rendered shock proof;
 - (ii) where short wave therapy machines are used, the treatment tables and examining chairs shall be wholly non-metallic.
- (4) The owner of any X-ray installation or similar high frequency apparatus shall not bring the same into use without giving to the Electrical Inspector not less than fourteen days notice in writing of his intention to do so:

Provided that the aforesaid notice shall not be necessary in the case of shock-proof portable X-ray and high-frequency equipment which have been inspected before the commencement of their use and periodically thereafter.

[Click Here To Go Back To Index](#)

Chapter VII

Safety requirements for overhead lines, underground cables and generating stations

55. Material and strength:-

- (1) All conductors of overhead lines other than those specified in regulation 68 shall have a breaking strength of not less than 350 kg.
- (2) Where the voltage does not exceed 250 V and the span is of less than fifteen metres and is drawn through the owner's or consumer's premises, a conductor having an actual breaking strength of not less than 150 kg may be used.

56. Joints.-

- (1) No conductor of an overhead line shall have more than one joint in a span and joints between conductors of overhead lines shall be mechanically and electrically secure under the conditions of operation.
- (2) The ultimate strength and the electrical conductivity of the joint shall be as per relevant Indian Standards.

57. Maximum stresses and factors of safety.-

- (1) The load and permissible stresses on the structural members, conductors and ground wire of self supporting steel lattice towers for overhead transmission lines shall be in accordance with the specifications laid down, from time to time, by the Bureau of Indian Standards.
- (2) Overhead lines not covered in sub-regulation (1) shall have the following minimum factors of safety, namely:-

(i)	for metal supports	1.5
(ii)	for mechanically processed concrete supports	2.0
(iii)	for hand-moulded concrete supports	2.5
(iv)	for wood supports	3.0

- (3) The minimum factors of safety shall be based on such load as may cause failure of the, support to perform its function, assuming that the foundation' and other components of the structure are intact.
- (4) The load shall be equivalent to the yield point stress or the modulus of rupture, as the case may be, for supports subject to bending and vertical loads and the crippling load for supports used as strut.
- (5) The strength of the supports of the overhead lines in the direction of the line shall not be less than one-fourth of the strength required in the direction transverse to the line.

[Click Here To Go Back To Index](#)

- (6) The minimum factor of safety for stay-wires, guard-wires or bearer-wires shall be 2.5 based on the ultimate tensile strength of the wire.
- (7) The minimum factor of safety for conductors shall be two, based on their ultimate tensile strength, in addition, the conductor's tension at 32° C, without external load, shall not exceed the following percentages of the ultimate tensile strength of the conductor:-

(i)	Initial unloaded tension	35 per cent
(ii)	Final unloaded tension	25 per cent

Provided that for the conductors having a cross section of a generally triangular shape, such as conductors composed of 3-wires, the final unloaded tension at 32° C shall not exceed thirty per cent of the ultimate tensile strength of such conductor.

- (8) For the purpose of calculating the factors of safety in sub-regulation (2), the following conditions shall be observed, namely:-
- (i) the maximum wind pressure shall be as specified in the relevant Indian Standards;
- (ii) for cylindrical lines the effective area shall be taken as full projected area exposed to wind pressure; and
- (iii) the maximum and minimum temperatures shall be such as specified in the relevant Indian Standards.
- (9) Notwithstanding anything contained in sub-regulation (2) to (8) in localities where overhead lines are liable to accumulations of ice or snow, the load and permissible stresses on the structural members, conductors and ground wire of self supporting steel lattice towers for overhead transmission lines shall be in accordance with the specifications laid down, from time to time, by the Bureau of Indian Standards or as specified by Appropriate Government, by order in writing.

58. Clearance above ground of the lowest conductor of overhead lines.-

- (1) No conductor of an overhead line, including service lines, erected across a street shall at any part thereof be at a height of less than-
- (i) for lines of voltage not exceeding 650 Volts - 5.8 meters
- (ii) for lines of voltage exceeding 650 Volts but not exceeding 33 kV - 6.1 meters
- (2) No conductor of an overhead line, including service lines, erected along any street shall at any part thereof be at a height less than-

[Click Here To Go Back To Index](#)

- (i) for lines of voltage not exceeding 650 Volts - 5.5 metres
- (ii) for lines of voltage exceeding 650 Volts but not exceeding 33 kV - 5.8 metres
- (3) No conductor of an overhead line including service lines, erected elsewhere than along or across any street shall be at a height less than –
- (i) for lines of voltage up to and including 11,000 Volts, if bare - 4.6 metres
- (ii) for lines of voltage up to and including 11,000 Volts, if insulated - 4.0 metres
- (iii) for lines of voltage exceeding 11,000 Volts but not exceeding 33 kV - 5.2 metres
- (4) For lines of voltage exceeding 33 kV the clearance above ground shall not be less than 5.2 metres plus 0.3 metre for every 33,000 Volts or part thereof by which the voltage of the line exceeds 33,000 Volts;
- Provided that the minimum clearance along or across any street shall not be less than 6.1 metres.
- (5) For High Voltage Direct Current (HVDC) lines, the clearance above ground shall not be less than:-

Sl.No.	DC Voltage (kV)	Ground Clearance (mtrs.)
1	100 kV	6.1
2	200 kV	7.3
3	300 kV	8.5
4	400 kV	9.4
5	500 kV	10.6
6	600 kV	11.8
7	800 kV	13.9

- (6) Ground clearances shall be as specified in schedule-X.

59. Clearance between conductors and trolley wires.-

- (1) No Conductor of an overhead line crossing a tramway or trolley bus route using trolley wires shall have less than the following clearances above any trolley wire-
- (i) lines of voltage not exceeding 650 Volts - 1.2 metres

Provided that where an insulated conductor suspended from a bearer wire crosses over a trolley wire the minimum clearance for such insulated conductor shall be 0.6 metre.

[Click Here To Go Back To Index](#)

- (ii) lines of voltage exceeding 650 Volts
up to and including 11,000 Volts - 1.8. metres
 - (iii) lines of voltage exceeding 11,000 Volts - 2.5 metres
but not exceeding 33,000 Volts
 - (iv) lines of voltage exceeding 33 kV - 3.0 metres
- (2) In any case of a crossing specified in sub-regulation (1), whoever lays his line later in time, shall provide the clearance between his own line and the line which will be crossed in accordance with the provisions of the said sub-regulation:

Provided that if the later entrant is the owner of the lower line and is not able to provide adequate clearance, he shall bear the cost for modification of the upper line so as to comply with this sub-regulation.

60. Clearance from buildings of lines of voltage and service lines not exceeding 650 Volts.-

- (1) An overhead line shall not cross over an existing building as far as possible and no building shall be constructed under an existing overhead line.
- (2) Where an overhead line of voltage not exceeding 650 V passes above or adjacent to or terminates on any building, the following minimum clearances from any accessible point, on the basis of maximum sag, shall be observed, namely:-
 - (i) for any flat roof, open balcony, varandah roof and lean-to-roof-
 - (a) when the line passes above the building a vertical clearance of 2.5 metres from the highest point, and
 - (b) when the line passes adjacent to the building a horizontal clearance of 1.2 metres from the nearest point, and
 - (ii) for pitched roof-
 - (a) when the line passes above the -building a vertical clearance of 2.5 metres immediately under the line, and
 - (b) when the line passes adjacent to the building a horizontal clearance of 1.2 metres.
- (3) Any conductor so situated as to have a clearance less than that specified above shall be adequately insulated and shall be attached at suitable intervals to a bare earthed bearer wire having a breaking strength of not less than 350 kg.
- (4) The horizontal clearance shall be measured when the line is at a maximum deflection from the vertical due to wind pressure.

[Click Here To Go Back To Index](#)

(5) Vertical and horizontal clearances shall be as specified in schedule-X.

Explanation: - For the purpose of this regulation, the expression "building" shall be deemed to include any structure, whether permanent or temporary.

61. Clearances from buildings of lines of voltage exceeding 650 V.-

- (1) An overhead line shall not cross over an existing building as far as possible and no building shall be constructed under an existing overhead line.
- (2) Where an overhead line of voltage, exceeding 650 V passes above or adjacent to any building or part of a building it shall have on the basis of maximum sag a vertical clearance above the highest part of the building immediately under such line, of not less than-
- (i) for lines of voltages exceeding 650 Volts up to and including 33,000 Volts - 3.7 metres
 - (ii) for lines of voltages exceeding 33 kV - 3.7 metres plus 0.30 metre for every additional 33,000 Volts or part thereof.
- (3) The horizontal clearance between the nearest conductor and any part of such building shall, on the basis of maximum deflection due to wind pressure, be not less than-
- (i) for lines of voltages exceeding 650 V up to and including 11,000 Volts - 1.2 metres
 - (ii) for lines of voltages exceeding 11,000 V and up to and including 33,000 V - 2.0 metres
 - (iii) for lines of voltages exceeding 33 kV - 2.0 metres plus 0.3 metre fore every additional 33kV or part thereof
- (4) For High Voltage Direct Current (HVDC) systems, vertical clearance and horizontal clearance, on the basis of maximum deflection due to wind pressure, from buildings shall be maintained as below:

Sl.No	DC Voltage (kV)	Vertical Clearance (mtrs.)	Horizontal Clearance (mtrs.)
1.	100 kV	4.6	2.9
2.	200 kV	5.8	4.1
3.	300 kV	7.0	5.3
4.	400 kV	7.9	6.2
5.	500 kV	9.1	7.4
6.	600 kV	10.3	8.6
7.	800 kV	12.4	10.7

[Click Here To Go Back To Index](#)

(5) Vertical and horizontal clearances shall be as specified in schedule-X.

Explanation: - For the purpose of this regulation the expression "building" shall be deemed to include any structure, whether permanent or temporary.

62. Conductors at different voltages on same supports.-

Where conductors forming parts of systems at different voltages are erected on the same supports, the owner shall make adequate provision to guard against danger to linemen and others, from the lower voltage system being charged above its normal working voltage, by leakage from or contact with the higher voltage system and the methods of construction and the applicable minimum clearances between the conductors of the two systems shall be as specified in regulation 69 for lines crossing each other.

63. Erection or alteration of buildings, structures, flood banks and elevation of roads.-

- (1) If at any time subsequent to the erection of an overhead line, whether covered with insulating material or not, any person proposes to erect a new building or Structure or flood bank or to raise any road level or to carry out any other type of work whether permanent or temporary or to make in or upon any building, or structure or flood bank or road, any, permanent or temporary addition or alteration, he and the contractor whom he employs to carry out the erection, addition or alteration, shall give intimation in writing of his intention to do so, to the supplier or owner and to the Electrical Inspector and shall furnish therewith a scale drawing showing the proposed building, structure, flood bank, road or any addition or alteration and scaffolding thereof required during the construction.
- (2) On receipt of such intimation, the supplier or owner shall examine,-
 - (i) whether the line under reference was laid in accordance with the provisions of these regulations and any other law;
 - (ii) whether it is technically feasible;
 - (iii) whether it meets the requirement of Right of Way (ROW);
 - (iv) whether such person was liable to pay the cost of alteration of the overhead line and if so, send a notice without undue delay, to such person together with an estimate of the cost of the expenditure likely to be incurred to so alter the overhead line and require him to deposit, within thirty days of the receipt of the" notice, with the supplier or owner, the amount of the estimated cost.
- (3) thereof shall If such person disputes the cost of alteration of the overhead line estimated by die supplier or owner or even the responsibility to pay such cost, the dispute may be referred to the Electrical Inspector whose decision be final.

[Click Here To Go Back To Index](#)

- (4) The Electrical Inspector shall estimate the cost of alteration of overhead line on the following basis, namely:-
- (i) the cost of material used on the alteration after crediting the depreciated" cost of the material which shall be available from the existing line;
 - (ii) the wages of labour employed in affecting the alteration;
 - (iii) supervision charges to the extent of-fifteen per cent of the wages mentioned in sub clause (ii); and charges incurred by the supplier or owner in complying with the provisions of section 67 of the Act, in respect of such alterations.
- (5) Any addition or alteration to the building or structure shall be allowed only after the deposit of such estimated cost to the supplier or owner.
- (6) No work upon such building, structure, flood bank, road and addition or alteration thereto shall be commenced or continued until the Electrical Inspector has certified that the provisions of regulation 58, 60 and 61 should not be contravened either during or after the aforesaid construction:
- Provided, that the Electrical Inspector may, if he is satisfied that the overhead line has been so guarded as to secure the protection of persons or property from injury, certify that the work may be executed prior to the alteration of the overhead line or in the case of temporary addition or alteration, without alteration of the overhead line.
- (7) The supplier or owner shall, on receipt of such deposit, alter the overhead line in such a way that it does not contravene the provisions regulation 58, 60 and 61 either during or after such construction within two months from the date of such deposit or within such longer period as the Electrical Inspector may allow.

64. Transporting and storing of material near overhead lines.-

- (1) No rods, pipes or similar materials shall be taken below, or in the vicinity of, any bare overhead conductors or lines if these contravene the provisions of regulations 60 and 61 unless such materials" are transported under the direct supervision of a person designated in this behalf by the owner of such overhead conductors or lines. No rods, pipes or other similar materials shall be brought within the flash over distance of bare live conductors or lines.
- (2) No material or earth work or Agricultural produce shall be dumped or stored, no trees grown below or in the vicinity of, bare overhead conductors, or lines to contravene the provision of regulations 60 and 61.
- (3) No flammable material shall be stored under the electric supply line.
- (4) No fire shall be allowed above underground cables.
- (5) Firing of any material below electric lines shall be prohibited.

[Click Here To Go Back To Index](#)

65. General clearances. –

- (4) For the purpose of computing the vertical clearance of an overhead line, the maximum sag of any conductor shall be calculated on the basis of the maximum sag in still air and the maximum temperature as specified under regulations 57 and computing any horizontal clearance of an overhead line the maximum deflection of any conductor shall be calculated on the basis of the wind pressure specified under regulations 57.
- (5) No blasting for any purpose shall be done within 300 metres from the boundary of a sub-station or from the electric supply lines of voltage exceeding 650 V or tower structure thereof without the written permission of the owner of such sub-station or electric supply lines or tower structures and in case of mining lease hold area, without the written permission of the Inspector of Mines.
- (6) No cutting of soil within ten meters from the tower structure of 132 kV and above voltage level shall be permitted without the written permission of the owner of tower structure.
- (1) No person shall construct brick kiln or other polluting units near the installations or transmission lines of 220 kV and above within a distance of 500 metres.

66. Routes proximity to aerodromes. –

Overhead lines shall not be erected in the vicinity of aerodromes unless the Airport Authorities have approved in writing the route of the proposed lines as-per relevant Indian Standards.

67. Maximum interval between supports. –

All conductors shall be attached to supports at intervals not exceeding the safe limits based on the ultimate tensile strength of the conductor and the factor of safety specified under regulations 57

Provided that in the case of overhead lines carrying conductors of voltage not exceeding 650 V when erected in, over, along or across any street, the interval shall not, without the consent in writing of the Electrical Inspector, exceed 65 metres.

68. Conditions to apply where telecommunication lines and power lines are carried on same supports.

- (1) Every overhead telecommunication line erected on supports carrying a power line shall consist of conductors each having a breaking strength of not less than 270 kg.
- (2) Every telephone used on a telecommunication line erected on supports carrying a power line shall be suitably guarded against lightning and shall be protected by cut-outs.
- (3) Where a telecommunication line is erected on supports carrying a power line of voltage exceeding 650 V, arrangement shall be made to safeguard any person against injury resulting from contact, leakage or induction between such power and telecommunication lines.

[Click Here To Go Back To Index](#)

69. Lines crossing or approaching each other and lines crossing street and road.-

Where an overhead line crosses or is in proximity to any telecommunication line,; the owner of either the overhead line or the telecommunication line, whoever lays his line later, shall arrange to provide for protective devices or .guarding arrangement and shall observe the following provisions, namely:-

- (i) when it is intended to erect a telecommunication line or an overhead line which will cross or be in proximity to an overhead line or a telecommunication line, as the case may be, the person proposing to erect such line shall give one month's notice of his' intention so to do along with the relevant details of protection and drawings to the owner of the existing line;
- (ii) guarding shall be provided where lines of voltage not exceeding 33 kV cross a road or street;
- (iii) where an overhead line crosses or is in proximity to another overhead line, guarding arrangements shall be provided so to guard against the possibility of their coming into contact with each other;
- (iv) where an overhead line crosses another overhead line, clearances shall be as under:-

(Minimum clearances in metres between lines crossing each other)

Sl. No	Nominal System Voltage	11-66 kV	110-132 kV	220 kV	400 kV	800 kV
1.	Low and Medium	2.44	3.05	4.58	5.49	7.94
2.	11-66 kV	2.44	3.05	4.58	5.49	7.94
3.	110-132 kV	3.05	3.05	4.58	5.49	7.94
4.	220 kV	4.58	4.58	4.58	5.49	7.94
5.	400 kV	5.49	5.49	5.49	5.49	7.94
6.	800 kV	7.94	7.94	7.94	7.94	7.94

Provided that no guarding are required when line of voltage exceeding 33 kV crosses over another line of 250 V and above voltage or a road or a tram subject to the condition that adequate clearances are provided between the lowest conductor of the line of voltage exceeding 33 kV and the top most conductor of the overhead line crossing underneath the line of voltage exceeding 33 kV and the clearances as stipulated in regulation 58 from the topmost surface of the road maintained;

- (v) where an overhead direct current (DC) line crosses another overhead line, clearances shall be as under:-

[Click Here To Go Back To Index](#)

(Minimum clearances in metres between AC and DC lines crossing each other)

Sl. No.	System Voltage AC/DC	100 kV DC	200 kV DC	300 kV DC	400 kV DC	500 kV DC	600 kV DC
1.	Low and Medium AC	3.05	4.71	5.32	6.04	6.79	7.54
2.	11-66W AC	3.05	4.71	5.32	6.04	6.79	7.54
3.	110-132 kV AC	3.05	4.71	5.32	6.04	6.79	7.54
4.	220 kV AC	4.58	4.71	5.32	6.04	6.79	7.54
5.	200 kV DC	4.71	4.71	5.32	6.04	6.79	7.54
6.	300 kV AC	5.32	5.32	5.32	6.04	6.79	7.54
7.	400 kV AC	5.49	5.49	5.49	6.04	6.79	7.54
8.	400 kV DC	6.04	6.04	6.04	6.04	6.79	7.54
9.	500 kV DC	6.79	6.79	6.79	6.79	6.79	7.54
10.	600 kV DC	7.54	7.54	7.54	7.54	7.54	7.54
11.	800kVDC	7.94	7.94	7.94	7.94	7.94	7.94

- (vi) a person erecting or proposing to erect a line which may cross or be in proximity with an existing line, shall provide arrangements on his own line or require the owner of the other overhead line to provide guarding arrangements as referred to in clause (iii) and (iv);
- (vii) in all cases referred to in this regulation the expenses of providing the guarding arrangements or protective devices shall be borne by the person whose line was last erected;
- (viii) where two lines cross, the crossing shall be made as nearly at right angles as the nature of the case admits and as near the support of the line as practicable, and the support of the lower line shall not be erected below the upper line;
- (ix) the guarding arrangements shall ordinarily be carried out by the owner of the supports on which it is made and he shall be responsible for its efficient maintenance.

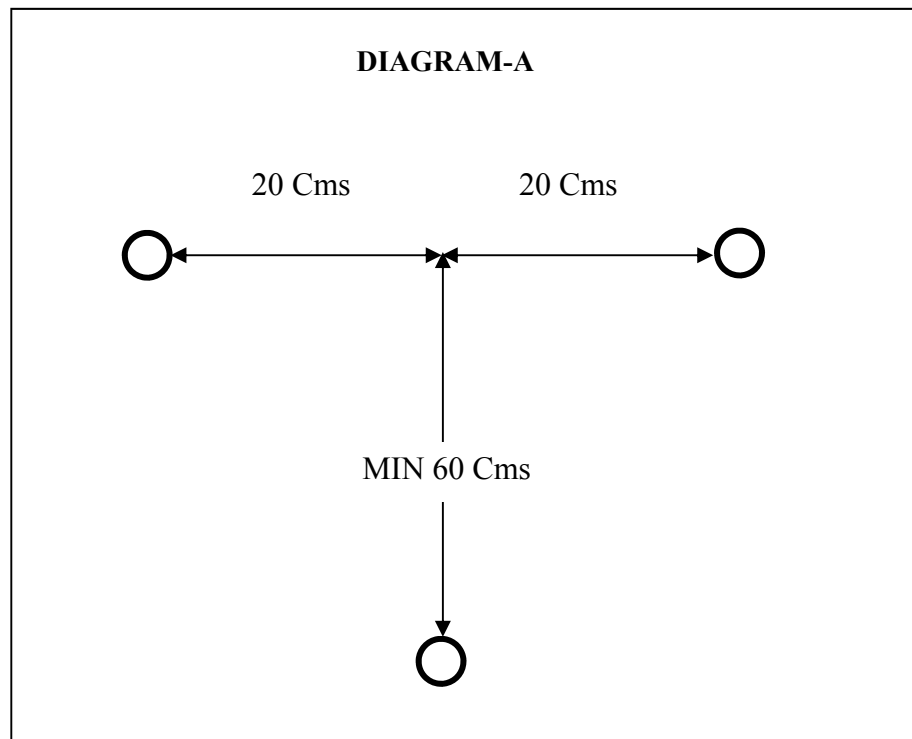
70. Guarding. –

- (1) Where guarding is required under these regulations the following shall be observed, namely:-
 - (i) every guard-wire shall be connected with earth at each point at which its electrical continuity is broken;
 - (ii) every guard-wire shall have an actual breaking strength of not less than 635 kg and, if made of iron or steel, shall be galvanised;
 - (iii) every guard-wire or cross-connected systems of guard-wires shall have sufficient current-carrying capacity to ensure them rendering dead, without risk of fusing of the guard-wire or wires, till the contact of any live wire has been removed.

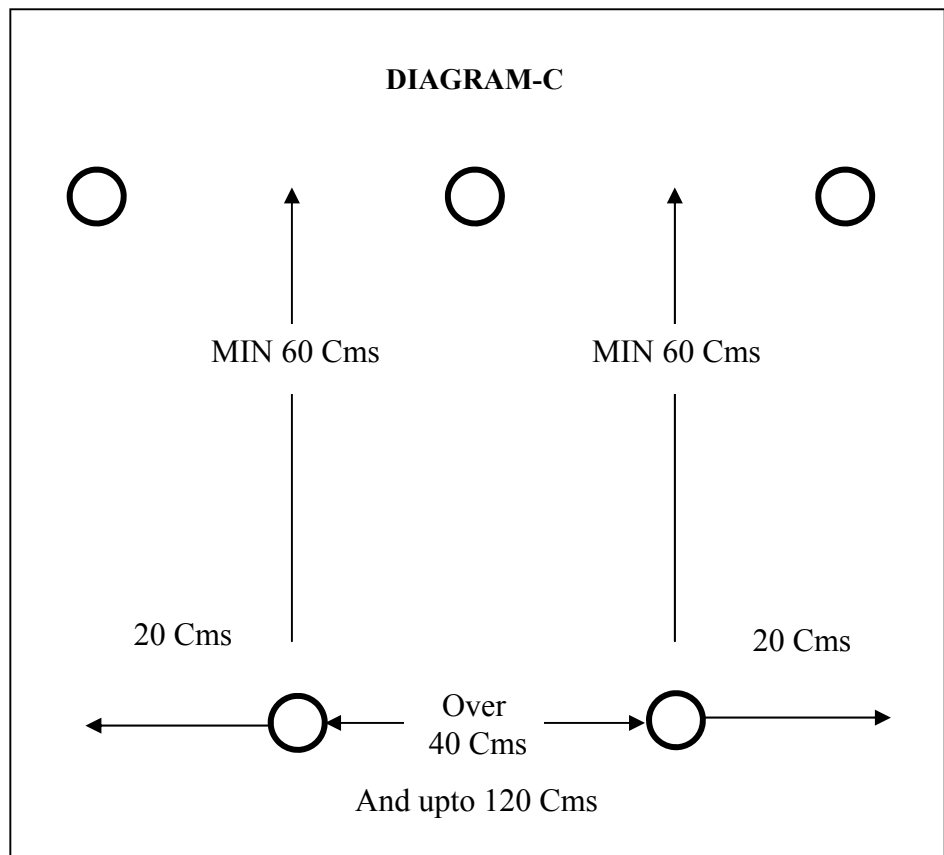
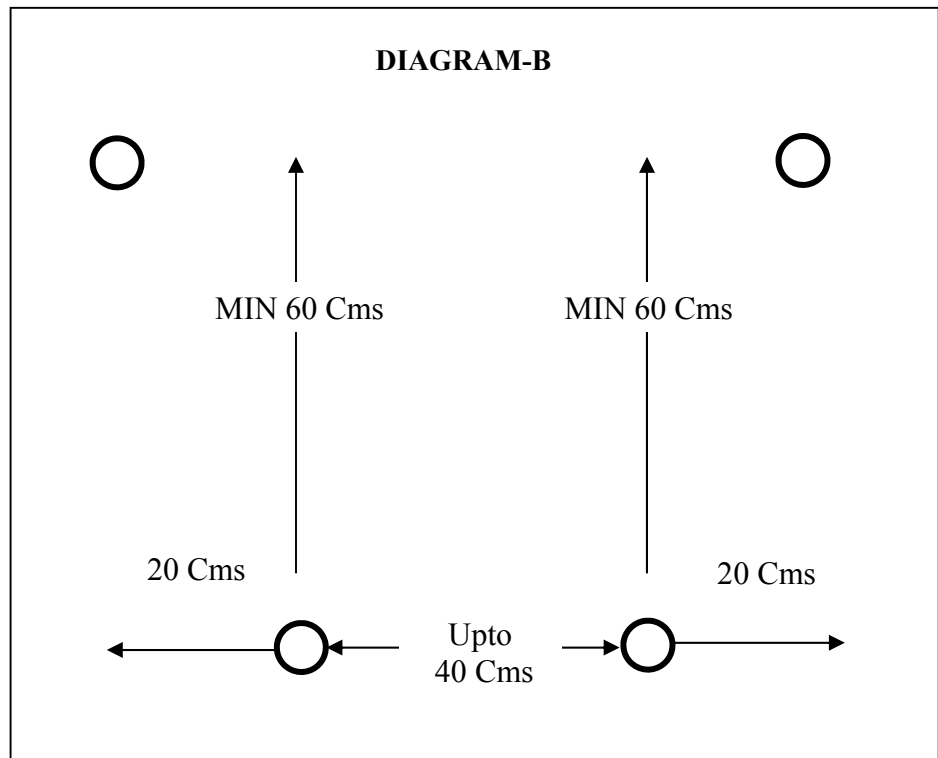
[Click Here To Go Back To Index](#)

(2) In the case of a line crossing over a trolley wire the guarding shall be subjected to the following conditions, namely:-

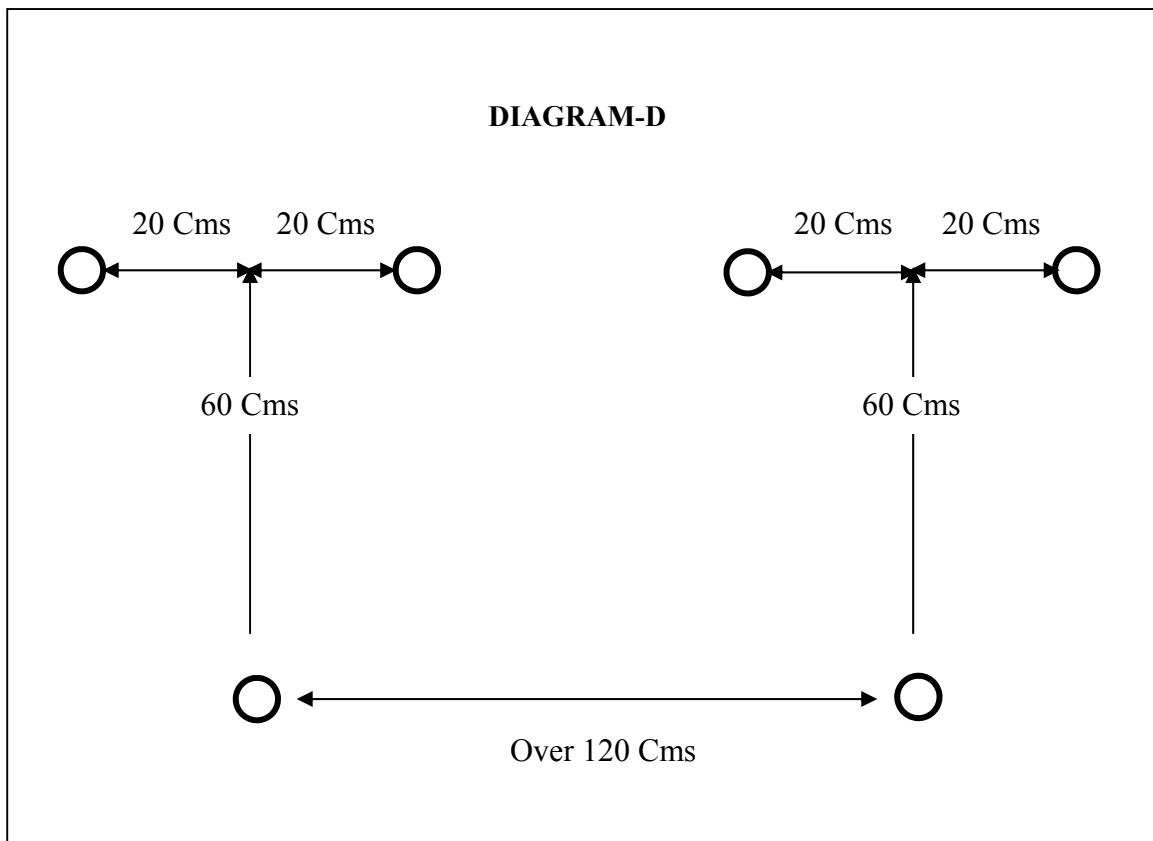
- (i) where there is only one trolley-wire, two guard wires shall be erected as in DIAGRAM-A;
- (ii) where there are two trolley -wires and the distance between them does not exceed 40cms, two guard-wires shall be erected as in DIAGRAM-B;
- (iii) where there are two trolley wires and the distance between them exceeds 40cms but does not exceed 1.2 metres, three guard-wires shall be erected as in DIAGRAM-C;
- (iv) where there are two trolley-wires and the distance between them exceeds 1.2 metres, each trolley-wire shall be separately guarded as in DIAGRAM-D;
- (v) the rise of trolley boom shall be so limited that when the trolley leaves the trolley-wire, it shall not foul the guard-wires; and
- (vi) where a telegraph-line, is liable to fall or be blown down upon an arm, stay-wire or span-wire and so slide-down upon a trolley-wire, guard hooks shall be provided to prevent such sliding.



[Click Here To Go Back To Index](#)



[Click Here To Go Back To Index](#)



71. Service lines from overhead lines. –

No service-line or tapping shall be taken off an overhead line except at a point of support:

Provided that the number of tapping per conductor shall not be more than four in case of connections at voltage not exceeding 650 V.

72. Earthing.-

- (1) All metal supports and all reinforced and pre-stressed cement concrete supports of overhead lines and metallic fittings attached thereto, shall be either permanently and efficiently earthed by providing a continuous earth wire and securely fastening to each pole and connecting with earth ordinarily at three points in every km. with the spacing between the points being as nearly equidistant as possible or each support and the metallic fitting attached thereto shall be efficiently earthed.
- (2) Metallic bearer wire used for supporting -insulated wire of overhead service lines of voltage not exceeding 650 V shall be efficiently earthed or insulated.
- (3) Each stay-wire shall be similarly earthed unless insulator has been placed in it at a height not less than 3.0 metres from the ground.

[Click Here To Go Back To Index](#)

73. Safety and protective devices.-

- (1) Every overhead line which is not being suspended from a dead bearer wire, not being covered with insulating material and not being a trolley-wire, is erected over any part of a street or other public place or in any factory or mine or on any consumer's premises shall be protected with earth gaurding for rendering the line electrically harmless in case it breaks
- (2) An Electrical Inspector may, by notice in writing, require the owner of any such overhead line, wherever it may be erected, to protect it in the manner specified in sub-regulation (1).
- (3) The owner of every overhead line of voltage exceeding 650 V shall make adequate arrangements as per relevant Indian Standards to prevent undesigned persons from ascending any of the supports of such overhead lines which can be easily climbed upon without the help of a ladder or special appliances.

Explanation,- For the purpose of this regulation, rails, reinforced cement concrete poles and pre-stressed cement concrete poles without steps, tubular poles, wooden supports without steps, I-sections and channels' shall be deemed as supports which cannot be easily climbed upon.

74. Protection against lightning.-

- (1) The owner of every overhead line, sub-station or generating station which is exposed to lightning shall adopt efficient means for diverting to earth any electrical surges due to lightning which may result into injuries.
- (2) The earthing lead for any lightning arrestor shall not pass through any iron or steel pipe, but shall be taken as directly as possible from the lightning arrestor "without touching any metal part to a separate-vertical ground electrode or junction of the earth mat already provided for the sub-station of voltage exceeding 650 V subject to the avoidance of bends wherever practicable.

75. Unused overhead lines. –

Where an overhead line ceases to be used as an electric supply line:

- (i) the owner shall maintain it in a safe mechanical condition in accordance with regulation 57 or remove it.
- (ii) the Electrical Inspector shall, by a notice in writing served on the owner, require him to maintain it in a safe mechanical condition or to remove it within thirty days of the receipt of the notice.

76. Laying of cables. –

- (1) No underground power cable of voltage exceeding 33 kV shall be laid without a minimum underground depth of 1.2 meters.
- (2) No underground telecommunication cable shall be laid without a minimum separation distance of 0.6 meters to the underground power cable of voltage exceeding 33 kV.

[Click Here To Go Back To Index](#)

77. Protection against electromagnetic interference. –

The owner of every overhead power line of voltage level 11 kV or higher shall submit proposal for obtaining Power Telecommunication Co-ordination Committee clearance to ensure safety of the personnel and telecom equipment.

[Click Here To Go Back To Index](#)

Chapter VIII

Safety requirements for Electric Traction

78. Application of chapter.-

- (1) The regulations in this chapter shall apply only where electricity is used for the purposes of traction:

Provided that nothing in this chapter shall apply to electricity used for the public carriage of passengers, animals or goods on, or for- the lighting or ventilation of the rolling stock of any railway or tramway subject to the provisions of the Railways Act, 1989 (24 of 1989).

- (2) In this chapter the conductor used for transmitting electricity to a vehicle is referred to as the "line" and the other conductor as the "return".
- (3) The owner of the line, return, rails or trolley wire, as the case may be, shall be responsible for the observance of regulations 79 to 92. Before an application is made by the owner of an installation of voltage exceeding 650 V to the Electrical Inspector for permission to commence or recommence supply after such installation has been disconnected for six months
- (4) and above, the supplier shall ensure that the electric supply lines or apparatus at voltage exceeding 650 V belonging to him are placed in position, properly connected and duly completed.
- (5) The supply of electricity shall not be commenced by the supplier unless and until the Electrical Inspector is satisfied that the provisions of regulations 44 to 50 and regulation 79 to 92 have been complied with and the approval in writing of the Electrical Inspector has been obtained by him.

79. Voltage of supply to vehicle. –

No person shall supply electricity to any trolley wire or other conductor at voltage exceeding 650 V used in direct electrical and mechanical connection with any vehicle, except with the written approval of the Central Government or the State Government, as the case may be, and subject to such conditions as the State Government may think reasonable to impose.

80. Insulation of lines. –

Every line shall be insulated throughout and a line may consist of either bare conductors supported on structures through insulators or insulated cable.

81. Insulation of returns.-

- (1) Where any rails on which cars run, or any conductors laid between or within 0.9 metre of such rails, form any part of a return, such part may be un-insulated and all other returns or parts of a return, shall be insulated, unless they are of such conductivity as to secure the conditions required by sub-regulations (2) and (3) of regulation 82.

[Click Here To Go Back To Index](#)

- (2) Where any part of a return is un-insulated, it shall be connected with the negative or neutral of the system.

82. Proximity to metallic pipes.-

- (1) Where an un-insulated return is in proximity to any metallic pipe, structure or substance not belonging to the owner of the return, the owner of un-insulated return shall, if so required by the owner of such pipe, structure or substance, connect his return therewith at his own expense.
- (2) Where the return is partly or entirely un-insulated, the owner shall, in the construction and maintenance of his system, adopt such means for reducing the difference produced by the current between the potential of the un-insulated. return at any one point and the potential of the un-insulated return at any other point as to ensure that the difference of potential between the un-insulated return and any metallic pipe, structure or substance in the vicinity shall not exceed four volts where the return is relatively positive, or one and one-third volts where the return is relatively negative.
- (3) The owner of any such pipe, structure' or substance in respect of it require the owner of the un-insulated return at reasonable times and intervals to ascertain by test in his presence or in the presence of his representative, whether the condition specified in sub-regulation (2) is fulfilled, and, if such condition is found to be fulfilled, all reasonable expenses of, and incidental to, carrying out of the test shall be borne by the owner of the pipe, structure or substance.
- (4) The potential of un-insulated return with respect to earth at any point shall not exceed fifty volt under normal conditions.
- (5) The petroleum sidings installation earth shall be connected to the un-insulated return to make it equi-potential and pipelines in the vicinity of the track should be properly earthed.

83. Difference of potential on return.-

Where the return is partly or entirely un insulated, the owner shall keep a continuous record of the difference of potential, during the working of his system, between every junction of an insulated return with an un-insulated return and the point on the route most distant from that junction, and the difference, of potential shall not, under normal running conditions; exceed a mean value of seven volts between the highest momentary peak and the average for the hour of maximum load.

84. Leakage on conduit system.-

Where both the line and the return are placed within a conduit, the following conditions shall be fulfilled in the construction and maintenance of the system, namely:-

[Click Here To Go Back To Index](#)

- (i) where the rails are used to form any part of the return, they shall be electrically connected at distances not exceeding 30 metres apart with the conduit by means of copper strips having a cross-sectional area of at least 0.40 sq. cm. or by other means of equal conductivity and where the return is wholly insulated and contained within the conduit, the latter shall be connected with earth at the generating station or sub-station through an instrument suitable for the indication of any contactor-partial contact of either the line or the return with the conduit; and
- (ii) the leakage-current shall be ascertained daily, before or after the hours of running when the line is fully charged and if at any time it is found to, exceed 0.6 ampere per km of single tramway track; transmission and use of electricity shall be suspended unless the leakage is stopped within twenty four hours.

85. Leakage on system other than conduit system. –

Where both the line and the return are not placed within a conduit, the leakage current shall be ascertained daily before or after the hours of running, when the line is fully charged and if at any time it is found to exceed 0.3 ampere per km. of single tramway track, the transmission and use of electricity shall be suspended unless the leakage is stopped within twenty four hours.

86. Passengers not to have access to electric circuit.-

Precautions to the satisfaction of an Electrical Inspector shall be taken by the owner of every vehicle to prevent, -

- (i) the access of passengers to any portion of the electric circuit where there is danger from electric shock;
- (ii) any metal, hand-rail or other metallic substance liable to be handled by passengers, becoming charged.

87. Isolation of sections. -

Every trolley wire shall be constructed in sections not exceeding 1.6 km. in length, and means shall be provided for isolating each section.

88. Minimum size and strength of trolley wire. –

No trolley-wire shall be of less cross-sectional area than 0.5 sq. cm. of shall have an actual breaking load of less than 2000 kg.

89. Height of trolley wire and length of span. –

A trolley wire or a traction feeder on the same supports as a trolley wire shall, at no place be, at a height from the surface of the street of less than 5.2 metres except, where it passes under a bridge or other fixed structure, or through or along a tunnel or mineshaft or the like in which case it shall be suspended to the satisfaction of an Electrical Inspector.

[Click Here To Go Back To Index](#)

90. Earthing of guard wires.-

Every guard wire shall- be connected with earth at each point at which its electrical continuity is broken and shall also be connected with the rails at intervals of not more than five spans.

91. Proximity to magnetic observatories and laboratories.-

Traction works shall not be carried out in the vicinity of geomagnetic; observatories and laboratories without the concurrence of the Central Government or of any officer authorised by it in this behalf.

92. Records.-

(1) The owner shall keep the following records, namely: -

(i) daily records showing -

- (a) the maximum working current from the source of supply;
- (b) the maximum working voltage at the source of supply;
- (c) the difference of potential, as required under regulation 83; and
- (d) the leakage current, if-any, as required under regulation 84 and 85.

(ii) occasional records showing -

- (a) every test made under sub-regulation (2) and (3) of regulation 82
- (b) every stoppage of leakage, together with the time occupied; and
- (c) particulars of any abnormal occurrence affecting the electrical working of the system.

(2) The records so kept under sub-regulation (1) shall be open to examination by Electrical Inspector.

[Click Here To Go Back To Index](#)

Chapter IX

Safety requirements for mines and oil fields

93. Application of chapter.-

The regulation in this chapter shall apply only where electricity is used in mines as defined in the Mines Act, 1952 (35 of 1952) and oil fields.

94. Responsibility for observance. –

- (1) It shall be the duty of every person in charge of and responsible to the mine including the owner, agent, manager and Engineer of mine and oil field to comply with and enforce the regulations in this chapter and it shall be the duty of all persons employed to conduct their work in accordance with these regulations.
- (2) In every mine or oil-field while -electricity is being used such number of designated supervisors and electricians shall be on 'duty as the owner may decide.

Explanation - For the purposes of this regulation, the word "Engineer" shall

- (i) in the case of a coal mine, have the same meaning as assigned to it in the Coal Mines Regulations, 1957;
- (ii) in the case of a metalliferous mine, have the same meaning as assigned to it in the Metalliferous Mines Regulations, 1961; and
- (iii) in the case of an oil mine, mean the 'Installation Manager' under the Oil Mines Regulations, 1984.

95. Notices. –

- (1) On or before the first day of February in every year, in respect of every mine or oil-field, returns giving the size and type of apparatus, together with such particulars in regard to circumstances of its use which may be required by the Inspector, shall be sent to the inspector of mines by the persons specified in regulation 94 in the form set out in Schedule-XI or Schedule-XII whichever is applicable.
- (2) The persons specified in regulation 94, shall also give to the inspector of mines not less than seven days notice in writing of the intention to bring into use any new installation in a mine or oil-field giving details of apparatus installed and its location:

Provided that in case of any additions or alterations to an existing installation of voltage not exceeding 650 V, immediate notice in writing shall be sent to the inspector of mines before such additions or alterations are brought into use.

Provided further that this regulation shall not apply to telecommunication or signaling apparatus.

[Click Here To Go Back To Index](#)

96. Plans.-

- (1) A correct plan,, on the same scale as the plan kept at the mine in fulfilment of the requirements of the Mines Act 1952 (35 of 1952), shall be available in the office at the mine showing the position of all fixed apparatus and conductors therein, other than lights, telecommunication or signalling apparatus, or cables for the same
- (2) A similar plan on the scale not less than 25 cm. to a km. (1:4000) shall be kept by the manager or owner of one or more wells in any oil-field,
- (3) A similar plan on such scale as the Central Government may direct, showing the position of all electric supply lines, shall be kept in the office of any licensee or other person transmitting or distributing electricity in a mine or oil-field,
- (4) The plans specified under this regulation shall be examined and corrected as often as necessary to keep them up-to-date and the dates of such examinations shall be entered thereon by the manager or owner of the mine or wells and such plans shall be available to the Inspector, or inspector of mines, at any time.

97. Lighting, overhead lines, communication and fire precautions.-

- (1) In a mine illuminated by electricity, one or more flame safety lamps, or other lights approved by the inspector of mines, shall be maintained in a state of continuous illumination in all places where failure of the electric light at any time shall be prejudicial to safety.
- (2) Efficient means of communication shall be provided in every mine between the point where the switchgear under sub-regulation (1) regulation 105 is erected, the shaft bottom and other distributing centres in the mines.
- (3) Fire extinguishing appliances of adequate capacity and of an approved type shall be installed and properly maintained in every place in a mine containing apparatus, other than cables, telecommunication and signaling apparatus.
- (4) In case of mines, minimum clearance above ground of the lowest conductor of over head lines or over head cables where dumpers or trackless vehicles are being operated shall not be less than twelve meters in height from the ground across the road where dumpers or trackless vehicles cross.

98. Isolation and fixing of transformer and switchgear.-

- (1) Transformers and switchgear shall be placed in a separate room, compartment or box where necessary to prevent danger of mechanical damage.
- (2) Unless the apparatus is so constructed, protected and worked as to obviate the risk of fire, no inflammable material shall be used in the construction of any room, compartment or box containing apparatus, or in the construction of any of the fittings therein and each such room, compartment or box shall be substantially constructed and shall be kept dry and illuminated and efficient ventilation shall be provided for all apparatus installed therein.

[Click Here To Go Back To Index](#)

- (3) All apparatus that has to be worked or attended to and all handles intended to be operated shall be placed at a spacious working place which is accessible, clear of obstruction and free from danger, so far as circumstances permit.

99. Method of earthing. –

Where earthing is necessary in a mine it shall be carried out by connection to an earthing system at the surface of the mine and in a manner approved by the inspector of mines.

100. Protective equipment.-

- (1) In the interest of safety, appropriate equipment shall be suitably placed in the mines for automatically disconnecting supply to any part of the system, where a fault, including an earth fault, occurs and fault current shall not be more than 750 milliamperes in installations of voltage exceeding 250 V and up to 100 V for below ground mines and oil fields and 50 ampere in installations of voltage exceeding 1100 V and up to 11 kV in open cast mines and the magnitude of the earth fault current shall be limited to these specified values by employing suitably designed, restricted neutral system of power supply.
- (2) The operation of the switchgear and the relays shall be recorded daily at the generating station, sub-station or switch station in a register kept for the purpose.
- (3) The effectiveness of the switchgear and the protective system shall always be kept and maintained in working order, shall be checked once every three months and the result thereof shall be recorded in a separate register kept for the purpose.

101. Earthing metals: -

- (1) All metallic sheaths, coverings, handles, joint boxes, switchgear frames, instrument covers, switch and fuse covers of boxes, all lamp holders, unless efficiently protected by an insulated covering made of fire resisting material, and the frames and bedplates of generators, transformers and motors, including portable motors, shall be earthed .by connection to an earthing system in the manner specified in regulation 99.
- (2) Where cables are provided with a metallic covering constructed and installed in accordance with clause (d) of regulation 106, such metallic covering may be used as a means of connection to the earthing system.
- (3) All conductors, of an earthing system shall have conductivity, at all parts and all joints, at least equal to fifty per cent of that of the largest conductor used solely to supply the apparatus, a part of which desired to be earthed:

Provided that no conductor of an earthing system shall have a cross-sectional area, less than 0.15 sq. cm. except in the case of the earth conductor of a flexible cable used with portable apparatus where the voltage does not exceed 125 Volts, and the cross-sectional area and conductance of the earth core is not less than that of the largest of the live conductors in the cable.

[Click Here To Go Back To Index](#)

- (4) All joints in earth conductors and all joints in the metallic covering of cables shall be properly soldered or otherwise efficiently made.
- (5) No switch, fuse or circuit-breaker shall be inserted in any earth conductor.
- (6) This regulation shall not apply, except in the case of portable apparatus, to any system in a mine in which the voltage does not exceed 30 V.

102. Voltage limits. –

Electricity shall not be transmitted into a mine at a voltage exceeding 11000 Volts and shall not be used therein at a voltage exceeding 6600 Volts: Provided that-

- (i) where hand-held portable apparatus is used, the voltage shall not exceed 125 V;
- (ii) where electric lighting is used,-
 - (a) in underground mines, the lighting system shall have a mid or neutral point connected with earth and the voltage shall not exceed 125 V between phases;
 - (b) on the surface of a mine or in an, open cast mine, the voltage may be raised to 250 V, if the neutral or the mid point of the system is connected with earth and the voltage between the phases does not exceed 250 V;
- (iii) where portable hand-lamps are used in underground working of mine, the voltage shall not exceed 30 V;
- (iv) where any circuit is used for the remote control or electric interlocking of apparatus, the circuit voltage shall not exceed 30 V:

Provided further that in fixed plants, the said voltage may be permitted up to 650 V, if the bolted type plug is used

103. Transformers.-

Where electricity is transformed, suitable provision shall be made to guard against danger by reason of the lower voltage apparatus becoming accidentally charged above its normal voltage by leakage from or contact with the -higher voltage apparatus.

104. Switchgear and terminals.-

Switchgear and all terminals, cable-ends, cable-joints and connections to apparatus shall be totally enclosed and shall be constructed, installed and maintained as to comply with the following requirements, namely:-

- (i) all parts shall be of mechanical strength sufficient to resist rough usage;

[Click Here To Go Back To Index](#)

- (ii) all conductors and contact areas shall be of adequate current-carrying capacity and all joints in conductors shall be properly soldered or otherwise efficiently made;
- (iii) the lodgement of any matter likely to diminish the insulation or affect the working of any switchgear shall be prevented;
- (iv) all live parts shall be so protected or enclosed as to prevent persons accidentally coming into contact with them and to prevent danger from arcs, short-circuits, fire, water, gas or oil;
- (v) where there may be risk of igniting gas, coal-dust, oil or other inflammable material, all parts shall be, so protected as to prevent open sparking; and
- (vi) every switch or circuit-breaker shall be so constructed as to be capable of opening the circuit it controls and dealing with any short-circuit without danger.

105. Disconnection of supply. –

- (1) Properly constructed switchgear for disconnecting the supply of electricity to a mine or oil-field shall be provided at a point approved by the inspector of mines.
- (2) At any time, when any cable or overhead line supplying electricity to the mine from the aforesaid switchgear is live, a person designated to operate the said switchgears shall be available within easy reach thereof;

Provided that in the case of gassy coal seam of second degree and third degree gassiness, the main mechanical ventilator operated by electricity shall be interlocked with the switchgear so as to automatically disconnect the power supply in the event of stoppage of main mechanical ventilator.

- (3) When necessary in the interest of safety, any apparatus suitably placed, shall be provided for disconnecting the supply from every part of a system.
- (4) If the inspector of mines in the interest of safety considered it necessary, he may direct that the apparatus specified in sub-regulation (3) shall be so arranged as to disconnect automatically, from the supply, any section of the system subjected to a fault.
- (5) Every motor shall be controlled by switchgear which shall be so arranged as to disconnect the supply from the motor and from all apparatus connected thereto and such switchgear shall be so placed as to be easily operated by the person designated to operate the motor.
- (6) Whenever required by the inspector of mines the motor shall be controlled by switchgear to disconnect automatically the supply in the event of conditions of over-current, over-voltage and single phasing.

[Click Here To Go Back To Index](#)

- (7) Auxiliary fan shall be interlocked with the switchgear controlling power supply to the in by face equipment of below ground coal mine for automatic disconnection of power supply in the event of the stoppage of the auxiliary fan.

106.Cables. –

All cables, other than flexible cables for portable or transportable apparatus, shall fulfill the following requirements, namely:-

- (i) all such cables, other than the outer conductor of a concentric cable, shall be covered with insulating material and shall be efficiently protected from mechanical damage and supported at sufficiently frequent intervals and in such a manner as to prevent damage to such cables;
- (ii) (a) except as provided in clause (iii) no cables other than concentric cables or single core or two core or multi core cables protected by a metallic covering and which contain all the conductors of a circuit shall be used where the voltage exceeds 125 V or when an Inspector considers that there is risk of igniting gas or coal dust or other inflammable material, and so directs;

(b) the sheath of metal-sheathed cables and the metallic armouring of armoured cables shall be of a thickness not less than that recommended from time to time in the relevant standard of the Bureau of Indian Standards;
- (iii) where a voltage exceeding 250 V but not exceeding 650 V direct current system is used, two single core cables may be used for any circuit provided that their metallic coverings are bonded together by earth conductors so placed that the distance between any two consecutive bonds is not greater than thirty metres measured along either cable;
- (iv) The metallic covering of every cable shall be -
 - (a) electrically and mechanically continuous throughout;
 - (b) earthed, if it is required by sub-regulation (3) of regulation 101 to be earthed by a connection to the earthing system of conductivity specified therein;
 - (c) efficiently protected against corrosion where necessary;
 - (d) of a conductivity at all parts and at all joints at least equal to fifty per cent of the conductivity of the largest conductor enclosed by the said metallic covering; and

[Click Here To Go Back To Index](#)

- (e) where there may be risk of igniting gas, coal-dust, or other inflammable material, so constructed as to prevent, as far as practicable, the occurrence of open sparking as the result of any fault or leakage from live conductors.
- (v) cables and conductors where connected to motors, transformers, switchgear and other apparatus, shall be installed so that,-
 - (a) they are mechanically protected by securely attaching the metallic covering to the apparatus; and
 - (b) the insulating material at each cable end is efficiently sealed so as to prevent the diminution of its insulating properties;
- (vi) where necessary to prevent abrasion or to secure gas-tightness, properly constructed glands or bushes shall be provided;
- (vii) un armoured cables or conductors shall be conveyed either in metallic pipes or metal casings or suspended from efficient insulators by means of non-conducting materials which will not cut the covering and which will prevent contact with any timbering or metal work and if separate insulated conductors are used, they shall be installed at least 3.75 cm. apart and shall not be brought together except at lamps, switches and fittings.

107.Flexible cables.-

- (1) Flexible cables for portable or transportable apparatus shall be two core or multi core, unless required for electric welding, and shall be covered with insulating material which shall be efficiently protected from mechanical injury.
- (2) If flexible metallic covering is used either as the outer conductor of a concentric cable or as a means of protection from mechanical injury, it shall not be used by itself to form an earth conductor for such apparatus, but it may be used for that purpose in conjunction with an earthing core.
- (3) Every flexible cable intended for use with portable or transportable apparatus shall be connected to the system and to such apparatus by properly constructed connectors:

Provided that for machines of voltage exceeding 650 V but not exceeding 33 kV a bolted type connector shall be used and the trailing cable shall be suitably anchored at the machine end..

Provided further that, where there are space limitations multiple onboard motors and equipment for transportable or portable machines-, direct entry flexible cable with elastomeric sealing rings, compression gland, packing gland or sealing box which does not alter the flame proof property may be permitted

[Click Here To Go Back To Index](#)

axial height of twenty, millimeter for circular cables of diameter not greater than twenty millimeter and twenty five millimeter for circular cables of diameter greater than twenty millimeter.

- (4) At every point where flexible cables are joined to main cables, a circuit breaker shall be provided which is capable of automatically disconnecting the supply from such flexible cables. Every flexible cable attached to a portable or transportable machine shall be examined periodically by the person designated to operate the machine, and if such cable is used underground, it shall be examined at least once in each shift by
- (5) such person and if such cable is found to be damaged or defective, it shall forthwith be replaced by a cable in good condition.
- (6) If the voltage of the circuit exceeds 250 V, all flexible cables attached to any transportable apparatus shall be provided with flexible metallic screening or pliable armouring and cables of portable apparatus shall be provided with flexible metallic screening on all the power and pilot cores.

Provided that the provision of this regulation shall not apply to flexible cables attached to any transportable or portable apparatus used in open cast mines or below ground mines where reeling and unreeling of such cables is necessary as per design features of the equipment.

- (7) All flexible metallic screening or armouring specified in sub-regulation (6) shall fulfill the requirement specified in clause (iv) of regulation 106.

Provided that in the case of separately screened flexible cables the conductance of each such screen shall not be less than twenty five per cent of that of the power conductor and the combined conductance of all such screens shall in no case be less than that of 0.15 sq. cm. copper conductors.

- (8) Flexible cable exceeding hundred metres in length shall not be used with any portable or transportable apparatus:

Provided that such flexible cable when used with coal cutting machines or cutter or loader or armoured face conveyor for long wall operation, or with shuttle cars or load haul dumper or cutter loader or all alike equipment for development and de-pillaring operation shall not exceed two hundred fifty metres in length:

Provided further that the aforesaid cable in case of an open cast mine when used with electrically operated heavy earth moving machinery shall not exceed three hundred metres in length and for bucked wheel excavator at 11 kV shall not exceed one thousand metres in length.

- (9) Flexible cable, when installed in a mine, shall be efficiently supported and protected from mechanical injury.
- (10) Flexible cables shall not be used with apparatus other than portable or transportable apparatus. –

[Click Here To Go Back To Index](#)

- (11) Where flexible cables are used they shall be detached or otherwise isolated from the source of supply when not in use, and arrangements shall be made to prevent the energising of such cables by undesignated persons.

108. Portable and transportable machines. -

The person designated to operate an electrically driven coal-cutter, or other portable or transportable machine, shall not leave the machine while it is in operation and shall, before leaving the area in which such machine is operating, ensure that the supply is disconnected from the flexible cable which supplies electricity to the machine and when any such machine is in operation, steps shall be taken to ensure that the flexible cable is not dragged along by the machine:

Provided that all portable and transportable machines used in underground mines shall operate on remote control from the concerned switchgear with pilot core protection.

109. Sundry precautions. –

- (1) All apparatus shall be maintained reasonably free from dust, dirt and moisture, and shall be kept clear of obstruction.
- (2) All apparatus other than portable and transportable apparatus shall be housed in a room, compartment or box so constructed as to protect the contents from damage occasioned by falling material or passing traffic.
- (3) Inflammable or explosive material shall not be stored in any room, compartment or box containing apparatus, or in the vicinity of any apparatus,
- (4) In case of a fault in any circuit, the part affected shall be made dead without delay and shall remain so until the fault has been remedied.
- (5) While lamps are being changed the supply shall be disconnected.
- (6) No lamp holder shall have metallic connection with the guard or other metal work of a portable hand lamp.
- (7) The following notices in Hindi and local language of the district, so designed and protected as to be easily legible at all times, shall be exhibited at the following places, namely;-
 - (i) where electrical apparatus is in use, a notice forbidding undesignated persons to operate or otherwise interfere with such apparatus;
 - (ii) in the interior or at the surface of the mine where a telephone or other means of communication is provided, a notice giving full instructions to person, at the surface of the mine, designated to effect the disconnection of the supply of electricity to the mine.
- (8) All apparatus, including portable and transportable apparatus, shall be operated only by those persons who are designated for the purpose.

[Click Here To Go Back To Index](#)

- (9) Where a plug-and-socket-coupling other than of bolted type is used with flexible cables, an electrical inter-lock or other approved device shall be provided to prevent the opening of the coupling while the conductors are live.

110. Precautions where gas exists. –

- (1) In any part of a coal-seam of the first degree gassiness -
- (i) all cables shall be constructed, installed, protected, operated and maintained in such a manner as to prevent risk of open sparking;
 - (ii) all signaling, telecommunication, remote control and insulation tester circuits shall be so constructed, installed, protected, operated and maintained as to be intrinsically safe;
 - (iii) all apparatus including portable and transportable apparatus including lighting fittings used at any place which lies in-by of the last ventilation connection shall be flame-proof:

Provided that electrically operated or battery operated portable or transportable apparatus such as shuttle car, men or material transporting equipment of increased safety type "e" shall be permitted at any place with suitable monitoring devices for detection of gases, if any;
 - (iv) all electric lamps at any place which lie in-by of the last ventilation connection and return airways shall be in flame proof enclosure and at other places these shall be in increased safety enclosure type 'e'
- (2) At any place which lies in any part of a coal-seam of second and third degree gassiness-
- (i) all signaling, telecommunication, remote control and insulation tester circuits shall be so constructed, installed, protected, operated and maintained as to be intrinsically safe;
 - (ii) all cables shall be constructed, installed, protected, operated and maintained in such a manner as to prevent risk of open sparking;
 - (iii) all apparatus, including portable and transportable apparatus used at any place within ninety metres of any working face or goaf in case of a second degree gassy mine and within two hundred seventy metres of any working face or goaf in case of third degree gassy mine or at any place which lies in-by of the last ventilation connection or in any return airways shall be flame proof;
 - (iv) all electric lamps shall be enclosed in flame-proof enclosures.
- (3) In any oil mine or oil-field, at any place within the zone-2 hazardous areas-

[Click Here To Go Back To Index](#)

- (i) all signaling and telecommunication, remote control and insulation tester circuits shall be so constructed, installed, operated, protected and maintained as to be intrinsically safe;
 - (ii) all cables shall be so constructed, installed, operated and maintained as to prevent risk of open sparking;
 - (iii) all apparatus including portable and transportable apparatus shall have the following types of enclosures conforming to the relevant Indian Standards, namely:-
 - (a) flame-proof enclosure type 'd' or
 - (b) pressurized enclosure type 'p' or
 - (c) sand filled apparatus type 'q' or
 - (d) increased safety enclosure type 'e', 'n' and 'o'
 - (iv) all electric lamps shall be enclosed in increased safety enclosure type 'e'
- (4) In any oil mine or oil-field, at any place within the zone-1 hazardous areas-
- (i) all signaling and telecommunication, remote control and insulation tester circuits shall be so constructed, installed, operated, protected and maintained as to be intrinsically safe;
 - (ii) all cables shall be so constructed, installed, operated and maintained as to prevent risk of open sparking;
 - (iii) all apparatus including portable and transportable apparatus shall have the following types of enclosures conforming to the relevant Indian Standards, namely: -
 - (a) flame-proof enclosure type 'd' or
 - (b) pressurized enclosure type 'p' or
 - (c) sand filled apparatus type 'q'
 - (iv) all electric lamps shall be enclosed in flame-proof enclosures.
- (5) In any oil mine at any place within zone-0 hazardous area no electrical equipment shall be used and where it is not practicable, intrinsically safe apparatus are only to be used with the prior approval of the Inspector.
- (6) In any coal-seam of degree second and degree third gassiness or the hazardous area of oil-mine the supply shall be discontinued;
- (i) immediately, if open sparking occurs;
 - (ii) during the period required for examination or adjustment of the apparatus, which shall necessitate the exposing of any part liable to open sparking;

[Click Here To Go Back To Index](#)

- (iii) the supply shall not be reconnected until the apparatus has been examined by the electrical supervisor or one of his duly appointed assistants and until the defect, if any, has been remedied or the necessary adjustment made; and
- (iv) a flame safety lamp shall be provided and maintained in a state of continuous illumination near an apparatus, including portable or transportable apparatus, which remains energised and where the appearance of the flame of such safety lamps indicates the presence of inflammable gas, - the supply to all apparatus in the vicinity shall be immediately disconnected and the incident reported forthwith to an official of the mine and such apparatus shall be interlocked with the controlling switch in such a manner as to disconnect power supply automatically in the event of percentage of inflammable gas exceeding one and one quarter in that particular district:

Provided that where apparatus for automatic detection of the percentage of inflammable gas or vapour are employed in addition to the flame safety lamps, such apparatus shall be approved by the inspector of mines and maintained in perfect order.

- (7) In any part of a coal-seam of any degree of gassiness or in any hazardous area of an oil-mine, if the presence of inflammable gas in the general body of air is found at any time to exceed one and one quarter per cent, the supply of energy shall be immediately disconnected from all cables and apparatus in the area and the supply shall not be reconnected so long as the percentage of inflammable gas remains in excess of one and one quarter per cent.
- (8) In an oil mine where concentration of inflammable gas exceeds twenty percent of its lowest explosive limit, the supply of electricity shall be cut-off immediately from all cables and apparatus lying within thirty metres of the installation and all sources of ignition shall also be removed from the said area and normal work shall not be resumed unless the area is made gas-free:

Provided that such disconnection shall not apply to intrinsically safe environmental monitoring scientific instruments

- (9) Any such disconnection or reconnection of the supply shall be noted in the log sheet which shall be maintained in the form set out in Schedule-XIII and shall be reported to the inspector of mines,
- (10) The provisions of this regulation shall apply to any metalliferous mine which may be notified by the inspector of mines if inflammable gas occurs or if the inspector of mines is of the opinion that inflammable gas is likely to occur in such mine.

Explanation - For the purpose of this regulation;

[Click Here To Go Back To Index](#)

- (1) the expression 'coal-seam of first degree gassiness', 'coal-seam of second degree gassiness', 'coal-seam of third degree gassiness' and flameproof apparatus' shall have the meanings respectively assigned to them in the Coal Mines Regulations, 1957.
- (2) The following areas in an oil-mine or oil-field shall be known as hazardous areas, namely:-
 - (i) an area of not less than ninety metres around an oil-well where a blow-out has occurred or is likely to occur, as may be designated by the Engineer-in charge or the senior most official present at the site;
 - (ii) an area within ninety metres of an oil-well which is being tested by open flow;
 - (iii) an area within fifteen metres of:
 - (a) a producing well-head or any point of open discharge of the crude there, from or other point where emission of hazardous atmosphere is normally likely to arise; or
 - (b) any wildcat or exploration well-head being drilled in an area where abnormal pressure conditions are known to exist; or
 - (c) any exploration or interspaced well-head being drilled in the area where abnormal pressure conditions are known to exist;
 - (iv) any area within four and one half meters of:
 - (a) any producing well-head where a closed system of production is employed such as to prevent the emission or accumulation in the area in normal circumstances of a hazardous atmosphere; or
 - (b) exploration or interspaced well-head being drilled in an area where the pressure conditions are normal and where the system of drilling employed includes adequate measures for the prevention in normal circumstances of emission or accumulation within the area of a hazardous atmosphere; or
 - (c) an oil-well which is being tested other than by open flow.
- (3) "hazardous atmosphere" means an atmosphere containing any inflammable gases or vapours in a concentration capable of ignition.
- (4) "Zone 0 hazardous area" means "an area in which hazardous atmosphere is continuously present."
- (5) "Zone 1 hazardous area" means "an area in which hazardous atmosphere is likely to occur under normal operating conditions".

[Click Here To Go Back To Index](#)

- (6) "Zone 2 hazardous area" means "an area in which hazardous atmosphere is likely to occur under abnormal operating conditions".

111. Shot-firing. –

- (1) When shot-firing is in progress adequate precautions shall be taken to protect apparatus and conductors, other than those used for shot-firing, from injury.
- (2) Current from lighting or power circuits shall not be used for firing shots.
- (3) The provisions of regulation 107 shall apply in regard to the covering and protection of shot-firing cables, and adequate precautions shall be taken to prevent such cable touching other cables and apparatus.

112. Signalling. –

Where electrical signalling is used,-

- (i) adequate precautions shall be taken to prevent signal and telephone wires coming into contact with other cables and apparatus;
- (ii) the voltage used in any one circuit shall not exceed 30 V;
- (iii) contact-makers shall be so constructed as to prevent the accidental closing of the circuit; and
- (iv) bare conductors, where used shall be installed in suitable insulators.

113. Haulage. –

Haulage by electric locomotives on the overhead trolley-wire system, at voltage not exceeding 650 V and haulage by storage battery locomotives may be used with the prior consent in writing of the Electrical Inspector, and subject to such conditions as he may impose in the interests of safety.

114. Earthing of neutral points. –

Where the voltage of an alternating current system exceeds 30 Volts, the neutral or mid-point shall be earthed by connection to an earthing system in the manner specified in regulation 99.

Provided that when the system concerned is required for blasting, and signalling purposes, the provisions of this regulation shall not apply.

Provided further that in case of unearthed neutral system adequate protection shall be provided with the approval of the Inspector

[Click Here To Go Back To Index](#)

115. Supervision. –

- (1) (i) One or more electrical supervisors as directed by the Inspector shall be appointed in writing by the owner, agent or manager of a mine or by the agent or the owner, of one or more wells in an oil field to supervise the installation.
 - (ii) The electrical supervisor so appointed shall be the person holding a valid Electrical Supervisor's Certificate of Competency, covering mining installation issued under sub-regulation (1) of regulation 29.
 - (iii) One or more electricians as directed by the Inspector shall be appointed in writing by the owner, agent or manager of a mine or by the agent or the owner, of one or more wells in an oil field for compliance with the duties specified in this regulation.
 - (iv) The Electrician shall be a person holding license under sub-regulation (1) of regulation 29.
 - (v) For small open cast mines and below ground mines receiving supply at voltage not more than 650 V and not having portable or transportable apparatus, electrical supervisor and electrician shall be appointed for more than one mine by the Inspector.
- (2) Every person appointed to operate, supervise, examine or adjust any apparatus shall be competent to undertake the work which he is required to carry out as directed by the Engineer.
- (3) The electrical supervisor shall be responsible for the proper performance of the following duties, by himself or by an electrician appointed under sub-regulation (1).
 - (i) thorough examination of all apparatus, including the testing of earth conductors and metallic coverings for continuity, as often as may be necessary to prevent danger;
 - (ii) examination and testing of all new apparatus, and of all apparatus, re-erected in the mine before it is put into service in a new position.
- (4) In the absence of any electrical supervisor, the owner, agent or manager of the mine and oil field shall appoint in writing a substitute electrical supervisor.
- (5) (i) The electrical supervisor or the substitute electrical supervisor appointed under sub-regulation (4) to replace him shall be personally responsible for the maintenance at the mine or oil-field, of a log-book made up of the daily log sheets prepared in the form set out in Schedule- XIII.
 - (ii) The results of all tests carried out in accordance with the provisions of sub-regulation (3) shall be recorded in. the log-sheets prepared in the form set out in Schedule-XIII.

[Click Here To Go Back To Index](#)

Chapter X

Miscellaneous

116.Deviations.-

- (1) The Central Government or the State Government, as the case may. be, by order in writing, allow deviations in respect of matters referred in these regulations except regulation 30.
- (2) The Electrical Inspector or the inspector of mines may, by order in writing, allow deviations in respect of matters referred in regulations 12 to 17, 28, 35(2)(3) and (5), 36(3), 37(1) to (iv), 41(xii), 43, 44(2), 46, 52 to 54, 57 to 61, 65, 72, 74, 78 to 91,102,107(6), (8) and (10) and 114

Explanation- Every order allowing the deviations by the Electrical Inspector or the Inspector of Mines under sub-regulation (2) shall be placed before the Central or State Government which may disallow or revise such deviations.

[Click Here To Go Back To Index](#)

**Central
Electricity
Authority
(Measures relating
to Safety and
Electric Supply)
Amendment
Regulations, 2015.**

MINISTRY OF POWER
(CENTRAL ELECTRICITY AUTHORITY)
NOTIFICATION

New Delhi, the 13th April, 2015

No. CEI/1/2/2015.-Whereas the Central Electricity Authority published a public notice on the 28th September, 2014 in respect of the draft of the Central Electricity Authority (Measures relating to Safety and Electric Supply) Amendment Regulations, 2014, as required under sub-section (3) of section 177 of the Electricity Act, 2003 (36 of 2003) read with sub-rule (2) of rule 3 of the Electricity (Procedure for Previous Publication) Rules, 2005, inviting objections and suggestions from the persons likely to be affected thereby, before the expiry of the period of forty five days, i.e., on or before the 12th November, 2014, from the date on which the copies of the publication containing the said public notice were made available to the public;

And whereas copies of the said publication containing the said public notice were made available to the public on the 28th September, 2014;

And whereas the objections and suggestions received from the public in respect of the said draft regulations have been duly considered by the Central Electricity Authority;

Now, therefore, in exercise of the powers conferred by sub-section (2) of section 177 read with section 53 of the said Act the Central Electricity Authority hereby makes the following regulations. namely:-

1. **Short title and commencement:-** (1) These regulations may be called the Central Electricity Authority (Measures relating to Safety and Electric Supply) Amendment Regulations, 2015.
(2) These Regulations shall come into force on the date of their publication in the Official Gazette.
2. In the Central Electricity Authority (Measures relating to Safety and Electric Supply), Regulations 2010 (hereinafter referred to as the said regulations), in regulation 2, in sub-regulation (1), -
 - (A) after clause (f), the following clause shall be inserted, namely:-
'(fa) "Chartered Electrical Safety Engineer" means a person as notified by the Appropriate Government as referred to in regulation 5A;'
 - (B) after clause (s), the following clause shall be inserted, namely:-
'(sa) "Electrical Inspector of Mines" means a person appointed as such by the Appropriate Government under sub-section (1) of section 162 for the purpose of electrical installations of mines and oil fields;'
 - (C) for clause (v), the following clause shall be substituted, namely:-
'(v) "flameproof enclosure" means an enclosure in which the parts which can ignite an explosive atmosphere are placed and which can withstand the pressure developed during an internal explosion of an explosive mixture and which prevents the transmission of explosion to the explosive atmosphere surrounding the enclosure;'
 - (D) after clause (za), the following clause shall be inserted, namely:-
'(zaa) "Inspecting Officer" means officer responsible for carrying out the testing and inspection of electrical installations under these regulations;'
 - (E) for clause (zc), the following shall be substituted, namely:-
'(zc) "intrinsically safe circuit" shall denote any circuit operating under its normal operation and specified fault condition as specified in the Bureau of Indian Standards, which when exposed to any spark, ignition, or any thermal effect whilst operating under the above said conditions, is not capable of causing ignition of a given explosive gas atmosphere;

(zca) “intrinsically safe apparatus” shall denote electrical apparatus in which all the circuits are intrinsically safe circuits;’

(F) after clause (zk), the following clause shall be inserted, namely:-
‘(zka) “notified voltage” means a voltage notified by the Appropriate Government for the purpose of self certification under regulation 30 and regulation 43;’

(G) after clause (zw), the following clause shall be inserted, namely:-
‘(zwa) “self-certification” means a certificate issued by a supplier or the owner in the prescribed format as required under regulation 30 and regulation 43;’

3. In the said regulations, for regulation 5, the following regulation shall be substituted, namely:-

"5. Electrical Safety Officer.- (1) All suppliers of electricity including generating companies, transmission companies and distribution companies shall designate an Electrical Safety Officer for ensuring observance of safety measures specified under these regulations in their organisation, for construction, operation and maintenance of power stations, sub-stations, transmission and distribution lines.

(2) The Electrical Safety Officer shall be an Electrical Engineering degree holder with at least five years of experience in operation and maintenance of electrical installations.

(3) The Electrical Safety Officer designated under sub-regulation (1), shall carryout periodic tests as per the relevant standards and inspection of such installations for ensuring observance of safety measures specified under these regulations at intervals not exceeding one year, and keep a record thereof in Form I or Form II or Form III, as the case may be, of Schedule IV and test reports, and also keep a register of recommended safety requirements duly acknowledged by the owner with date and compliances thereafter; and such records shall be made available to the Electrical Inspector, as and when required.

(4) For every electrical installation including factory registered under Factory Act, 1948 and mines and oil field as defined in the Mines Act, 1952 (35 of 1952), where more than 250 kW of electrical load is connected, the owner of the installation or the management of the factory or mines, as the case may be, shall designate Electrical Safety Officer having qualification and experience specified in sub-regulation (2), for ensuring the observance of the safety provisions laid under the Act and the regulations made thereunder, who shall carryout recommended periodic tests as per the relevant standards, and inspect such installation at intervals not exceeding one year, and keep a record thereof in Form I or Form II or Form III of schedule IV to these regulations, test reports and a register of recommendations in regard with safety duly acknowledged by owner, compliances made thereafter and such records shall be made available to the Electrical Inspector if and when required.”

4. In the said regulations, after regulation 5, the following regulation shall be inserted, namely:-

"5A. Chartered Electrical Safety Engineer.-The Appropriate Government may authorise Electrical Safety Engineers having the qualification and experience as specified in sub-regulation (2) of regulation 5 to assist the owner or supplier or consumer of electrical installations for the purpose of self-certification under regulation 30 and regulation 43.”.

5. In the said regulations, for sub-regulations (2) to (5) of regulation 30, the following shall be substituted, namely:-

"(2) The periodical inspection and testing of installation of voltage equal to or below the notified voltage belonging to the supplier or consumer shall be carried out by the supplier or owner or consumer and shall be self certified.

(3) The periodical inspection and testing of installations of voltage above the notified voltage belonging to the supplier or consumer shall be carried out by the Electrical Inspector:

Provided that the supplier or owner or consumer has the option to get his installation inspected and tested by the Electrical Inspector of the Appropriate Government:

Provided further that the every electrical installations of mines, oil fields and railways shall be periodically inspected and tested by the Electrical Inspector of the Appropriate Government.

(4) Where the supplier is directed by the Central Government or the State Government, as the case may be, to inspect and test the installation, such supplier shall report on the condition of the installation to the consumer concerned in the Forms I, II and III as specified in Schedule-IV and shall submit a copy of such report to the Electrical Inspector.

(5) The Electrical Inspector may, on receipt of such report, accept the report submitted by the supplier or record variations as the circumstances of each case may require and may recommend that the defects may be rectified as per report.

(6) In the event of the failure of the owner of any installation to rectify the defects in his installation pointed out by the Electrical Inspector in his report and within the time indicated therein, such installation shall be liable to be disconnected under the directions of the Electrical Inspector after serving the owner of such installation with a notice for a period not less than forty eight hours:

Provided that the installation shall not be disconnected in case an appeal is made under sub section (2) of section 162 of the Act and the appellate authority has stayed the orders of disconnection.

(7) It shall be the responsibility of the owner of all installations to maintain and operate the installations in a condition free from danger and as recommended by the manufacturer or by the relevant codes of practice of the Bureau of Indian Standards."

6. In the said regulations, for sub-regulations 32. the following regulation shall be substituted, namely:-

"32. Installation and testing of generating units.- The capacity above which generating units including generating units producing electricity from renewable sources of energy will be required to be inspected by the Electrical Inspector before commissioning shall be as per the notification to be issued by the Appropriate Government under the sub-section (1) of section 162 of the Act."

7. In the said regulations, for sub-regulations 42, the following regulation shall be substituted, namely:-

"42. Earth leakage protective device. - The supply of electricity to every electrical installation other than voltage not exceeding 250V, below 2 kW and those installations of voltage not exceeding 250V, which do not attract provisions of section 54 of the Act, shall be controlled by an earth leakage protective device whose maximum earth leakage threshold for tripping should not exceed 30 milliamps for domestic connections and 100 milliamps for all other installations, so as to disconnect the supply instantly on the occurrence of earth fault or leakage of current:

Provided that such earth leakage protective device shall not be required for overhead supply lines having overhead supply lines having protective devices which are effectively bonded to the neutral of supply transformers and conforming to regulation 73."

8. In the said regulations, for sub-regulations 43, the following regulation shall be substituted, namely:-

"43. Approval by Electrical Inspector and self-certification. - (1) Every electrical installation of notified voltage and below shall be inspected, tested and shall be self-certified by the owner of the installation before commencement of supply or recommencement after shutdown for six months and above for ensuring observance of safety measures specified under these regulations and such owner shall submit, the report of self-certification in the Form-I or Form-II or Form-III, as the case may be, of Schedule-IV to the Electrical Inspector.

(2) The voltage above which inspection and testing of electrical installations including installations of supplier or consumer shall be carried out by the Electrical Inspector shall be notified by the Appropriate Government.

(3) Every electrical installation of voltage above the notified voltage and all the apparatus of the generating stations and above the capacity specified under regulation 32, shall be required to be inspected and tested by the Electrical Inspector before commencement of supply or recommencement after shutdown for six months and above for ensuring observance of safety measures specified under these regulations:

Provided that the owner or supplier or consumer has the option to get his installation inspected and tested by the Electrical Inspector of the Appropriate Government.

(4) The Electrical Inspector may, on receipt of self-certification report referred to in sub-regulation (1), accept the report submitted by the supplier or owner and record variations as the circumstances of each case may require and may recommend that the defects may be rectified as recommended:

Provided further that every electrical installation covered under section 54 of the Act including every electrical installations of mines, oil fields and railways shall be inspected and tested by the Electrical Inspector of the Appropriate Government as specified in sub-regulation (3)

(5) Before making an application to the Electrical Inspector for permission to commence or recommence supply in installations above the notified voltage after an installation has been disconnected for six months, the supplier shall ensure that electric supply lines or apparatus of more than notified voltage belonging to him are placed in position, properly joined, and duly completed and examined, and the supply of electricity shall not be commenced by the supplier for installations of voltage needing inspection under these regulations unless the provisions of regulations 12 to 29, regulations 33 to 35, regulations 44 to 51 and regulations 55 to 77 have been complied with and the approval in writing of the Electrical Inspector has been obtained by him;

Provided that the supplier may energise the aforesaid electric supply lines or apparatus for the purpose of tests specified in regulation 46 and after successful testing, the owner may energise the section of a line to prevent theft of conductors or towers, subject to compliance of all the provisions of these regulations.

(6) The owner of any installations of voltage above the notified voltage shall, before making application to the Electrical Inspector for approval of his installation or additions thereto, test every circuit or additions thereto, other than an overhead line, and satisfy himself that they withstand the application of the testing voltage set out in sub-regulation.

(1) of regulation 46 and shall duly record the results or such tests and forward them to the Electrical Inspector:

Provided that an Electrical Inspector may direct such owner to carry out such tests as he deems necessary or accept the certified tests of the manufacturer in respect of any particular apparatus in place of the tests required by this regulation.

(7) The owner of any installation who makes any addition or alteration to his installation shall not connect to the supply his apparatus or electric supply lines, comprising the said alterations or additions, unless and until such alteration or addition has been approved in writing by the Electrical Inspector or self-certified by the owner of the installation, as the case may be.”

9. In the said regulations, for the marginal heading and sub-regulation (1) regulations 44, the following shall be substituted, namely:-

"44. Use of electricity at voltage exceeding notified voltage.- (1) The Electrical Inspector shall not authorise the supplier to commence supply or where the supply has been discontinued for a period of six months and above, to recommence the supply at voltage exceeding notified voltage to any consumer unless-

(a) all conductors and apparatus situated on the premises of the consumer are so placed as to be inaccessible except to a designated person and all operations in connection with the said conductors and apparatus are carried out by a designated person;

(b) the consumer has provided and agrees to maintain a separate building or a locked whether proof and fire proof enclosure of agreed design and location, to which the supplier at all times shall have access for the purpose of housing his apparatus and metering equipment, or where the provision for a separate building or enclosure is impracticable, the consumer has segregated the aforesaid apparatus of the supplier from any other part of his own apparatus:

Provided that such segregation shall be by the provision of fire proof walls, if the Electrical Inspector considers it to be necessary:

Provided further that in the case of an outdoor installation the consumer shall suitably segregate the aforesaid apparatus belonging to the supplier from his own;

(c) all pole type sub-stations are constructed and maintained in accordance with regulation 50."

10. In the said regulations, in regulations 63,-

(a) for sub-regulations (1) to (4), the following sub-regulations shall be substituted, namely;-

"(1) If at any time subsequent to the erection of an overhead line, whether covered with insulating material or not or underground cable, any person proposes to erect a new building or structure or flood bank or to raise any road level or to carry out any other type of work whether permanent or temporary or to make in or upon any building, or structure or flood bank or road, any permanent or temporary addition or alteration, such person and the contractor whom he employs to carry out the erection, addition or alteration, shall, give intimation in writing of his intention to do so, to the supplier or owner and to the Electrical Inspector and shall furnish therewith a scale drawing showing the proposed building, structure, flood bank, road or any addition or alteration and scaffolding thereof required during the construction.

(2) On receipt of such intimation, the supplier or owner shall examine, -

(a) whether the line or underground cable under reference was laid in accordance with the provisions of these regulations and any other law for the time being in force;

(b) whether it is technically feasible;

(c) whether it meets the requirement of Right of Way (ROW);

(d) whether such person was liable to pay the cost of alteration of the overhead line or underground cable and if so, issue a notice within a period of thirty days, to such person together with an estimate of the cost of the expenditure likely to be incurred to so alter the overhead line or underground cable and require him to deposit, within thirty days of the receipt of the notice, with the supplier or owner, the amount of the estimated cost.

(3) If such person disputes the cost of alteration of the overhead line or underground cable estimated by the supplier or owner or even the responsibility to pay such cost, the dispute may be referred to the Electrical Inspector who shall after hearing both parties decide upon the issue in accordance with sub-regulation (4).

(4) The Electrical Inspector shall estimate the cost of alteration of overhead line or underground cable on the following basis, namely;-

(a) the cost of material used on the alteration after crediting the depreciated cost of the material which shall be available from the existing line or underground cable;

(b) the wages of labour employed in affecting the alteration;

(c) supervision charges and charges incurred by the supplier or owner in complying with the provisions of section 67 of the Act, in respect of such alterations."

(b) for sub-regulations (6) and (7), the following shall be substituted, namely:→

"(6) No work upon such building, structure, flood bank, road and addition or alteration thereto shall be commenced or continued until the Electrical Inspector certifies that the provisions of regulations 58, 60, 61 and regulation 76 should not be contravened either during or after the aforesaid construction:

Provided that the Electrical Inspector may, if he is satisfied that the overhead line or underground, cable has been so guarded as to secure the protection of persons or property from injury, certify that the work may be executed prior to the alteration of the overhead line or underground cable or in the case of temporary addition or alteration, without alteration of the overhead line or underground cable.

(7) The supplier or owner shall, on receipt of such deposit, alter the overhead line or underground cable in such a way that it does not contravene the provisions regulations 58, 60, 61 and regulation 76 either during or after such construction within two months from the date of such deposit or within such longer period as the Electrical Inspector may permit for reasons to be recorded in writing."

11. In the said regulations, for sub-regulation (2) of regulation 65, the following sub-regulation shall be substituted, namely:-

"(2) No blasting for any purpose shall be done within 300 metres from the boundary of a sub-station or from the electric supply lines of voltage exceeding 650V or tower structure thereof without the written permission of the owner of such sub-station or electric supply lines or tower structures; and in case of mining lease hold area, without the written permission of the Electrical Inspector of Mines."

12. In the said regulations, for regulation 95, the following regulation shall be substituted, namely:-

"95. Notices.- (1) On or before the first day of February in every year, in respect of every mine or oil-field, returns giving the size and type of apparatus, together with such particulars in regard to circumstances of its use as may be required, shall be sent to the Electrical Inspector of Mines by the persons specified in regulation 94 in the Form provided in Schedule-XI or, as the case may be, Schedule-XII, whichever is applicable,

(2) The persons specified in regulation 94, shall also give to the Electrical Inspector of Mines not less than seven days notice in writing of the intention to bring into use any new installation in a mine or oil-field giving details of apparatus installed and its location:

Provided that in case of any additions or alterations to an existing installation of voltage not exceeding 650V, immediate notice in writing shall be sent to the Electrical Inspector of Mines before such additions or alterations are brought into use:

Provided further that this regulation shall not apply to telecommunication or signaling apparatus."

13. In the said regulations, for regulation 99, the following regulation shall be substituted, namely:-

"99. Method of earthing.- Where earthing is necessary in a mine, it shall be carried out by connection to an earthing system at the surface of the mine and in such manner as may be approved by the Electrical Inspector of Mines,"

14. In the said regulations, in regulation 105, -

(a) for sub-regulation (1), the following sub-regulation shall be substituted, namely:-

"(1) Properly constructed switchgear for disconnecting the supply of electricity to a mine or oil field shall be provided at a point approved by the Electrical Inspector of Mines.";

(b) for sub-regulation (4), the following sub-regulation shall be substituted, namely:-

"(4) If the Electrical Inspector of Mines, in the interest of safety considered it necessary, he may direct that the apparatus specified in sub-regulation (3) shall be so arranged as to disconnect automatically, from the supply, any section of the system subjected to a fault."

(c) for sub-regulation (6), the following sub-regulation shall be substituted., namely;-

" (6) If the Electrical Inspector of Mines feels it appropriate, the motor shall be controlled by a switchgear to disconnect automatically the supply in the event of conditions of over-current, over-voltage and single phasing."

15. In the said regulations, for sub-regulation (9) of regulation 110, the following sub-regulation shall be substituted, namely:-

"(9) Any such disconnection or reconnection of the supply shall be noted in the log sheet which shall be maintained in the form set out in Schedule-XIII and shall be reported to the Electrical Inspector of Mines."

16. In the said regulations, in sub-regulation (1) of regulation 115, for the word "Inspector" wherever they occur, the words "Electrical Inspector of Mine," shall be substituted,

17. In the said regulations, for sub-regulation (2) of regulation 116, the following shall be substituted, namely:-

"(2) The Electrical Inspector or the Electrical Inspector of Mines may, by order for reasons to be recorded in writing, allow deviations in respect of matters referred to in regulations 12 to 17, regulation 28, sub-regulation (2), (3) and (5) of regulation 35, sub-regulation (3) of regulation 36, clause (i) to (iv) of regulation 37, clause (xii) of regulation 41, regulation 43, sub-regulation (2) of regulation 44, regulation 46, regulations 52 to 54, regulations 57 to 61, regulation 65, regulation 72, regulation 74, regulations 78 to 91, regulation 102, sub-regulation (6), (8) and (10) of regulation 107 and regulation 114.

Explanation.- Every order allowing the deviations by the Electrical Inspector or the Electrical Inspector of Mines under this sub-regulation shall be placed before the Central Government or, as the case may be, the State Government which may disallow or revise such deviations."

18. In the said regulations, in Schedule IV relating to Forms of Inspection Report,-

- (a) under the sub-heading "FORM I (Installations of voltage upto and including 250V)",-

- (i) for the portion-

"Report No. ----- Date of Inspection -----
Date of Last Inspection -----

the following shall be substituted, namely:-

"Report No. ----- Date of inspection by Electrical Inspector or
self-certification by owner -----
Date of last inspection or self-certification -----"

- (ii) after the Table, for the portion-

"Signature of the Inspecting Officer/
Name -----
Designation -----
File No. -----
Copy forwarded to Chief Electrical Inspector for. -----"

the following shall be substituted, namely:-

"Signature of the Inspecting Officer/Self-certifying supplier or owner
Name -----
Designation -----
File No. -----
Copy forwarded to Electrical Inspector/Chief Electrical Inspector for -----"

- (b) under the sub-heading "FORM II (Installations of voltage level more than 250V up to and including 650V)",-

- (i) for the portion-

"Report No. ----- Date of Inspection -----
Date of Last Inspection -----

the following shall be substituted, namely:-

“Report No. ----- Date of inspection by Electrical Inspector or
self-certification by owner -----
Date of last inspection or self-certification -----”

(ii) after the Table, for the portion-

“Signature of the Inspecting Officer/
Name -----
Designation -----
File No. -----
Copy forwarded to Chief Electrical Inspector for. -----”

the following shall be substituted, namely:-

“Signature of the Inspecting Officer/Self-certifying supplier or owner
Name -----
Designation -----
File No. -----
Copy forwarded to Electrical Inspector/Chief Electrical Inspector for -----”

(c) under the sub-heading "FORM III (Installations of voltage exceeding 650V)",-

(i) for the portion-

"Report No. ----- Date of Inspection -----
Date of Last Inspection -----"

the following shall be substituted, namely:-

“Report No. ----- Date of inspection by Electrical Inspector or
self-certification by owner -----
Date of last inspection or self-certification -----”

(ii) after the Table, for the portion-

“Signature of the Inspecting Officer/
Name -----
Designation -----
File No. -----
Copy forwarded to Chief Electrical Inspector for. -----”

the following shall be substituted, namely:-

“Signature of the Inspecting Officer/Self-certifying supplier or owner
Name -----
Designation -----
File No. -----
Copy forwarded to Electrical Inspector/Chief Electrical Inspector for -----”

P.D.SIWAL, Secy.

Note :- The principal regulations were published in the Gazette of India, Extraordinary, Part III, section 4 vide notification No.CEI/1/59//CEA/EI, dated 20th September, 2010.

MINISTRY OF COMMERCE AND INDUSTRY**(Department of Industrial Policy and Promotion)****NOTIFICATION**

New Delhi, the 29th December, 2008

G.S.R. 907(E).—Whereas the Draft of Explosives Rules, 2006 were published, as required by sub-section (1) of Section 18 of Explosive Act, 1884 (4 of 1884) *vide* notification of the Government of India in the Ministry of Commerce & Industry (Department of Industrial Policy & Promotion) number G.S.R. 226, dated 6th day of September, 2006 in the Gazette of India, Part II, Section 3, Sub-section (i) inviting objections and suggestions from all persons likely to be affected thereby, before the expiry of a period of forty five days from the date on which the copies of the Gazette containing the said notification were made available to the public;

And, whereas, copies of the said Gazette were made available to the public on 6th day of November, 2006;

And, whereas, objections and suggestions were received from the public on the said draft rules, have been duly considered by the Central Government;

Now, therefore, in exercise of powers conferred by Sections 5 and 7 of the Explosives Act, 1884 (4 of 1884) and in supersession of the Explosives Rules, 1983, except as respect of things done or omitted to be done before such supersession, the Central Government hereby makes following rules, namely :—

THE EXPLOSIVES RULES, 2008**Chapter I****Preliminary**

1. Short title and commencement.—(1) These rules may be called the Explosives Rules, 2008.

(2) They shall come into force on the date of their publication in the Official Gazette.

2. Definitions.—(1) In these rules, unless the context otherwise requires,—

(2) “**Act**” means the Explosives Act, 1884 (4 of 1884);

(3) “**adirvettu or kadina**” means sound producing device made of iron tube having strong base with a hole at the side close to the bottom, which is filled with gunpowder and fired by means of trail of dry loose gunpowder and approved by the Chief Controller of Explosives;

(4) “**Ammonium Nitrate Fuel Oil Explosive (ANFO)**” means an explosive mixture of ammonium nitrate and fuel oil which is not cap sensitive, but does not include emulsion or slurry explosive or site mixed explosive (SME);

(5) “**authorised explosive**” means an explosive included in the list of authorised explosives referred to in rule 6 and published by the Central Government from time to time in the Official Gazette;

(6) “**Bulk Mix Delivery (BMD)**” Vehicle means a vehicle that transports non-explosive materials in bulk, for mixing to form non-cap sensitive explosives and for loading directly into boreholes;

(7) “**cap sensitive**” means an explosive which explodes on initiation by a detonator of minimum strength;

(8) “**carrying box**” means metal case or box specially manufactured for carrying limited quantity of blasting explosives and initiating explosives;

(9) “**Chief Controller**” means the Chief Controller of Explosives;

(10) “**Compatibility Group**” shall have the meaning assigned to it in United Nations Economic and Social Council's Committee of Experts on transport of dangerous goods resolution number 645 G (XXIII), dated 26-04-1957 and further resolution number 1995/5, dated 10-07-1995;

(11) “**competent person**” means a person recognised by the Chief Controller who is adequately experienced and well conversant in safe manufacture, storage, transportation, handling, as the case may be of explosive.

(12) “**compressor mounted motor truck or tractor**” means a compressor mounted on mechanically propelled motor truck or tractor duly licensed for transport of explosives to blasting site for use in well sinking, the design of which is approved by the Chief Controller;

(13) “**Conservator**” includes any person acting under the authority of the officer or body of persons appointed to be conservator of a port under Section 7 of the Indian Ports Act, 1908 (15 of 1908);

(14) “**Controller**” includes Joint Chief Controller of Explosives, Deputy Chief Controller of Explosives, Controller of Explosives and Deputy Controller of Explosives;

(15) “**deflagration**” means an explosive reaction such as a rapid combustion that moves through an explosives material at a velocity less than the speed of sound in that material;

(16) “**Departmental Testing Station**” means the testing station of the Petroleum and Explosives Safety Organisation;

(17) “**detonating fuse**” means a cord containing a centre-core of high explosive authorised by the Chief Controller which is used for initiating high explosives charges and to transmit explosion from one explosive charge to another;

(18) “**detonator**” means a tubular device—

- (a) one end of which is closed and the other—
- (i) left open for the insertion of safety fuse for the purpose of initiating explosion within the tube; or
 - (ii) fitted with wires or other device for that purpose and sealed;

- (b) which is loaded with a charge of initiating explosives, the charge being so designed as to produce an explosion that would communicate to the other tube similarly constructed and charged or other explosive charge and includes cord relay connector;
- (19) **“display fireworks”** means a group of authorised manufactured fireworks assembled at site, solely for the purpose of display;
- (20) **“emulsion explosive”** means an explosive material in the form of emulsion, containing substantial amount of oxidizer dissolved in water droplets surrounded by an immiscible fuel;
- (21) **“explosive actuated device”** means any tool or special mechanised device or gas generator system which is actuated by a small charge of explosive or which releases and directs work through the explosive charge;
- (22) **“explosive limit”** means the maximum quantity of explosives permitted by the licensing authority to be stored or processed in a particular premises;
- (23) **“explosives van”** means a mechanically propelled vehicle for transport of explosives by land and includes a road van;
- (24) **“fireworks”** means low hazard explosive comprising of any composition or device manufactured with a view to produce coloured fire or flame, light effect, sound effect, smoke effect (coloured or natural), or combination of such effects and includes fog-signals, fuses, rockets, shells, percussion caps;
- (25) **“fireworks composition”** means any chemical compound or mechanically mixed preparation of an explosive or inflammable substance that is used for the purpose of making manufactured fireworks and is not included in any other class of explosives, and includes any star or coloured fire composition;
- (26) **“foreman's certificate”** means certificate of competence issued by the Controller to a person who is conversant with the process of manufacturing fireworks or safety fuse, as the case may be, and associated hazards for the purpose of supervision of such activities by him;
- (27) **“Form”** means a Form specified in Schedules annexed to these rules;
- (28) **“gunpowder”** means gunpowder ordinarily so called and is an explosive containing a mixture of an inorganic nitrate, charcoal and sulphur;
- (29) **“high explosive”** means explosive which is characterised by a very high rate of reaction, development of high pressure, and presence detonation wave, but does not include fireworks and safety fuse;
- (30) **“licensing authority”** means authority empowered to issue licence or certificate or permit specified in Part 1 of Schedule IV;
- (31) **“magazine”** means a building or structure (other than an explosives manufacturing building) intended for storage of explosives, specially constructed in accordance with the specification provided under these rules or of a design and approved by the Chief Controller;
- (32) **“manufactured fireworks”** means low hazard explosive contrivance containing explosive or combination of different classes, namely, Class 1 or Class 2 or Class 3 or Class 4 or Class 6 given in Part 1 of Schedule I of these rules or any explosives that come under Division 2 or Division 3 or Division 4 under Class 7 given under the said Part;
- (33) **“man-limit”** means the maximum number of individuals permitted by the licensing authority to work inside a particular premises for manufacture or processing of explosives;
- (34) **“marking or detection agent”** is a substance which is introduced into the plastic explosives in a certain minimum quantity for the purpose of detection by means of vapour detection technique;
- (35) **“micro cord fuse”** means a fuse other than safety fuse or quick match, characterised by fixed rate of burning and visible lateral propagation of fire, used for igniting fireworks;
- (36) **“non-explosive emulsion matrix”** means water in oil emulsion or a slurry matrix, which is neither cap sensitive nor booster sensitive;
- (37) **“occupier”**, in relation to a premises means a person a who has the control and is responsible for managing the affairs of the premises, and includes, in relation to any explosives, the person in possession of the explosives :
- Provided that in relation to a—
- proprietary firm, the proprietor; or
 - partnership firm, the partner nominated in writing by all other partners; or
 - company, the director nominated in writing by the board of directors; or
 - society or association, the office-bearer nominated in writing by the governing body;
- shall be deemed to be the occupier;
- (38) **“permitted explosive”** means authorised explosive which is permitted by the Director General of Mines Safety to be used in underground coal mines;
- (39) **“plastic explosive”** means as explosive material in flexible or elastic sheet form formulated with one or more high explosives which in their pure form have a vapor pressure less than 10^{-4} Pa at a temperature of 25 degree Celcius and is formulated with a binder material, and is, as a mixture, malleable or flexible at normal room temperature;
- (40) **“permit”** means permit issued by Chief Controller or Controller or District Magistrate under these rules for specific purpose;

(41) **“prohibited explosive”** means explosive which is prohibited by the Central Government under Section 6 of the Act;

(42) **“propellant”** means an explosive that normally functions by deflagration and is used for propulsion purposes;

(43) **“protected works”** includes buildings or structures in which persons dwell, work or assemble, college, school, hospital, theatre, cinema house, shop, market, factory, place of worships, place of storage of hazardous substances, highway or public road, railway line, navigable waterways, cross country above ground pipelines, dams or reservoirs, overhead high tension power lines, but does not include cart tracks not in regular use, agricultural wells and pump sets connected therewith;

(44) **“quick match”** means a fuse for igniting charges of fireworks and consists of strands of cotton or jute yarn coated or impregnated with black powder (gun powder), wrapped and enclosed with paper with the help of binding material and which burns but does not explode and which does not contain its own means of ignition;

(45) **“safety cartridge”** means a cartridge for small arms as defined in the Arms Act, 1959 (54 of 1959) or the rules made thereunder, the case of which can be extracted for the small-arms after firing and which is so closed as to prevent any explosion in one cartridge being communicated to other cartridges;

(46) **“safety fuse”** means a fuse for igniting charges of other explosives which burn and does not explode and which does not contain its own means of ignition, and which is of such strength and construction and contains an explosives in such quantity that the burning of such fuse would not communicate laterally with other like fuse;

(47) **“Safety management plan”** means the comprehensive plan for ensuring and managing safety in an explosive manufacturing factory;

(48) **“safety distance”** means the distance necessary under these rules to be kept clear between any licensed factory shed, magazines, store house or other licensed premises and protected works as referred to in Schedule VIII;

(49) **“Schedule”** means a Schedule annexed to these rules;

(50) **“shock tube”** means a plastic tube that contains explosives charge authorised by the Chief Controller, which on initiation transmits a firing signal through the tube to the detonator;

(51) **“shot firer”** means a competent person recognised and certified by the Controller for carrying out blasting operation using explosives in areas not coming under the Mines Act, 1952 (35 of 1952);

(52) **“Site Mixed Explosive (SME)”** means an explosive charge formed in the borehole and includes manufacture of ANFO, using a BMD vehicle;

(53) **“slurry explosive”** means an explosive material in the form of slurry, containing oxidizer, fuel, thickener and water;

(54) **“small arm nitro-compound”** means nitro-compound adapted and intended exclusively for use in cartridges for small arms;

(55) **“store house”** means independent building other than a magazine meant to possess fireworks not exceeding 5000 kilogrammes or safety fuse not exceeding 50000 meters, not for sale but for transfer to own licensed shop;

(56) **“testing officer”** means such officer as the Central Government may appoint in this behalf;

(57) **“transfer”** with its grammatical variations and cognate expressions includes letting on hire, lending, giving and parting with possession of explosives or the transfer of explosives from one magazine to another magazine of the same licensee or transfer of packed boxes of fire works from a store house of the licensee to the shop owned by the same licensee;

(58) **“traverse or mound”** means a solid mass of earth, sand, concrete or a brick work around a building or magazine or stack containing explosives provided for protection against effects of explosion;

(59) **“UN Classification”** means United Nations recommendations in the Model Regulation on the Transport of Dangerous Goods published vide ST/SG/AC.10/1 Rev 12 in ISBN 92 -1-13974-5, which specify testing procedures to be carried out by competent authority while classifying dangerous goods for transport;

(60) **“UN Number”** means the four digit identification number assigned to the article or substance under the United Nations system for transport and storage of dangerous goods as stated in the Model Regulation on the Transport of Dangerous Goods published vide ST/SG/AC.10/1/Rev 12 in ISBN 92 -1-13974-5;

(61) **“UN Regulation”** means the United Nations Model Regulations on the Transport of Dangerous Goods published vide ST/SG/AC 10/1 Rev. 12 in ISBN 92-1-13974-5;

(2) All other words and expressions used but not defined in these rules but defined in the Act shall have the meanings respectively assigned to them in the Act.

3. Scope of applicability of rules and exemptions.—

(1) These rules are applicable for regulating the manufacture, import, export, transport, and possession for sale or use of explosives.

(2) Nothing in these rules shall apply to the manufacture, possession, use, transport or importation of any explosives by—

- (a) any of the Armed Forces of the Union and Ordnance Factories or other establishments of such Forces for own use in accordance with

the rules or regulations made by the Central Government;

- (b) Indian railways while acting as carrier ;
- (c) any person employed under the Central or State Government in exercise of any power under the Act or these rules.

(3) When the Chief Controller is of the opinion that an explosive does not pose a risk to public to warrant application of all or part of these rules or the nature and characteristics of explosives present such a minimal and limited risk as not to warrant application of these rules, the Chief Controller may exempt such explosives from the purview of all or part of these rules, with such other conditions as deemed necessary.

Chapter-II

Classification, Categorisation and Authorisation

4. Classification of explosives.—(1) For the purposes of these rules, the explosives shall be classified in the manner specified in Schedule I. The dual system of classification shall be retained for five years from the date of commencement of these Rules, thereafter only UN classification shall be applicable.

(2) If any explosive falls within the limits of more than one class as defined in Schedule I, it shall be deemed to belong exclusively to the last number of such classes.

(3) The fireworks are classified into the following categories depending upon the desired pyrotechnique effect :—

- (i) Sound emitting fireworks.—Fireworks with sound level not exceeding 125 dB (AI) or 145 dB (C) pk at 4 meters distance from the point of bursting. For individual fire-cracker constituting the series (joined fire-crackers), the above mentioned limit be reduced by $5 \log 10(N)$ dB, where N = number of crackers joined together;
- (ii) Colour or light emitting fireworks.—such fireworks which emit colour or light and having sound level not exceeding 90 dB (AI) at 4 m distance from the point of bursting;
- (iii) Display Fireworks.— Any product of fireworks assembled at the site for the purpose of display including shell of diameter exceeding 25 mm, multiple shots or cake products of any diameter exceeding 25 nos., of shots in a product and lance network or other products as approved by the Chief Controller; and
- (iv) Fireworks for export purpose.—Firecrackers for the purpose of export may be manufactured with high sound level or product of such size and design as approved by the Chief Controller subject to following conditions :

- (a) The manufacturer shall have a valid export order with him; and
- (b) The sound level for these fire crackers shall conform to the sound level prescribed in the country to which these are intended to be exported.

5. Safety distance categories of explosives.—(1) Explosives are divided into four categories according to the risks which they present when initiated, namely :—

- (a) Category X—Those explosives, which have a fire or a slight explosion risk or both but the effect of which will be local.
- (b) Category Y—Those explosives, which have a mass fire risk or a moderate explosion risk, but not the risk of mass explosion.
- (c) Category Z—Those explosives, which have a mass explosion risk and major missile effect.
- (d) Category ZZ—Those explosives, which have a mass explosion risk and minor missile effect.

(2) If any question arises as to whether any explosive belongs to Category X, Category Y, Category Z or Category ZZ, the matter shall be referred to the Chief Controller whose decision shall be final.

(3) The safety distances shall be followed as per tables specified in Schedule VIII.

6. Authorisation of explosives :—(1) No person shall manufacture, import, export, transport, possess, sell or use any explosive unless it has been declared as an authorised explosive, by an order issued by the Chief Controller and published by the Central Government in the Official Gazette:

Provided that nothing in this rule shall apply to the manufacture and possession for test and trial purposes and not for sale of a new explosive composition under development at a place specially approved for the purpose by the Chief Controller.

(2) Any person desirous of including an explosive in the list of authorised explosives shall submit an application to the Chief Controller.

(3) The application submitted in accordance with sub-rule (2) shall be accompanied by following particulars, namely :—

- (a) the nature and composition of the explosives and in case of plastic explosives, the name and percentage of the marking agent;
- (b) the limiting range of percentage of each ingredient of the explosive, including substitutes, if any;
- (c) method of function, purpose of use and performance characteristics of the explosives and instructions governing its use;

- (d) in the case of a new explosive to be manufactured in India, the process of manufacture stating safe operating procedures and precautions;
- (e) where an explosives is enclosed in a case or other contrivance, the dimensions of the case or other contrivance, the quantity, nature, brand of explosives contained therein and markings thereon;
- (f) the box, wrapping or other container in which the explosive will be handled, used or displayed or otherwise distributed including the markings thereon;
- (g) the package in which the explosive will be transported and stored including the markings thereon;
- (h) country of origin with name and address of the manufacturer, UN Classification and UN number of the explosives; recommended methods of disposal; material Safety Data Sheet for the explosives and raw material;
- (i) fee referred to in Part 2 of schedule IV to these rules;

(4) When, in the opinion of the Chief Controller, an explosive in respect of which an application is made may properly be considered for authorisation, the Chief Controller shall instruct the applicant as to the samples required and the manner of forwarding the same to the Departmental Testing Station, or to any other authority specified by the Chief Controller in this behalf for testing thereof along with prescribed fees.

(5) No person shall send a sample of an explosive unless such person has first received the instruction referred to under sub-rule (4).

(6) No person shall send a sample of an explosive otherwise than in accordance with instructions given by the Chief Controller under sub-rule (4).

(7) (i) Sample forwarded under sub-rule (4) shall be subjected to such of the tests enumerated in clause (ii) of this sub rule as are necessary having regard to the nature and type of explosive submitted to ensure that the explosive is capable of being safely manufactured, handled, stored transported and used.

(ii) The tests referred to in clause (i) pertain to —

- (a) physical properties including consistency, reaction tendency to absorb moisture, segregation in transport or otherwise of the constituents, exudation, behaviour at low temperatures, specific gravity and such other physical properties as may be considered necessary;
- (b) chemical composition —determination of the percentage composition of the ingredients

forming the explosive, and the quality of the ingredients employed in its manufacture;

- (c) stability — determination of stability after subjection to such varying environmental conditions as would tend to produce spontaneous ignition or variation in sensitiveness of an explosive;
- (d) ignition characteristics — ignition point, behaviour on ignition, liability to spontaneous ignition, behaviour on ignition in bulk;
- (e) mechanical sensitiveness — determination of sensitiveness to friction and impact;
- (f) air gap and transmission of detonation;
- (g) velocity of detonation;
- (h) determination of strength;
- (i) composition of gases evolved upon explosion;
- (j) ensure that plastic explosives are detected by vapour detection technique;
- (k) such other tests and field trials as the Chief Controller may specify.

(8) An explosive tested in accordance with sub-rule (7) shall be declared by the Chief Controller to be an authorised explosive if, he is satisfied that such an explosive can be safely manufactured, handled, stored, transported and used.

(9) Authorisation issued by the Chief Controller under sub-rule (8) in respect of indigenous explosives shall be valid as long as it is included in the list of authorised explosives, and conforms to the descriptions outlined while issuing authorisation.

(10) In case of explosives manufactured in a foreign country and already authorised in that country, the manufacturer, in addition to the report of tests stated in clause (ii) of sub-rule (7) shall submit the information regarding country of origin, the copies of various approvals or permissions obtained for testing, packaging, markings etc. required for authorisation of the explosives as well as for export of explosives from the country of manufacture to other countries and report of such other tests as the Chief Controller may specify.

(11) The authorisation issued by the Chief Controller of Explosives under sub-rule (8) in respect of any imported explosives shall be valid for one year from the date of authorisation, if the foreign manufacturer certifies that there has been no change in the composition or any other characteristics of the explosives.

(12) The Chief Controller, may, on his own accord once in a year or on the request of manufacturer or importer or exporter or consignor, subject any explosive to the tests enumerated in clause (ii) of sub-rule (7) to verify the approved composition and characteristics of the explosives at the Departmental Testing Station and as a result of the

tests or otherwise, if the Chief Controller is satisfied that the explosive is no longer safe for manufacture, handling, storage, transport or use, or unfit for continuation of authorisation, may delete such explosive from the authorised list after giving the applicant or licensee an adequate opportunity of being heard.

(13) The samples required for testing under sub-rule (7) or sub-rule (12) and as required in rule 3 of rule 45 and testing fees as prescribed in Part 2 of Schedule IV, shall be submitted by the licensee or applicant.

(14) The Chief Controller, on completion of the testing of an explosive, in pursuance of sub-rule (7) shall decide whether or not the explosives should be declared to be an authorised explosive; and

- (a) where the explosive is declared to be an authorised explosive, shall assign the class including any division and sub-division and category within which the explosive falls;
- (b) where the explosive is not declared to be an authorised explosive, shall communicate the same with reasons thereof to the applicant.

(15) (i) The Chief Controller shall maintain a list of authorised explosives showing-

- (a) the brand or trade name of the explosives;
- (b) the name and address of the manufacturers;
- (c) the class, including any division and sub-divisions thereof, within which each explosive falls ; and
- (d) the safety distance category and the corresponding UN Classification and UN Number.

(ii) The list of authorised explosives shall be published by the Chief Controller from time to time.

(16) (i) No alteration in the composition, limiting percentage of ingredients or substitute ingredients, the process of manufacture, the description and construction of the case or the contrivance as submitted in accordance with sub-rule (3) shall be carried out without prior approval of the Chief Controller.

(ii) The Chief Controller may order fresh test to be carried out if the proposed alteration in the percentage, composition, nature of ingredients, process of manufacture or construction of the case or contrivance of the explosive are likely to change the results of the original test prescribed in these rules.

(17) For trial manufacture and field trial of new explosive composition, the following procedure shall be observed, namely :—

- (i) Upon scrutiny of the proposal, the Chief Controller may grant permission to manufacture trial batches of the explosives in laboratory not exceeding explosive limit of

laboratory and direct to carry out such tests, as he may consider necessary.

- (ii) The applicant shall submit test report seeking permission for trial manufacture in the plant or manufacturing unit.
- (iii) On receipt of test report, the Chief Controller may permit manufacture of limited quantity of the explosives in the manufacturing unit or plant on trial basis.
- (iv) In case of existing plants or conventional type of explosives, the Chief Controller may permit trial manufacture directly in the manufacturing plant without manufacturing in the laboratory scale.
- (v) On being satisfied with the reports of the tests as may be required by the Chief Controller, he may issue field trial permission under such conditions as he may specify.
- (vi) After field trial, applicant shall submit to the Chief Controller the reports of field trial and necessary fees referred to in Part 2 of Schedule IV of these rules.
- (vii) For permitted explosives, test report and field trial report from Central Mining Research Institute and Central Mine Planning and Design Institute are required to be submitted to the Chief Controller and in case of non-permitted explosives field trial report from reputed mining or construction company.
- (viii) On receipt of report and being satisfied, the Chief Controller may authorise the explosives and permit its manufacture on regular basis provided that nothing in this sub-rule shall be applicable for fireworks.

Chapter III

General provisions

7. Control over manufacture, import, export, transport, possession for sale or use of explosives.—No person shall manufacture, import, export, transport, possess for sale or use an explosive except as authorised or licensed under these rules.

8. Pre-requisite for grant of licence.—No licence shall be granted unless otherwise all the relevant provisions laid down under these rules are complied with and all conditions which are contained in the licence forms under Part 3 or Part 4 of Schedule V are satisfied.

9. No licence needed in certain cases.—Notwithstanding anything contained in rule 7, no licence shall be necessary for the following cases, namely :—

- (1) manufacture of explosive in small quantities in an established laboratory for research and development purpose with prior permission

from the Chief Controller under the conditions as may be imposed by him;

- (2) manufacture, possession and sale of colour or star matches with prior permission from the Chief Controller under the conditions set forth by him in SET- XVI referred to in Part 4 of Schedule V:

Provided that the manufacture, possession and sale of colour or star matches shall be done in a factory approved by the Chief Controller and any person desiring to manufacture, possess and sell colour or star matches shall submit to the Chief Controller, an application, plans of the proposed building and site drawn to scale, description of process or work to be carried out, detailed process of manufacture and prescribed scrutiny fee;

- (3) transport of explosives by other than mechanical propelled vehicle, within the factory premises, from place of storage to place of use, port of import to storage place within the notified port premises;
- (4) transport of safety fuse and fireworks;
- (5) possession of fireworks not exceeding one hundred kilogram for own use and not for sale;
- (6) possession by any person for his own private use and not for sale of gunpowder not exceeding five kilograms and fifty metres of safety fuse in any State other than Bihar, Kerala, Tamilnadu and West Bengal and of small arm nitro-compound not exceeding five kilograms except in the State of Kerala;
- (7) possession by Indian Railways of flare lights or other explosives for its own use and not for sale to any other person by transfer or otherwise for maintaining railways, tracks, tunnels if the provisions of the Act and these rules are otherwise complied with;
- (8) possession of any explosive, which is not for sale and is required solely for the navigation of aircraft, when kept in an aircraft for use therein, or for distribution to other aircraft or to aerodromes or at an aerodrome for use there or for distribution to aircraft or to other aerodromes:

Provided that the maximum quantity so possessed shall not exceed twenty five kilograms when carried in an aircraft and fifty kilograms when kept at an aerodrome; and

- (9) possession and sale from a shop of amorces and sparklers in quantity not exceeding one hundred kilogram.

10. General Restrictions.—(1) Restriction on manufacture—(a) No explosives shall be manufactured at any place except at a licensed factory with manufacturing process duly approved by the licensing authority.

(b) No person shall manufacture any plastic explosive without adding marking agent as per the International Civil Aviation Organisation Resolution A 27-8 based on United Nations Security Council Resolution 635 of 14th June, 1989 and United Nation General Assembly Resolution 44/29 of 4th December, 1989;

(2) Restriction on import or export —

- (a) No person shall import or export any explosive except under and in accordance with the conditions of licence granted under these rules.
- (b) No explosive shall be imported or exported except at its ports notified by the Central Government
- (c) No licence shall be granted for import or export of any explosives unless—
- (i) the explosive is an authorised explosive;
 - (ii) the explosive, if of the Class 3 (nitro-compound class) or Class 4 (chlorate mixture) is certified in Form CE 1 by the testing officer to have passed the tests specified in Schedule III;
 - (iii) the explosive is certified to have passed such analysis or examination, if any, as the Commissioner of Customs in consultation with the Chief Controller, by order in writing, may require in order to determine its composition or condition.
 - (iv) plastic explosives are added with marking agent as per International Civil Aviation Organisation Resolution A 27-8 based on United Nations Security Council Resolution 635 of 14th June, 1989 and United Nation General Assembly Resolution 44/29 of 4th December, 1989;
 - (v) the exporter shall submit Form AE-7 duly filled in and signed, indicating therein clearly the purpose and intent of export, the UN classification and UN Number, the Material Safety Data Sheet for the explosives intended to be exported, means of transport, detailed address of importer.

(3) Restriction on transport—(a) Any explosive of Class 5 (Fulminate) or detonator or any other explosive of Class 6 (Ammunition) containing its own means of ignition or initiation, or an explosive of Class 7 (Fireworks) shall not be transported in the same carriage, or save as provided in Part 3 of Schedule VI in the same vessel and shall not be

conveyed or handled with any explosives not of the class and division to which it belongs.

- (a) No person shall transport any explosive with explosives belonging to Compatibility Group K referred to against serial number 10 in Table 1 under Part 3 of Schedule I, in a vehicle.
- (b) No person shall transport explosives of Class 3 or Class 2 along with detonators.
- (c) Nothing in clauses (a) and (b) shall apply to the transport of explosives of Class 2 and/or Class 3, safety fuse, detonating fuse and detonators in a compressor mounted motor truck or tractor covered under a licence as per these rules.

(4) Restriction on delivery—(a) No person shall deliver or despatch any explosive to any one other than a person who—

- (i) is the holder of a licence to possess the explosives or the agent of a holder of such a licence duly authorised by him in writing in this behalf; or
- (ii) is entitled under these rules to possess the explosives without a licence.

(b) The explosives so delivered or despatched shall in no case exceed the quantity, which the person to whom they are delivered or despatched is authorised to possess with or without a licence under these rules.

(c) No person shall receive explosives from any person other than the holder of a licence granted under these rules.

(d) No person shall receive from or transfer explosives to any person for a temporary storage or safe custody in a licensed premises unless prior approval is obtained from the Controller or licensing authority having jurisdiction.

(5) Restriction on handling explosives—No person shall handle or cause to be handled any explosive between the hours of sunset and sunrise :

Provided that nothing in this rule shall apply to handling of explosives during the dark hours if proper illumination is provided in the area and the place is guarded.

(6) Restriction on smoking and articles likely to cause fire or dangerous substance—No person shall smoke, and no fires, lights or articles or substances of a flammable nature or liable to spontaneous ignition, or act to cause or communicate fire or explosion such as acids, petroleum, carbide of calcium, compressed gases or such other hazardous substances, or radio or cell phone or radio frequency operated device or any such communication system or devices shall be allowed at any time within fifteen metres from the place where an explosive is stored or at any place where an explosive is handled during transport one hour before and during such handling.

(7) Restriction on employment of children, intoxicated persons and certain other persons - No person shall employ, allow or engage a person—

- (a) who is below the age of eighteen years; or
- (b) who is in a state of intoxication; or
- (c) who is of mentally or physically challenged, for manufacture, storage, sale, loading, unloading or transport of explosives or to enter any premises licensed under these rules.

(8) Restriction on toxic, corrosive or flammable substances—No toxic, corrosive or flammable or otherwise dangerous substances shall be allowed in the premises meant for manufacture, import, export, transport, storage, sale or handling of explosives.

11. Employment of competent person.—(1) All operations associated with handling of explosives shall be carried out under supervision of competent person.

(2) No explosive shall be manufactured in any building or part thereof except under the supervision of a competent person employed by the licensee who shall be fully conversant with the process of manufacture of explosives, hazards connected therewith and the provisions of these rules.

(3) Professionally qualified person with Degree or Diploma in Engineering or Graduate in science having minimum 5 years experience in manufacturing explosives shall be an essential qualification and Diploma in Industrial safety as an optional qualification to be the competent person referred to in sub-rules (1) and (2) who shall be employed by the licensee to ensure compliance of safety norms in a factory for manufacturing explosives of Class 1 with the capacity exceeding one hundred and fifty tonnes per annum or explosives of Class 2, 3 or explosives accessories like detonating fuse, detonator, shock tube, initiating composition.

(4) Foreman holding foreman's certificate shall be the competent person referred to in sub-rule (2) who shall be employed by the licensee to ensure compliance of safety norms in a factory for manufacturing fireworks or safety fuse.

12. Protection from lightning and thunderstorm.

(1) Every magazine or process building shall have attached thereto one or more efficient lightning conductors designed and erected in accordance with specification laid down by Bureau of Indian Standards.

(2) The connections to various parts of earth resistance of the lightning conductor terminal on the building to the earth shall be tested at least once in every year by a qualified electrical engineer or any other person holding a certificate of competency in this behalf from the State Government and a certificate showing the results of such test and the date of the last test shall be conspicuously displayed.

(3) Whenever a thunderstorm appears to be imminent in the vicinity of a magazine or store house or processes building, every person engaged in or about such magazine or store house shall be withdrawn to a safe distance from such magazine and store house shall be kept closed and locked until the thunderstorm has ceased or the threat of it has passed.

Provided that process building used for manufacture of fireworks, explosives of class 7, may not be provided with lightning conductor unless otherwise specified by the licensing authority.

13. Repair and maintenance of the premises.—The interior of every building or room used for storage of explosives and the benches, shelves and fittings in such building or room shall be so constructed or so lined or covered as to prevent the exposure of any iron or steel and the detachment of any grit, iron, steel or similar substance so as to come into contact with explosive in such building and such interior benches, shelves and fittings shall, so far as is reasonably practicable, be kept clean and free from grit.

- (1) A cemented trough at least fifteen centimetres deep shall be provided near each entrance of a magazine or storehouse. Such trough shall be kept filled with clean water and no person shall enter the magazine or storehouse without dipping overshoes or feet in such a trough so as to remove any grit or dust.
- (2) Oiled cotton, oiled rags or oiled waste or any articles liable to spontaneous ignition shall not be taken into any magazine or storehouse used for storage of explosives.
- (3) Before repairs are done to any magazine or storehouse or part thereof used for storage of explosives, that magazine or storehouse or part thereof shall be cleaned by removal of all explosives and by thorough washing.

14. Packing of explosives.—(1) No person shall import, export, tender for transport, cause to be transported, possess or sell any explosive unless -

- (a) it is packed in the manner laid down in Schedule II;
- (b) the container or package is marked in accordance with rule 15;
- (c) the packages conform to the relevant standard of Bureau of Indian Standards or other standards accepted and approved by the Chief Controller;
- (d) packages of explosives for export or import conform to the requirements of the tests as specified for various classifications under International Maritime Dangerous Goods Code

(hereinafter referred to as the IMDG Code in these rules) or International Air Transport Authority code or United Nations recommendations on the transport of Dangerous Goods and permitted by the Chief Controller:

Provided that nothing in this rule shall apply to explosives in the process of manufacture.

- (e) The firecrackers for export purpose shall have different colour packing and shall carry a declaration printed thereon. "Not for sale in India. Only for export".

(2) For the purpose of requirements of clause (c), container or package shall be tested in the Departmental Testing Station or other Testing Stations recognized by the Chief Controller. For testing in the Departmental Testing Station, fees as specified in Part 2C of Schedule IV shall be payable.

(3) An explosive which is not an authorised explosive but which is required to be transported for the purposes of test in connection therewith shall be packed in such manner as may be directed by the Chief Controller.

15. Marking on explosives and packages.—(1) Marking on packages - (i) The outer package shall be marked in conspicuous indelible character, by means of a stamping, embossing or painting with—

- (a) the word "EXPLOSIVES";
- (b) the name of authorised explosive;
- (c) the number if any of the Class and the Division including sub-division to which it belongs;
- (d) the safety distance category of explosive;
- (e) the name of the manufacturer;
- (f) identification number of the package;
- (g) the net weight of explosives;
- (h) gross weight of the package;
- (i) date of manufacture and batch number;
- (j) UN Classification and UN Identification number (for export packages);
- (k) in case of plastic explosives, the words "marking agent added as per International Civil Aviation Organisation Resolution A 27-8" referred in sub-clause (iv) of clause (c) under sub-rule (2) of rule 10; and
- (l) a paper slip containing the above details shall be kept inside the package :

Provided that in the case of safety fuse or fireworks, clauses (a) and (l) may be omitted and the words "safety fuse" or "Fireworks" shall be marked.

- (ii) In case of fireworks, the names of the items, for example - amorces, paper caps, serpents eggs etc. as appropriate shall be marked.
- (iii) Every manufacturer shall on the box of each fire cracker shall mention details of its chemical content, sound level and that it satisfies requirements as laid down by the Chief Controller. Firecracker meant for export shall have a different colour packing from those intended to be sold in India and a clear print indicating that they are not to be sold in India.

(2) **Marking on explosives of Class 2 and Class 3.**—In the case of explosives of Class 2 and Class 3, each of the cartridges or primary containment of explosives shall be printed or embossed legibly on it with—

- (a) the word “EXPLOSIVES”;
- (b) the name of explosives and in case of plastic explosives additional words ‘marking agent added’;
- (c) weight of explosive;
- (d) diameter of the cartridge;
- (e) name of manufacturer; and
- (f) in case of permitted explosive, the letter P1, P3 or P5 as the case may be.

(3) **Marking on explosives of Class 6.**—In the case of explosives of Class 6 Divisions 2 and 3 the name of the manufacturer in full or abbreviated form shall be printed or embossed legibly on every metre or on every piece, as the case may be. The abbreviated form, if used, shall be registered with the Chief Controller.

(4) **Marking on fireworks.**—In case of fireworks, explosive composition, quantity of such composition, whether sound emitting crackers or colour or light emitting crackers, sound level, a caution or warning indicating the name of the item, manufacturer’s name, method of firing and precautions to be taken both in words and pictorial view shall be printed on each piece of fireworks and cardboard box and where adequate space is not available on the fireworks, such caution or warning shall be printed on a separate label and inserted in the smallest packet or carton.

(5) **Marking on other classes of explosives.**—Explosives of classes other than those mentioned in sub-rules above shall be marked as directed by the Chief Controller.

(6) **Defacing of marking prohibited.**—No person shall alter or deface any printing or marking on the explosives or packages thereof.

16. Weight of explosives.—The weight of explosives when referred to in these rules shall not include the weight of the packing box in which the explosives are packed:

Provided that in case of explosives of the Class 6 (Ammunition) or Class 7 (Fireworks), the weight shall be deemed to be the weight of the completed article inclusive of the case or contrivance in which the explosive is contained, but shall not include the weight of the inner package and outer packing box.

17. Split explosive to be destroyed.—If any explosive escapes from the package in which it is contained, or is split, such explosive shall immediately be carefully collected and destroyed in a safe manner as provided in these rules.

18. Precautions against danger from water, heat or pollution.—(1) In the case of any explosive which is liable to be dangerously affected by water, due precautions shall at all times be taken to prevent water from coming in contact with such explosive.

(2) Packages containing explosives shall not be allowed to remain in the sun or exposed to excessive heat:

Provided that nothing in sub-rule (2) shall apply to sun-drying of gunpowder or fireworks or drying of explosives in a licensed factory under controlled conditions.

(3) The statutory provisions regarding pollution, as applicable as far as these rules are concerned, shall be complied with.

19. Special precautions against accident.—(1) No person shall commit or attempt to commit any act which may tend to cause a fire or explosion in or about any place where an explosive is manufactured, stored or transported.

(2) Every person possessing explosives and every person in charge of or engaged in the import, export, manufacture, sale, transport or handling of explosives shall at all times comply with the provisions of these rules and the conditions of the licence relating thereto and observe all due precautions for the prevention of thefts or accidents by fire or explosion.

(3) Every person shall prevent any other person from committing any such act as is prohibited under sub-rule (1).

20. Provision of mounds.—(1) **For manufacturing factory**—Every building used for production, handling, storage, testing of explosives, in a licensed factory unless otherwise exempted by the licensing authority shall be surrounded by a substantial mound which shall be of a type and design approved by the licencing authority:

Provided that the licensing authority may allow blast walls in place of substantial mound if such blast walls can be provided for the purpose.

(2) **For magazines.**—A substantial mound shall be provided near a magazine, if so required by the licensing authority. Such mound shall be of a type approved by the licensing authority and shall always be maintained in good condition to provide effective protection. The mound shall be provided near the magazine and constructed as per

approved specification, if applicable and shall be shown in the drawing for approval by the authority.

21. Restriction on unauthorised persons and provision of guards.—(1) The licensee shall at his own expense provide security guards for safe custody of the factory or magazine for storage of explosives other than fireworks.

(2) For the purposes of sub-rule (1), the security guards shall be of such strength as the District Magistrate may consider it to be sufficient.

(3) A factory licensed under these rules for manufacture of explosives shall be surrounded by a wall or security fencing at least two metres high of such strength and construction as to effectively prevent entry of unauthorised persons.

(4) The area enclosed by such wall or fence referred to in sub-rule (3) shall cover the safety zone required to be kept clear from any of the process buildings or sheds.

(5) The licensee for a magazine shall provide a shelter for the security guard(s) on duty near the magazine at a suitable location not less than thirty metres away from the magazine.

22. Use of electrical equipment.—(1) No electrical equipment shall be used in places where explosives are being manufactured, handled or stored except with the prior permission of the Chief Controller.

(2) The electrical equipment shall be of a type acceptable to the Chief Controller.

23. Prohibition of certain acts. —No person shall—

- (1) provide false or misleading information in any application made or statement submitted under these rules; or
- (2) falsify, erase or fraudulently alter any entry in any log, document or other record required to be kept or maintained under these rules; or
- (3) change or alter any licence, permit or other documents issued under these rules.

24. Maintenance of records and submission of returns.—(1) Every person holding a licence granted under these rules for manufacture, possession, sale, use or transport of explosives shall maintain records in the prescribed forms specified in Part 5 of Schedule V and shall produce such records on demand to an authority specified in rule 128.

(2) Stock books in prescribed forms shall be page numbered and certified by any officer authorised under these rules and such records shall be retained for period of three years, unless otherwise directed by an authority.

(3) The licensee shall submit quarterly returns of explosives (other than fireworks) manufactured, received, sold or transferred or used or destroyed or imported or

exported to the Controller as well as District Magistrate in the form prescribed in Part 5 of Schedule V so as to reach the above authority within tenth day of every succeeding quarter.

(4) In case the licensing authority is the District Magistrate, the licensee shall submit quarterly return to such authority.

25. Records of accidents.—Records of all accidents occurring within the licensed premises shall be maintained and shall be made available to the inspecting authority.

Chapter IV

Special Provisions for Manufacture of Explosives

26. Approval of manufacturing process.—(1) No new explosive after its inclusion in the list of authorised explosives shall be manufactured unless the process of manufacture is approved by the licensing authority and his permission obtained in writing.

(2) A person intending to manufacture an authorised explosive shall submit to the Chief Controller separately for each explosive a project report in duplicate containing, among other relevant data, the following particulars, namely :—

- (a) the detailed process starting from the raw materials, to the finished product describing the plant and equipment, quantities of materials handled, operating conditions and parameters, nature of controls and safety devices provided in the proposed method of treating effluents and waste explosives;
- (b) the nature and composition of the explosives;
- (c) the limiting percentage of each ingredient of explosives;
- (d) the specification of the various raw materials including substitutes, if any, used in the process of manufacture;
- (e) physical and chemical characteristics of final product;
- (f) name and percentage of marking agent to be added in plastic explosives for detection by vapour detection technique;
- (g) safety management plan as stated in sub-rule (3) to be followed by the company in case of high explosives or blasting accessories;
- (h) any other particulars as may be required by the licensing authority;
- (i) prescribed scrutiny fee.

(3) Safety management plan referred to in clause (g) of sub-rule (2) shall include the following, namely :—

- (a) assigned responsibilities and organisational structure, including resource assessment;

- (b) hazard identification, risk assessment and control;
 - (c) provision of information, education and training to the work force, contractors and visitors;
 - (d) accident reporting and investigation;
 - (e) emergency response planning and preparedness such as first aid, testing of emergency plan once in a year;
 - (f) provision of escape route;
 - (g) evacuation plan, appropriate fire fighting controls, consequence minimising steps like control of spills, appropriate off-site response plan etc.;
 - (h) maintenance of records;
 - (i) maintenance of schedules for plant and equipment;
 - (j) standard operating procedures where absence of such procedures may adversely affect safety;
 - (k) availability of Material Safety Data Sheet (MSDS);
 - (l) security of explosives;
 - (m) transport and storage of explosives;
 - (n) material handling;
 - (o) explosives and man limit in each building and location;
 - (p) precaution against adverse conditions, natural as well as artificial such as lightning, earthquake, load shedding, trips in the process, etc.;
 - (q) restriction of source of ignition;
 - (r) segregation of incompatible materials;
 - (s) disposal of waste explosives and ingredients, including burning grounds procedures;
 - (t) competence of personnel for tasks; and
 - (u) safety meetings, self auditing and external safety auditing of system and procedures.
- (4) The Chief Controller, after scrutiny of the project report, the Safety management plan and after making such further enquiries as may be considered necessary, may if he is satisfied, approve the process for each explosive separately.
- (5) No person shall make any change in the process, nature and composition of explosives, specification and limiting percentages of raw materials and ingredients without prior approval of the licensing authority.
- (6) The Chief Controller may cause at any time any test on any raw material, ingredients or explosives to

ascertain if these conform to the particulars given under sub-rule (2).

27. Submission of safety management plan to District Magistrate—The applicant shall submit a copy of the safety management plan to the District Magistrate.

28. Buildings to be used for specified purpose only.—Every building in a factory shall be used only for the purpose specified in the licence granted under these rules :

Provided that the licensing authority may temporarily permit the use of a building for a purpose other than that specified in the licence after satisfying himself that such a change is safe and for smooth operation of the process of manufacture.

29. Interior of buildings to be suitably finished.—A building in which explosives or any ingredient thereof which either by itself is possessed of explosives' properties, or which when mixed with any other ingredient or article also present in such building is capable of forming an explosive mixture or an explosive compound, kept or resented, or in the course of manufacture is liable to be, shall be a danger building; and the interior of every such building, and the benches, shelves and fittings in such building (other than the machinery) shall be so constructed or so lined or covered as to prevent the exposure of any iron or steel and the formation and detachment of any grit so as to come into contact with the explosive or ingredient thereof in such building and such interior benches, shelves and fittings shall, as far as reasonably practicable, be kept free from grit and otherwise clean.

30. Restriction of articles liable to spontaneous ignition.—Oiled cotton, oil rags and oil waste and any other article liable to spontaneous ignition shall not be taken into any building where explosives are kept except for the purpose of immediate supply and work or immediate use in such building and upon cessation of such work or use, shall forthwith be removed.

31. Use of special tools and implements.—No tools or other implements shall be used or allowed to be present in a building used for carrying out process of manufacture (hereinafter referred to as process building) unless they are of wood, copper, brass or soft metal or material, or are covered with safe and suitable material.

32. Particulars to be exhibited on process building.—The particulars mentioned hereunder shall be prominently marked or exhibited in every process building, namely :—

(1) **outside the building**—

- (a) the name and identification number of the building as per plan approved by the licensing authority; and
- (b) man - limit and explosives limit.

(2) inside the building—

- (a) man limit and explosives limit;
- (b) general safety instructions;
- (c) operating instructions; and
- (d) safe process details.

33. Removal of foreign matter from ingredients.—

No ingredient shall be made or mixed into an explosive unless it has been thoroughly treated by sifting or other effective means for the detection and removal of all foreign objects or matters that might cause danger.

34. Removal of explosives and materials expeditiously.—(1) All explosives processed in a process building shall immediately be removed to the next process building or a licensed magazine or storehouse, as the case may be, and no explosive shall be allowed to accumulate in any process building.

(2) Where the process in the manufacture of explosive in a process building has been completed, all substances that have been brought into the building for use in that process but not used, and that are not immediately required for use in another process in the same building, shall immediately be removed from the building.

35. Training to personnel.—Every person engaged in the manufacturing factory shall be imparted training in safety by competent person periodically during manufacture, handling, transportation and storage of explosives and records of such trainings shall be maintained.

36. Use of vehicles.—Every vehicle and every trolley or receptacle in which finished or partly finished explosives are transported in a licensed factory area shall—

- (a) unless otherwise approved, have no exposed iron or steel in its interior;
- (b) be closed or covered while the explosives or its ingredients are being transported.

37. Maintenance and repairs of building, plant and equipment.—(1) Every building in the licensed premises shall always be maintained in a fit condition. All plants and equipments in a licensed factory shall be regularly serviced and maintained in a proper and fit condition by the licensee.

(2) Before carrying out repairs to any building or part thereof, including any equipment therein, that building or equipment shall be thoroughly made free of explosives by a suitable safety process of removal.

(3) If the repairs to the building or a part thereof require use of any source of fire, licensee shall issue a written permit allowing use of such articles under the supervision of safety personnel and a copy each of such permit shall be preserved for a period of three months and presented on demand by an inspecting authority.

(4) If major repairs are done to a building or any part thereof including any machinery therein, that building or

part of it shall not be taken into use unless the same is permitted by the licensing authority.

(5) A record of all such servicing and maintenance shall be maintained till the time of next servicing and maintenance and in case of any major repairs or replacement to any machinery or equipment, such record should be preserved till replacement of such machinery and equipment.

38. Facilities for testing.—Proper testing facilities for routine physical and chemical examination of raw materials, intermediates and final products shall be provided by the licensee in the licensed premises at places specially approved by the Chief Controller or Controller :

Provided that the Chief Controller or Controller, as the case may be, may direct the licensee, by a written order to provide such additional facilities at such places which, in his opinion, are necessary for maintaining desired quality and safe manufacture of explosives in the licensed factory.

39. Requirement of samples for testing.—

Whenever the Chief Controller or Controller requires under sub-rules (7) or (12) of rule 6 testing of any explosive by the Departmental Testing Station, the manufacturer or the applicant shall submit the samples of the explosives, free of cost to the Departmental Testing Station in required quantities :

Provided that if considered necessary, Chief Controller or Controller, as the case may be, may draw samples through his subordinate officers.

40. Stoppage of manufacture of explosives.—If at any time any operation in the process of manufacture of an explosive is no longer found to be safe or behaviour of the explosives during the course of storage, transport or use is no longer found to be safe due to change in the nature and composition of explosives, or due to any other reason, the licensing authority may issue an order in writing directing the licensee to stop forthwith the manufacture of such explosive till such time the operation or the composition is rectified to the satisfaction of the licensing authority.

41. Exclusion from list of authorised explosives.—

If the licensing authority stops the manufacture of any explosives under rule 40 or if any explosive is not manufactured for a continuous period of five years, such explosives may be excluded from the list of authorised explosives by the Chief Controller.

42. Disposal of waste explosives.—(1) The laboratories, process buildings and machineries therein shall be swept and cleaned at the end of each shift or earlier if necessary, and the sweepings and waste explosives shall be properly collected and stored in a safe place and safely disposed of.

(2) Adequate facilities for safe destruction under the supervision of a person adequately competent and at

a place approved by the licensing authority in the licensed premises shall be provided by the licensee for the materials collected under sub-rule (1).

Chapter V

Special Provisions for Import or Export of Explosives General

43. Import or export by land.—No licence for import or export of explosives by land shall be granted without the previous sanction of the Central Government in each case, wherein the Central Government may impose conditions and restrictions in consultation with the Chief Controller.

44. Compliance of port rules.—The provision of rules regulating to handling of explosives at the notified ports issued under the Act and respective port rules and bye-laws shall be observed.

45. Import of explosives.—(1) Declaration by importer - A person holding an import licence granted under these rules shall furnish a declaration to the Chief Controller—

- (a) in Form RE-8 under Part 5 of Schedule V as soon as ship carrying explosives sails from the port of loading;
- (b) in Form RE-9 under Part 5 of Schedule V as soon as any shipment of explosives is cleared from the port of import.

(2) **Declaration by master of ship or by the ship's agent** - (a) The master of every ship carrying explosives or the agent for such ship shall give the Conservator of the port not less than forty eight hours' notice of its intended arrival at the port.

(b) The master of every ship carrying explosives shall deliver to the pilot before entering any port, a written declaration in Form CE-2 under his signature:

Provided that if in anticipation of a ship's arrival, the agent for such ship delivers to the Conservator of the port a written declaration as aforesaid under his signature, no such declaration need to be made by master of the ship.

(c) Every declaration delivered to a pilot under clause (b) of sub-rule (2) shall be made over by him without delay to the Conservator of the port and all declarations received by the Conservator of the port shall be forwarded by him, with all convenient despatch to the Commissioner of Customs.

(3) **Sampling procedure from imported explosives**—
(a) When the master of, or the agent for, a ship has made declaration required by sub-rule (2) as the Commissioner of Customs of the port may authorise in this behalf shall board the vessel and obtain samples of all such explosives intended to land at the port and are required under these rules to be tested, analysed or examined.

(b) The master or the agent, as the case may be, shall deliver to the officer referred to in clause (a), without charges, samples of all the explosives of which samples are required to be taken. One sample consisting of at least two cartridges shall be drawn from a group of cases having the same batch number and same date of manufacture. The samples, if the sampling officer so requires, shall be taken from particular package indicated by him.

(c) If the taking of any samples under clause (a) involves the opening of any case, such case shall, before it is opened, be removed to an isolated position at a safe distance from any place where consignments of explosives are stored.

(4) **Despatch of samples to the testing officer**—(a) The officer taking a sample of any explosives under sub rule (3) shall affix to it the name of the ship, the name of the consignee, name of the explosive and such other distinguishing marks, as he may think necessary and shall forward it to the testing officer without delay.

(b) In the case of a Nitro-compound or a Chlorate mixture, the date and batch number shall also be affixed to the sample.

(5) **Testing of samples**—(a) The testing officer shall test, analyse or examine, as the case may be, the samples and shall without delay forward to the Commissioner of Customs a test certificate in CE-1 in duplicate under his signature certifying whether the explosives have passed the prescribed tests, analysis or examination.

(b) The Commissioner of Customs shall, as soon as practicable and ordinarily within twenty four hours after receipt of the report of the testing officer, forward a copy each of the certificate in CE-1 to the Chief Controller and the Controller of the area having jurisdiction.

(6) **Permission to land explosives**—(a) No imported explosives shall be permitted to be landed by the Commissioner of Customs except with the prior permission of the Chief Controller or the Controller duly authorised in this behalf who shall issue such permission if the explosives have passed the prescribed tests, analysis or examination and after making such other enquiries as considered necessary.

(b) If the Commissioner of Customs, after receiving the permission under clause (a) and the licence for import of such explosive under these rules and after making such further enquiries as he deems necessary, is satisfied that the explosives can lawfully be imported, he shall permit it to be landed.

(c) Nothing in this rule shall affect the power of Commissioner of Customs to detain the explosives under any other law for the time being in force.

(d) The imported explosives shall be removed from the port premises by the importer as expeditiously as possible.

(7) **Restrictions on airports for import.**—(a) No explosive shall be imported by air except at the airports authorised for this purpose by the Central Government from time to time.

(b) Any explosive not permitted by International Air Transport Authority regulations or by the Director General of Civil Aviation, shall not be imported by air.

(c) Any person intending to import explosives by air shall obtain landing permit from the Director General of Civil Aviation and produce a copy thereof to the Chief Controller prior to issue of licence.

(d) A person holding a licence for import of explosives by air or his authorised agent shall give a declaration well in advance before bringing the explosives into the airport to the Officer in charge of the airport, the Commissioner of Customs and the Chief Controller giving full particulars of the explosives intended to be imported.

(e) Proper arrangements shall be made by the importer to take direct delivery of the imported explosives and remove the same as expeditiously as possible from the airport.

46. Export of explosives.—(1) Declaration by exporter or his agent—(a) The exporter or his authorised agent shall give the conservator of the port not less than forty eight hours' notice of his intention to bring explosives to port for export and shall not bring the explosives to any part of the port without prior permission in writing from the said officer.

(b) The exporter or his authorised agent shall produce before the conservator of a port—

- (i) licence granted under these rules for export of explosives in question;
- (ii) a certificate issued by the exporter to the effect that the explosives have been packed and marked in accordance with the UN regulations.

(c) The exporter or his authorised agent shall also submit to the Chief Controller, on export of each consignment and within twenty-one days from the date of actual export, copy of bill of lading and return in Form RE-10.

(2) **Export of explosives by air.**—(a) Explosive of any kind and quantity, which is not included in International Air Transport Authority regulations or not permitted by Director General of Civil Aviation, shall not be exported by air.

(b) A person holding a licence for export of explosives by air or his authorised agent shall give a declaration well in advance before bringing the explosives into the airport to the Officer In charge of the airport or the Commissioner of Customs and the Chief Controller giving full particulars of the explosives intended to be exported.

(c) Explosives meant for export shall be brought to the airport after making proper arrangements and only after

the aircraft is ready for loading explosives and explosives so brought to the airport shall be loaded directly into the aircraft.

(d) If for any unforeseen circumstances, explosives brought to the airport cannot be loaded into the aircraft, such explosives shall be stored in an isolated shed under guard as directed by the Officer in charge of the airport and all due precautions against theft, fire or explosion shall be taken.

(e) Any person intending to export explosives by air shall obtain permission from the Director General of Civil Aviation and produce a copy thereof to the Chief Controller prior to grant of export licence.

Chapter VI

Special provisions for Transportation of Explosives

General

47. Procedure to be followed during transportation.—

(1) Every consignment of explosives transported under licence shall be accompanied by a pass issued by the consignor in Form RE-12 under Part 5 of schedule V.

(2) Such pass shall be attached to the way-bill, invoice or despatch note as the case may be.

(3) A copy of every pass issued under sub-rule (2) shall forthwith be sent by the consignor to—

- (a) the licensing authority who issued the licence of the consignor;
- (b) the Controller and the District Superintendent of Police in whose jurisdiction the place from which the consignment is sent is situated;
- (c) the Controller and the District Superintendent of Police in whose jurisdiction the place to which the consignment is sent is situated.

48. Certificate of safety.—(1) Before transporting or tendering for transport an explosive of Class 3 (Nitro-compound) or Class 4 (Chlorate mixture), the consignor shall attach to the consignment a valid certificate in Form CE-1 under Part 6 of Schedule V or certified copy thereof granted by testing officer.

(2) The certificate referred to in sub-rule (1) shall be issued by the testing officer after conducting the tests as per the methods of testing set forth in Schedule III as applicable to such explosives in accordance with the existing specification prescribed by the Bureau of Indian Standards.

(3) Certificate referred to in sub-rule (1) shall be valid for a period of twelve months from the date of issue.

49. Transport in passenger carriages and vessels.—Save as otherwise expressly provided in these rules, no explosive shall be transported in any carriage vessel or aircraft plying for or carrying passengers on hire.

50. Documents to be available during transport.—

(1) The operator of a vehicle used for the transport of

explosives except fireworks and safety fuse shall ensure that the driver or any attendant thereof has in his possession the following documents during transport, namely :—

- (a) copy of indent in form RE-11 under Part 5 of Schedule V, issued by the consignee;
- (b) copy of transport pass in form RE-12 under Part 5 of Schedule V issued by the consignor;
- (c) copy of road van licence;
- (d) original copy of bill of explosives being transported.

(2) The documents mentioned in sub-rule (1) shall be produced on demand by the authority empowered under rule 128.

51. Maximum consignments allowed.—The quantity of explosives except fireworks and safety fuse transported shall not exceed—

- (1) ten tonnes or half the carrying capacity of a railway wagon whichever is less ;
- (2) ten tonnes or the maximum carrying capacity of a road van, permitted by road transport authority, whichever is less :

Provided that if the explosives to be transported is of Class 2, the quantity of explosives shall not exceed fifteen tonnes or the maximum carrying capacity of the van, whichever is less;

- (3) one tonne in any animal drawn carriage;
- (4) twenty two and half tonnes or the maximum quantity permitted in International Maritime Dangerous Goods Code, as applicable whichever is less, in any one boat;
- (5) quantity specified in International Air Transport Authority regulations or Director General of Civil Aviation whichever is less, in any one aircraft;
- (6) twenty five kilograms in tractor compressor licensed under these rules by the District Magistrate.

52. Despatch of explosives to carriers for transport.—(1) No person shall despatch any explosives except fireworks to a carrier other than the Indian Railways for the purpose of transport.

(2) No person shall despatch any explosive to the Indian Railways for the purpose of transport unless—

- (a) he has given the Station Master a notice in writing—
 - (i) of his intention to tender such explosives;
 - (ii) certifying that the explosives have been packed and marked in accordance with rules 14 and 15;

(iii) stating the true name, description and quantity of explosives to be transported.

- (b) he has received a reply and intimation in writing from the Station Master that he is prepared to receive the explosive for immediate despatch;
- (c) he has received a confirmation from the consignee regarding readiness to receive explosives as authorised under these rules.

(3) No person shall bring, send or forward to, or upon any railway any explosives which the Indian Railways have by any notice of regulation for the time being in force notified that it will not receive.

53. Place and time of loading and unloading.—(1)

Every explosive shall be loaded and unloaded at a safe distance from the station buildings, passenger platforms, dwelling houses, factories, public buildings and other buildings or places where persons assemble or any flammable or other hazardous goods are stored or handled.

(2) Every explosive intended for transport by road whether under a licence or otherwise shall be loaded only near a licensed magazine, licensed store house or other licensed premises.

(3) Loading of explosives after sunset within a licensed factory may be carried out up to 22 hours at a well-illuminated place approved by the Chief Controller.

(4) Nothing in sub-rule (1) and sub-rule 5 of rule 10 shall apply to any operations connected with the transport of explosives by passenger train or by a pick-up vehicle or a van or a goods train used for the transport of small consignments or in the brake-van.

54. Carriage or vessel or aircraft to be in readiness for loading.—No explosive shall be brought to any place of loading until the carriage or vessel or aircraft into which it is to be loaded is at that place in readiness to receive it.

55. Delay in transit to be avoided.—The person or persons in charge of carriage or vessel carrying explosives shall, not stop or delay at any place for a longer time than may be reasonably necessary, not stop unnecessarily at any place where such stopping would reasonably be dangerous to public.

56. Repairs to conveyance.—Before any repairs or alterations are commenced in any part of a carriage or vessel in which explosives are being, or have been transported, all due precautions should be taken to remove all such explosives, or any remnants thereof, and the space in such carriage or vessel in which such explosives have been carried shall be thoroughly washed out to ensure that no remnants of explosives remain therein.

57. Small quantities of fireworks exempted.—Nothing contained in rules 49, shall apply to the transport of manufactured fireworks in the custody of a person entitled to possess them without a licence under sub-rule (5) of rule 9:

Provided that not more than five kilograms of manufactured fireworks, securely packed in original packing, shall be so transported in any motor vehicle used for conveyance of more than six passengers.

58. Safety distances between carriages and boats.-

Where the explosives in two or more carriages, other than motor vehicles or in two or more boats, travelling in company exceed the maximum quantity or International Maritime Dangerous Goods Code, as applicable, or as stated in rule 51, whichever is less, for any one carriage or boat, such carriages or boats shall not approach within fifty metres of one another :

Provided that—

- (1) nothing in this rule shall apply to the transport of explosives by rail;
- (2) the Conservator of the port may waive the requirement within the limit of a port if in his opinion it is impracticable to secure compliance within this rule.

59. Transport by water.—All the safety provisions stated in Part 3 of Schedule VI annexed to these rules shall be complied with for transport of explosives by water within India.

60. Transport by Rail.—All the safety provisions stated in Part 4 of Schedule VI annexed to these rules shall be complied with for transport of explosives by Rail within India

61. Licence for road van or compressor mounted motor truck or tractor.—(1) No person shall transport or cause to be transported any explosive in a road van or compressor mounted motor truck or tractor unless such vehicle is licensed under these rules to transport explosives. The road van shall meet the requirements laid down in specification 5 of Schedule VII and compressor mounted motor truck or tractor shall meet the requirements laid down in specification 5 thereof and shall be approved by Chief Controller.

(2) The licensee of road van shall maintain records of all transactions in Form RE- 6 under Part 5 of Schedule V.

(3) The licensee of road van, compressor- mounted truck or tractor, as the case may be, should engage only such drivers or cleaners, whose antecedents are verified by the local police. A list of such drivers or cleaners along with all personal particulars should be made available to the local police in advance to carry out the verification. Re-verification of such staff should be carried out at regular intervals, preferably once in a year.

62. Prohibition of transport within Streets, Public places and other specified areas.—

(1) No person shall transport or cause to be transported any explosives on any road within the limits of a municipality or cantonment where such a road is specifically prohibited for plying vehicles carrying explosives.

(2) Nothing in sub rule (1) shall apply to—

- (a) any explosive of Class 7(Fireworks), or safety fuse ; or
- (b) other explosives not exceeding five kilograms in weight.

63. Restriction on transport of explosives except fireworks and safety fuse by vehicles other than road vans or compressor mounted motor truck or tractor.—

No explosive other than fireworks or safety fuse shall be transported by any carriage, which is not, a road van or compressor mounted motor truck or tractor:

Provided that any carriage, which is not a road van or compressor mounted motor truck or tractor, may transport any explosive if the distance from the place of loading to the place of destination does not exceed ten kilometres and the following conditions are complied with :

- (a) the transport of explosives is restricted to the period between sunrise and sunset;
- (b) the explosives are accompanied by at least two able-bodied guards;
- (c) a red flag is displayed on each cart;
- (d) the packages containing explosives are suitably covered by a tarpaulin, and secured.

64. Loading of explosives.—(1) The person in charge of loading explosives into a vehicle or aircraft for carriage shall ensure that the explosives are stowed in such a manner that—

- (a) during normal course of transport they will not move and will be protected against friction and bumping; and
- (b) should it become necessary to unload any of the explosives, those remaining can be re-stowed with as little disturbance as possible.

(2) No person shall load or unload explosives onto or from a licensed vehicle, except when the engine of the vehicle is stopped, the wheels choked and the hand brake applied.

65. Restriction on use of towed vehicles.—No person shall transport explosives other than fireworks in any towed vehicle or tow any vehicle transporting explosives.

66. Carriage of explosives with other substance prohibited.—No other goods shall be carried with explosives in any vehicle :

Provided that not more than one thousand kilograms of fireworks may be carried along with other goods not being flammable and hazardous in nature.

67. Loading, unloading, maintenance and operation of road vans.—(1) After the loading or unloading of explosives in or from any such vehicle is commenced, the

operation shall not be stopped until completed and shall be completed as expeditiously as possible.

(2) No bale hooks or other metal tools shall be used for the loading, unloading or handling of packages containing explosives nor shall any package or container of explosives be thrown or dropped during such operation.

(3) The vehicle shall be maintained in safe working condition suitable for transport of explosives.

(4) The driver or operator of a vehicle carrying or containing an explosive shall not stop unnecessarily or for a longer period than is reasonably required, and shall avoid stops or places where public safety is in danger :

Provided that where a van transporting or containing explosives is parked over night due to the reasons beyond the control of licence or the driver, the premises in which the van is parked-

- (a) shall not be used for any purpose that might give rise to the presence therein of an open flame, matches or any substance or article likely to cause explosion or fire;
- (b) shall be away from any habitation of any godown containing articles of a flammable nature or other hazardous goods:

Provided further that the nearest police station shall be informed about the location and temporary parking of the van.

(5) The driver or operator of any vehicle carrying or containing an explosive shall not drive or conduct the same in a dangerous or reckless manner.

(6) Routes passing through centres of dense habitation shall, as far as possible, be avoided.

(7) A road van while transporting explosives shall always be attended to by two armed guards at the expense of the licensee. If the consignment of explosives is likely to pass through sensitive areas notified by the Ministry of Home Affairs, it should be escorted by armed police escort or guard, provided by the District Police Administration.

(8) When there is a convoy of two or more vehicles transporting explosives, where applicable, a space of at least 300 metres shall be maintained between each such vehicle.

(9) Road van transporting explosives shall not be driven past fires of any kind on or near the highway or other thorough fare.

(10) The driver of the road van while transporting explosives shall, before crossing any unmanned railway crossing or before crossing any main highway, bring the road van to a full stop and proceed only when the way is safely clear.

(11) The original licence for van granted under these rules or attested copy of the same shall always be carried in the vehicle.

68. Lighting of stationary vehicles.—Where a road van carrying explosives is stationary on a public road at night, otherwise than by reason of delay incidental to the flow of traffic, driver or the licensee of the van shall keep the parking lights on throughout the stay and if necessary shall also provide reflectors or use blinking lights in such position as to convey an effective warning of the presence of the road van to the drivers of other vehicles.

69. Accident to the vehicle.—(1) Where a vehicle transporting explosives is involved in an accident, fire or any other occurrence that causes a significant delay in the delivery of explosives or damage to the vehicle or explosives, the driver or any other authorised person accompanying the vehicle shall—

- (a) comply with all requirements of law relating to road accidents;
- (b) inform the nearest police station;
- (c) inform the licensee who shall-
 - (i) inform the Chief Controller and the Controller in whose jurisdiction the accident has taken place giving the full details of explosives carried and accident;
 - (ii) arrange for safe storage and custody of explosives till examination by the Controller if required, and then arrange for transport to the destination or place designated by the Controller;

(2) In case of a breakdown of road van, the driver or the person in charge of the vehicle shall—

- (a) make or permit to be made minor repairs if the repairs can be made without hazard;
- (b) where major repairs are required, prevent such repairs being made until the explosives are transferred to another vehicle or are removed from the vehicle and stored under proper security at a safe distance from the highway and at least three hundred metres from any inhabited premises;
- (c) inform the licensee who shall in turn inform the Chief Controller and the Controller in whose jurisdiction the vehicle is broken down giving full details of the explosives and the circumstances attending the breakdown.

70. Fire extinguishers to be provided.—(1) Every road van shall be provided with two fire extinguishers of minimum two kilograms capacity. One of the extinguishers shall be capable of dealing with fire involving electric circuits and the other, with other inflammable components.

(2) The fire extinguishers shall always be kept in good working condition.

(3) The fire extinguishers shall be located where they will be convenient and ready for immediate use.

(4) The fire extinguishers shall be examined and recharged according to the manufacturers' recommendations.

Chapter VII

Special Provisions for Possession, Sale and Use of Explosives

71. Possession in licensed premises.—(1) A person holding licence for possession of explosives granted under these rules shall store the explosives only in premises specified in the licence.

(2) The licensed magazine or store house shall be kept securely closed or locked at all times except when goods are being placed in or taken from it or when it must be kept open for some other purpose in connection with the management of such premises.

(3) The keys of the licensed magazine shall, at all times be kept secured in licensee's own custody or of his authorised agent and shall be produced for opening the magazine or store house whenever so required by an inspecting officer.

(4) The name and address of the person alongwith passport size photograph with whom the keys will be kept shall be furnished to the licensing authority and the Controller having jurisdiction.

72. Repacking or opening of packages.—(1) An explosive shall, as far as practicable, be sold in original packages. If the quantity sold to any person is less than the quantity of explosives packed in the original packing, such quantity shall be packed in a safe and proper manner in a substantial package which shall be clearly marked with following markings, namely :—

- (a) Name of the explosive;
- (b) Class, Division and sub-division as per to Schedule I;
- (c) Quantity of explosive packed;
- (d) Name of licensee with licence number of the magazine from where the explosive is being supplied and packed;
- (e) Date of packing;
- (f) Name and address of the consignee.

(2) No repacking shall be carried out in a magazine or storehouse.

(3) Repacking of explosives shall be done, where necessary, in an approved open sided shed having smoothly finished dust-free floor at a distance as approved by the licensing authority.

73. Explosives not to be kept in damaged boxes.—The licensee of every magazine or storehouse shall ensure that the explosives are always kept in their original outer

package and if the outer package gets damaged in a manner that the explosives contained therein cannot be stored or transported, such explosives shall be repacked after giving prior intimation well in advance to the Controller having jurisdiction over the area with all necessary details.

74. Storage of explosives in excess of the licensed quantity.—(1) The quantity of any kind of explosives kept in any licensed magazine or storehouse shall not exceed the quantity entered in the licence against such kind of explosives.

(2) Notwithstanding anything contained in sub-rule (1), the licensing authority may issue a permit for a period not exceeding fifteen days, on receipt of the such fees as prescribed under Part-2 of Schedule IV, to a licensee for storage of explosives in excess of the licensed quantity when such authority is satisfied that such excess storage is essential and unavoidable due to circumstances beyond the control of the licensee :

Provided that such excess storage shall not exceed one third of the licensed quantity.

(3) The licensing authority may refuse to grant a permit for excess storage of explosives if such excess storage is of a repeated nature.

75. Permit for temporary possession of manufactured fireworks in excess of the licensed quantity.—A permit for a period not exceeding thirty days may be granted by the licensing authority to a licensee for fireworks shop to possess one-third in excess of the licensed quantity on receipt of fees as prescribed under Part 2 of Schedule IV :

Provided that adequate floor area to accommodate excess storage is available in such shop.

76. Quantity of explosives to be purchased in a given period of time.—A licensee for possession, sale or use of explosives in and from a magazine licensed in Form LE-3 shall purchase only such quantity of explosives in a given period as may be specified in the licence.

77. Accountability and transaction of explosives.—(1) All licenses granted under these rules shall bear the photograph of the licensee or occupier.

(2) For purchase and transaction of explosives, following procedures shall be observed—

- (a) Indent Form RE-11 under Part 5 of Schedule V shall be signed by the licensee or his authorised representative;
- (b) Photograph and specimen signature of the licensee or occupier shall be filed with the supplier of explosives;
- (c) Photograph, specimen signature and address of the licensee's authorised representative duly attested by the licensee or occupier shall be filed with the supplier of explosives;

(d) The supplier of explosives shall verify the photograph and signature before effecting the delivery;

(e) The authorised representative mentioned in clause (c), shall represent one licensee only for receiving explosives on his behalf :

Provided that nothing in this rule shall be applicable for fireworks and safety fuse.

78. Magazine, store house, or shop to be at ground level.—A magazine, store house, or shop shall be constructed at ground level only. A magazine or storehouse shall be a single storey building.

79. Stacking of packages.—Packages shall be stacked in magazine or store house in such a manner so as to facilitate inspection of the condition of all packages stored and to read the marking particulars of each package and in the manner provided under Schedule VII.

80. Storage of compatible explosives.—
(1) Detonators or gunpowder or fireworks shall be stored only in separate rooms or compartments meant for each in a magazine.

(2) Paper caps or colour or star matches shall be stored in separate compartments.

81. Specification for construction of a magazine.—Magazine used for storage of explosives shall be constructed as per Specification 2 of Schedule VII.

82. Store house for fireworks or safety fuse.—
(1) Store house shall be used only for possession of fireworks not exceeding five thousand kilograms or safety fuse not exceeding fifty thousand meters and not for sale.

(2) A person holding licence for possession and sale of fireworks or safety fuse from a shop shall be eligible for a licence for one store house per shop.

(3) The store house shall be constructed as per Specification 3 of Schedule VII.

83. Explosives permitted for possession and sale from shop.—(1) No explosives, other than fireworks, gun powder, small arm nitro compound and safety fuse, permitted in licence shall be stored in a shop for possession and sale.

(2) **Construction of shop.**—The shop shall be constructed of a brick, stone or concrete and the shop shall be closed and secured so as to prevent unauthorised person from having access thereto.

(3) The premises shall have storage area not less than nine square meters and not more than twenty five square meters.

(4) The shop shall —

(a) be located on the ground floor of a building completely separated from other parts of the building by substantial walls having

independent entrance and emergency exit from open air and having doors opening outwards, if applicable;

(b) not be situated in the sub-level or basement or mezzanine floor;

(c) not be situated under the upper floor used for the purpose of dwelling;

(d) not be situated under or nearby any staircase or lift;

(e) be accessible for fire fighting; and

(f) have no electrical apparatus or battery or oil lamp or similar equipments capable of producing spark or ignition and all electrical wiring in the shop be fixed and effectively sealed or conduited or mechanically protected; the main switch or circuit breaker be provided at the immediate accessible position outside the premises.

84. Temporary shops for possession and sale of fireworks during festivals.—During festivals, the District Magistrate may issue temporary licences for possession and sale of fireworks in a temporary shop subject to the following conditions namely :—

(1) The fireworks shall be kept in a shed made of non-flammable material, which is closed and secured so as to prevent unauthorised persons having access thereto.

(2) The sheds for possession and sale of fireworks shall be at a distance of at least three metres from each other and fifty metres from any protected work.

(3) The sheds shall not face each other.

(4) No oil burning lamps, gas lamps or naked lights shall be used in the shed or within the safety distance of the sheds. Electrical lights, if used, shall be fixed to the wall or ceiling and shall not be suspended by flexible wire. Switches for each shop shall be fixed rigidly to the wall and a master switch shall be provided for each row of sheds.

(5) Display of fireworks shall not be allowed within fifty metres of any shed.

(6) In one cluster not more than fifty shops shall be permitted.

85. Special precautions to be observed for fireworks.—(1) Subject to other provisions of this rule, fireworks shall not be placed or kept in a shop window used for display of goods.

(2) Fireworks in the shop shall be kept in a spark proof receptacle, or the original outer packet in which they

were received if that package is effectively sealed and in good order and condition.

(3) A receptacle or package containing fireworks shall be kept in a position away from and clear of shop traffic and to be separated from all articles of a flammable or combustible nature.

(4) Where a package containing fireworks is opened for sale, the fireworks shall immediately be placed in a clean, dust free and spark proof receptacle.

86. Safety distances to be maintained.—(1) Factory or magazine—The factory licensed for manufacture or magazine licensed for possession, sale or use of explosives shall maintain safety distance specified in Schedule VIII and condition of licence, as the case may be.

(2) **Store house.**—The store house licensed for possession of fireworks or safety fuse shall maintain safety distance of three metres from protected works and minimum fifteen metres from any such premises or any other premises used for storage of similar explosives, flammable or hazardous materials.

(3) **Shop.**—The shop licensed for storage and sale of small arms nitro-compound, fireworks or safety fuse shall be at a distance of minimum fifteen metres from any such premises or any other premises used for storage of similar explosives, flammable or hazardous materials.

87. Sale of other article prohibited.—The premises in which small arms nitro-compound or fireworks or gun powder or safety fuse is kept shall be used only for possession and sale of such explosives and for no other purposes when small arms nitro-compound or fireworks or gun powder or safety fuse is stored :

Provided that the premises may be used for other purposes except for inflammable and dangerous substances when small arms nitro-compound or fireworks or gun powder or safety fuse are not stored in the premises.

88. Fireworks to be sold from licensed premises only.—No person shall sell fireworks from any premises other than those licensed under these rules.

89. Restriction on preparation of charges.—(1) An explosive of one description shall not be converted into an explosive of another description.

(2) The explosives of Class 2 or Class 3 shall be used in their original cartridge packing and such cartridges shall not be cut to remove explosives for making cartridges of different sizes.

90. Restriction on conveyance of explosives to or at the blasting site.—(1) Explosives shall only be conveyed from the licensed storage premises to near the site in original unopened packages or in closed containers used solely for that purpose and securely locked. No manufacturer shall directly supply the cartridge explosives for charging of boreholes at the blasting site.

(2) Explosives shall not be taken to a point nearer than fifty metres from any site until such site is ready for charging.

(3) Explosives shall not be conveyed in any vehicle with any other materials, tools or implements other than that required for the purpose of blasting.

(4) Explosives left over after the day's work shall be returned to the licensed premises from which the same was taken.

(5) The carrying box used for carrying explosives from original packages shall be maintained thoroughly cleaned and dried and shall be kept closed when not in use. The containers shall be provided with either handles or carrying straps of adequate strength and shall be conspicuously marked with the word "Explosives".

(6) Detonators shall be conveyed in special containers constructed of non metal or non conductive material and these shall not be carried with other explosives. Batteries, dry cells and other sources of electric energy shall not be carried in the vehicle carrying detonators.

(7) No detonator shall be taken out from a case or container unless it is required for immediate use.

91. Explosives to be examined before use.—(1) Explosives before use shall be visually examined for any visible defects and any defective explosive shall not be used.

(2) Any explosive showing signs of deterioration of any kind should be reported immediately to the licensing authority and such explosive set-aside for examination by such authority.

(3) Gunpowder, which is found to be caked owing to the moisture, shall not be used.

(4) Frozen nitro-glycerine explosives shall not be used until thawed under the supervision of experienced persons. Where freezing is likely to occur only low freezing explosives shall be used.

92. Precautions to be observed at site.—(1) The electric power at the blasting site shall be discontinued as far as practicable before charging the explosives.

(2) No work other than that associated with the charging operations shall be carried out within fifteen metres of the holes unless otherwise specified to the contrary by the licensing authority.

(3) When charging is completed, any surplus explosives, detonators or fuses shall be removed from the vicinity of the hole and stored at a distance which would prevent sympathetic detonation in the event of a charge detonating in any hole.

(4) The holes, which have been charged with explosives, shall not be left unattended till the blasting is completed.

(5) Care shall be taken to ensure that fuse or wires connected to the detonators are not damaged during the placing of stemming material and tamping.

93. Suitable warning procedure to be maintained.—

The licensee or an authorised person appointed by the licensee to be in charge of the use of explosives at the site shall lay down a clear warning procedure consisting of warning signs and audible signals and all persons employed in the area shall be made fully conversant with such signs and signals.

94. Precautions to be observed while firing.—(1)

The end of the safety fuse should be freshly cut before being lighted.

(2) The exploders shall be regularly tested and maintained in a fit condition for use in firing. An exploder shall not be used for firing a circuit above its rated capacity.

(3) The electric circuit shall be tested for continuity before firing. All persons other than the shot firer and his assistants, if any, shall be withdrawn from the site before testing the continuity.

(4) For the purpose of joining, the ends of all wires and cables should have the insulation removed for a maximum length of 5 centimeters and should then be made clean and bright for a minimum length of 2.5 centimeters and the ends to be joined should be twisted together so as to have a positive metal contact.

95. Precautions against stray currents.—Where electrically operated equipment is used in locations having conductive ground or continuous metal objects, tests shall be made for stray currents to ensure that electrical firing can proceed safely.

96. Person in charge to be responsible.—The licensee or a shot firer employed by him to be in-charge of blasting operations shall take all precautions against fire, accident, loss, pilferage etc., of explosives and will be personally held responsible for any contravention of the relevant provisions of the Act or Rules thereof.

97. Blasting operations in mines.—Blasting operations in mines shall be carried out as per the Mines Act, 1952(35 of 1952) and such operations shall be carried out according to regulations framed under that Act. The shot firer employed for blasting operations shall take all precautions against fire, accident, loss, pilferage etc., of the explosives and personally be held responsible for any contravention of the provisions of the Explosives Act, 1884 and the rules thereof.

98. Blasting operation by shot firer in areas other than mines.—(1) Blasting operation shall be carried out by a shot firer holding valid certificate issued by the Controller.

(2) A copy of the certificate shall be carried by the shot firer during blasting operations.

(3) The shot firer shall take all due precautions in handling or charging or blasting operations.

Chapter VIII

Grant or refusal of approval, no objection certificate, licence, certificates, amendment, transfer and renewal

99. Licences and licensing authorities.—Licences and certificates for specific purposes may be granted by the authorities specified in Part 1 of Schedule IV.

100. Payment of Fees.—(1) When the licensing authority is the Chief Controller or Controller, the fees payable under these rules shall be paid by a crossed Bank Draft and when the licensing authority is the District Magistrate, the fees payable under these rules shall be paid in such manner as may be specified by him.

(2) The amount of various types of fees payable under these rules shall be as per Part 2 of Schedule IV.

(3) When a licence is sought for more than one financial year, the fees for the desired number of financial years at the rate prescribed in Part 2 of Schedule IV shall be payable.

101. Prior approval before construction .—(1) A person desiring to obtain a licence for manufacture, possession for sale, use, transport of explosives, under these rules, shall obtain prior approval from the authority empowered to grant such licence, by submitting documents mentioned in rule 113.

(2) The District Magistrate while granting the prior approval, shall return to the applicant one set of approval together with plans and Form DE-2, if required, showing distances required to be kept clear in and around the premises.

(3) The Chief Controller or Controller while granting the prior approval, shall return to the applicant one set of approval together with plans and a Form DE-2 if required, showing distances required to be kept clear in and around the premises and an additional set of the said documents to enable the applicant to submit the same to the authority authorised to issue no objection certificate under rules 102 and 103.

(4) Prior approval under sub-rule (1) shall not be necessary in case of licences for manufacture of Adivertus, transport of explosives in tractor compressor, possession in shops, public display of fireworks and import and export of explosives.

102. No objection certificate before construction.—

(1) After approval under rule 101, the person desiring to obtain a licence for manufacture, possession for sale or use of explosives shall obtain a no objection certificate from the District Magistrate or Director General of Mines Safety, as the case may be, before commencing construction of the premises.

(2) Certificate referred to in sub-rule (1) shall not be required if—

(a) the premises proposed to be licensed is within the factory licensed under these rules for

manufacture of explosives and the required safety distances are under the control of applicant;

- (b) the premises for which the new licence is required is situated within the same survey number, in which the applicant has an existing premises and a valid licence for the same.
- (c) any other amendment in the existing licence is carried out which does not warrant any fresh enquiry for grant of no objection certificate.

103. Procedure to be observed for issue of no objection certificate and for grant of licence.—

- (1) The applicant desiring to obtain a licence from the Chief Controller or Controller, shall apply to the District Magistrate or the Director General of Mines Safety with copies of the site plan showing the location of the premises proposed to be licensed for issue of a certificate to the effect that there is no objection to the applicant receiving licence for the site proposed.
- (2) The District Magistrate shall be the authority to issue the certificate referred to in sub-rule (1) if the area of the proposed site does not come under the Indian Mines Act, 1952 (35 of 1952) and the Director General of Mines Safety shall be such authority if the area of the proposed site is for ANFO, Liquid Oxygen Explosives or SME and comes under the Indian Mines Act, 1952.
- (3) The District Magistrate on receipt of application referred in sub-rule (1), shall make verification of the antecedents of the applicant, lawful possession of the site, genuineness of the purpose, interest of public and any other verifications or enquiries as may be specifically required by the licensing authority to be carried out, if any, and on any other matter as deemed necessary.
 - (a) For verification of the interest of public, the District Magistrate shall forthwith cause a notice to be published calling upon the public to submit objections, if any, with reasons thereof, within a period of one month from the date of publication of the notice and specifying the date, time and place for consideration of objections by him. Where the site of the proposed premises lies within 1.5 kilometers of the limits of the jurisdiction of any town planning municipal authority or port or air port or satellite or space craft launching station or similar establishments of national importance,

the District Magistrate shall cause the notice to be served to such authority or establishment. The day of hearing for consideration of objections shall be fixed as early as possible, after the expiration of the period of one month from the date of publication of notice. On receipt of objection, the District Magistrate shall call the person or persons raising objection and also the applicant, giving not less than seven clear days before the day fixed for hearing for consideration of the objection. On the day fixed for the hearing or any day to which such hearing may be adjourned from time to time, the District Magistrate shall hear any objection relating to the purpose of no objection certificate and shall make such enquiry, as he may deem necessary to assess justification of such objection.

- (b) If the quantity of explosives does not exceed one hundred kilograms or in case of ANFO or Liquid Oxygen Explosives or SME or transport of explosives in a road van, the notice for public for objection as stated in clause (a) shall not be necessary.
- (4) The Director General of Mines Safety, on receipt of application referred to in sub-rule (1), shall make verification of lawful possession of the site, genuineness of the purpose, any other verifications or enquiries as may be specifically required by the licensing authority to be carried out, if any, and on any other matter as deemed necessary.
- (5) The authority referred to in sub-rule (3) or sub-rule (4) shall complete the enquiry within a period of three months and such authority shall after being satisfied, grant no objection certificate along with site plan duly signed and sealed by such authority.
- (6) If the authority referred to in sub-rule (3) or sub-rule (4) objects to the grant of the no objection certificate on any of the grounds relating to the purpose of no objection certificate, no licence shall be granted by the licensing authority except with the sanction of the Central Government.
- (7) The authority referred to in sub-rule (3) or sub-rule (4) shall grant the no objection certificate in the format specified in Part 2 of Schedule V or convey his refusal for granting no objection certificate with reasons thereof in writing to the applicant as expeditiously as possible but

not later than six months from the date of receipt of application from the applicant.

- (8) No licence for manufacture of explosives other than Liquid Oxygen Explosives shall be granted or renewed to a person for his factory or mine not covered under the Factories Act, 1948 (63 of 1948) or the Mines Act, 1952 (35 of 1957), as the case may be, unless he executes a bond in Form CE-3 indemnifying person injured or dependants of deceased workers in the event of an accident in the factory or mine for an amount of Rs. 10,000 for factories manufacturing up to 15 kilograms of gunpowder or fireworks at any one time, an amount of Rs. 25,000 for factories manufacturing up to 200 kilograms of gunpowder or fire works at any one time and Rs. 50,000 in every other case in respect of factory or mines.

104. Commencement of construction of premises.—On receipt of no objection certificate under rule 103, the applicant shall start construction of the premises or installation of the facilities :

Provided that in case of shops or storehouses or other premises, which are already constructed, no objection certificate may be obtained subsequently.

105. Application for grant of licence.—After the construction of premises is completed, the applicant shall apply for grant of licence along with documents stated in rule 113.

106. Period of validity of licence.—The licensing authority may grant a licence for the period deemed necessary but not exceeding—

- (1) six months for import or export of explosives;
- (2) one month for public display of fireworks;
- (3) five financial years or part thereof in case of manufacture of explosives or storage magazine;
- (4) thirty days for temporary fireworks shops;
- (5) ten financial years or part thereof for all other cases.

107. Grant of a licence and certificate.—(1) The licensing authority, on being satisfied with the documents received for grant of licence, and after making such inquiry, if any, as it may consider necessary, shall, subject to the other provisions of this Act and these rules, by order in writing either grant the licence or refuse to grant the same.

(2) A copy each of every licence other than for import or export of explosives granted by the Chief Controller or the Controller shall be forwarded to the District Magistrate and the Superintendent of Police of the District and the Controller in whose jurisdiction the premises are situated.

(3) When the licensing authority grants a licence other than for export or import of explosives, after

conducting inspection of the premises to ensure conformity of the premises to the provisions of the Act and these rules, such authority shall endorse the licence and from the date of such endorsement, the licence shall come into force :

Provided that if the licensing authority grants a licence without conducting prior inspection, such authority shall issue provisional permission pending endorsement of licence to use the licensed premises for a period which the licensing authority may require for conducting inspection of the premises for endorsement of the licence.

(4) If the licensing authority observes, on inspection, that the premises do not conform to the provisions of the Act and these rules and not fit for endorsement, he shall communicate to the licensee,

- (i) his direction for rectification of deficiencies; or
- (ii) reasons for not regular endorsement of the licence; or
- (iii) reasons for suspension or revocation of the licence, as the case may be.

(5) In case of application for grant of shot firer's certificate, the Controller on receipt of documents specified in item number 24 of rule 113 shall conduct such examination and enquiries as deemed necessary before granting the shot-firer's certificate. On his being satisfied that the applicant has adequate knowledge and experience in related field of handling and blasting explosives, he shall grant the shot firer's certificate in Form LE-10 specifying therein the authorised area and category of blasting. Such certificate shall be valid for a period of five years from the date of issue. The certificate may be revalidated for subsequent five-year periods on completion of procedures as in the case of fresh grant.

Explanation :—For the purposes of this sub rule, there shall be the following categories of blasting, namely :—

Class	Category	Type of blasting permitted
A	Unlimited	All types of blasting
B	General aboveground	All phases of aboveground blasting operation
C	General underground	All phases of underground blasting operation
D	Demolition	All phases of blasting in demolition projects
E	Seismic	All phases of blasting in seismic prospecting or production
F	Agricultural	All phases of blasting in agricultural and well sinking
G	Special	Blasting for special purpose not covered under the above categories

(6) In case of application for grant of foreman's certificate, the Controller on receipt of documents specified in item number 25 of rule 113 shall conduct such examination and enquiries as deemed necessary before granting the foreman's certificate. On his being satisfied that the applicant has adequate knowledge and experience in related field of handling and blasting explosives, he shall grant the foreman's certificate in Form LE-11 specifying therein the authorised area of manufacture. Such certificate shall be valid for a period of five years from the date of issue. The certificate may be revalidated for subsequent five-year periods on completion of procedures as in the case of fresh grant.

(7) The District Authority shall forward a copy of every licence granted by him in Form LE-1, LE-2, LE-3, LE-4 and LE-5 to the Controller having jurisdiction over the area.

(8) Wherever licence is granted in Form LE-1 for manufacture of fireworks by the District Authority, he shall ensure that such licence is issued for manufacture of only such fireworks item which are authorized by the Chief Controller.

108. Transfer of licence.—(1) A licence granted under these rules may be transferred by the authority empowered to grant the licence.

(2) An applicant who desires to get the licence transferred in his favour shall submit to the licensing authority—

- (a) an application in form appropriate for grant of the licence ;
- (b) specimen signature of the applicant or his authorised person;
- (c) a letter from the existing licensee signed by the authorised person requesting the transfer of licence in favour of the applicant or a succession certificate from a competent court in case of death of a licensee being an individual;
- (d) original licence issued to the existing licensee;
- (e) copies of supporting documents regarding transfer of rights of the premises in favour of the applicant;
- (f) requisite scrutiny fee and transfer fee;
- (g) copies of all approved drawings in the name of the applicant;
- (h) status of the applicant whether individual, proprietary firm, partnership firm, company, association or society or otherwise— documentary evidence along with names, addresses of the proprietor or partners or

directors or members as the case may be, and photographs of the occupier, to be submitted;

- (i) a no objection certificate from the District Magistrate for transfer of the licence in favour of the applicant :

Provided that no objection certificate shall not be necessary if the applicant holds a licence for which a no objection certificate has already been granted.

109. Amendment of licence in respect of alteration or change in the premises or licenses capacity, but not involving change of name of licensee or partners or directors or members.—(1) A licence granted under these rules may be amended by the authority empowered to grant the licence if the amendment is not inconsistent with the provisions of these rules.

(2) A licensee who desires to have his licence amended shall submit the following particulars to the licensing authority, namely :—

- (a) an application stating nature of the amendment and the reasons there for;
- (b) the original licence together with enclosures to it;
- (c) plans showing the details of the proposed amendment if such plans are required by the licensing authority for the purpose of amendment;
- (d) prescribed scrutiny fee;
- (e) prescribed amendment fee.

(3) The licensing authority after scrutiny of the documents submitted under sub-rule (2), and after making such further inquiries and taking such action as deemed necessary, may take suitable action to amend the licence.

110. Amendment of licence due to change of name of the licensee (firm or company or association or society).—(1) Wherever, name of the licensee such as firm or company or association or society is proposed to be changed, the licensee shall submit application to the licensing authority for amendment of licence in favour of the new name along with—

- (a) application in the form as appropriate for grant of licence;
- (b) documentary evidence with supporting documents in respect of the change of the name;
- (c) copies of all approved drawings in the new name of the licensee;
- (d) no objection certificate from the District Magistrate for change in the name of the licensee;

(e) requisite scrutiny fee and amendment fee .

(2) In case of change of name of licensee being manufacturer of explosives, the licensee shall apply for corresponding amendments in the list of authorised explosives in respect of explosives manufactured by him.

111. Procedure for change of partners or directors or members or occupier.—Whenever any new partner or member or director is inducted in the partnership firm or society or association or company, as the case may be, without any change in the name of the licensee firm or society or association or company, the licensee shall submit application to the licensing authority for accepting the newly inducted partners or members or directors,—

- (a) names and addresses of newly inducted partners or directors or members as the case may be, and in case the occupier is changed, photographs of the new occupier;
- (b) certificate of verification of antecedents from the District Magistrate of the newly inducted partners or members or directors or occupier, as the case may be;
- (c) requisite scrutiny fee;
- (d) any other document as may be called for by the licensing authority.

112. Renewal of licence.—(1) Every licence except the licences granted for a specific period not exceeding one year, shall be renewable for a maximum period of five financial years ending on the 31st March.

(2) Every application under sub-rule (1) for renewal of the licence shall be accompanied by the following documents, namely :—

- (a) application in Form RE- 1;
- (b) the original licence;
- (c) prescribed renewal fee.

(3) A licence may be renewed by the authority empowered to grant such licence :

Provided that a licence which has been granted by the Chief Controller may be renewed without any alteration by a Controller duly authorised by the Chief Controller in this behalf:

Provided further that a licence, which has been granted by the District Magistrate, may be renewed without any alteration by a Sub-Divisional Magistrate or an Executive Magistrate duly authorised by the District Magistrate in this behalf.

(4) Every application for the renewal of a licence shall be made so as to reach the licensing authority or the authority empowered to renew the licence on or before the date on which the licence expires.

(5) If the application for renewal reaches the renewing or licensing authority on or before the date of expiry, the licence shall be deemed to be in force until such date as the licensing authority renews the licence or until an intimation that the renewal of the licence is refused has been communicated to the applicant.

(6) The same fee shall be charged for the renewal of a licence for each year as for grant thereof:

Provided that if the renewal application together with complete documents is received by the licensing authority after the date of expiry but not later than six months from the date of expiry; and if the licensing authority is satisfied that such delay is beyond the control of the licensee, the licence may, without prejudice to any other action that may be taken in this behalf, be renewed on payment of penalty fee which is equal to one year's licence fee.

(7) In case of an application for the renewal of the licence for a period of more than one year at a time, the fee prescribed under proviso of sub-rule (6), if payable, shall be paid only for the first financial year of renewal.

(8) Every licence granted under these rules other than a licence granted for a specified period shall be renewable for a maximum period of five years where there has been no contravention of the Act or these rules framed there under or of any condition of the licence so renewed.

(9) Where a licence renewed for more than one financial year is surrendered before its expiry, the renewal fee paid for the unexpired portion of the licence shall be refunded to the licensee:

Provided that no refund of renewal fee shall be made for any financial year during which-

- (a) the licensing authority received the renewed licence for surrender;
- (b) any explosive is received or stored on the authority of the licence.

(10) No licence shall be renewed if the application for renewal is received by the licensing or renewing authority after three months of the date of its expiry. An application for revalidation received after three months of the expiration of the licence shall be considered as an application for a new licence.

(11) When a licence is renewed by the Chief Controller or a Controller, an intimation to that effect shall be sent to the District Magistrate concerned and when a licence is renewed by the District Magistrate, intimation to that effect shall be sent to the Controller having jurisdiction.

113. **Documents for approval and grant of licence.**—The following documents shall be required to be submitted for approval and grant of licence.—

Sl. No.	Purpose of Licence	Article number as per Part I of Schedule IV	Licence Form	Documents required for approval	Documents required for grant of licence
1	2	3	4	5	6
1.	Licence to manufacture fireworks or gunpowder or both not exceeding 15 kilogrammes at any one time.	1(a)	LE-1	(i) Form AE-1; (ii) Plans of the proposed buildings or sheds and the site showing approach road to the factory, all buildings in and around, and safety distances maintained; (iii) Particulars of competent persons and their experience in related fields; (iv) Passport size photographs of the occupier alongwith documentary evidence of nomination as occupier as per rule 2; (v) Scrutiny fee as per Schedule IV, part-2.	(i) Form AE-1; (ii) Plans of the proposed (buildings or sheds and the site showing approach road to the factory, all buildings in and around, and safety distances maintained; (iii) Particulars of competent persons and their experience in related fields; (iv) Passport size photographs of the occupier alongwith documentary evidence of nomination as occupier as per rule 2; (v) Completion certificate; (vi) Indemnity bond in CE-3; (vii) Licence fee as per Schedule IV, part-2.
2.	Licence to manufacture fireworks or gunpowder or both exceeding 15 kilogrammes but not exceeding 500 kilogrammes at any one time.	1(b)	LE-1	(i) Form AE-1 and additional information like details of process; (ii) Plans of the proposed buildings and the site showing approach road net work to the factory or premises; all buildings, blast wall, safety distances, plant, equipment, explosives limit, man limit; (iii) Distance form DE-1; (iv) Particulars of competent technical persons or foreman and their experience in related fields; (v) Passport size photographs of the occupier alongwith documentary evidence of nomination as occupier as per rule 2; (vi) Scrutiny fee as per Schedule IV, part-2.	(i) Form AE-1 and additional information like details of process; (ii) Plans of the completed buildings and the site showing approach road net work to the factory or premises; all buildings, blast wall, safety distances, plant, equipment, explosives limit, man limit; (iii) Distance form DE-1; (iv) Particulars of competent technical persons or foreman and their experience in related fields; (v) No objection certificate alongwith approved plan from competent issuing authority; (vi) Completion certificate; (vii) Passport size photographs of the occupier alongwith documentary evidence of nomination as occupier as per rule 2; (viii) Indemnity bond in CE-3; (ix) Licence fee as per Schedule IV, part-2.

1	2	3	4	5	6
3.	Licence to manufacture fireworks or gunpowder or both exceeding 500 kilogrammes at any one time.	1(c)	LE-1	<p>(i) Form AE-1 and additional information like details of process;</p> <p>(ii) Plans of the proposed buildings and the site showing approach road net work to the factory or premises; all buildings, blast wall, safety distances, plant, equipment, explosives limit, man limit;</p> <p>(iii) Distance form DE-1;</p> <p>(iv) Particulars of competent technical persons or foreman and their experience in related fields;</p> <p>(v) Passport size photographs of the occupier alongwith documentary evidence of nomination as occupier as per rule 2;</p> <p>(vi) Scrutiny fee as per Schedule IV, part-2.</p>	<p>(i) Form AE-1 and additional information like details of process;</p> <p>(ii) Plans of the completed buildings and the site showing approach road net work to the factory or premises; all buildings, blast wall, safety distances, plant, equipment, explosives limit, man limit;</p> <p>(iii) Distance form DE-1;</p> <p>(iv) Particulars of competent technical persons or foreman and their experience in related fields;</p> <p>(v) No objection certificate along with approved plan from competent issuing authority;</p> <p>(vi) Completion certificate;</p> <p>(vii) Passport size photographs of the occupier along with documentary evidence of nomination as occupier as per rule 2;</p> <p>(viii) Indemnity bond in CE-3;</p> <p>(ix) Licence fee as per Schedule IV, part-2.</p>
4	Licence to manufacture at site, ANFO explosives not exceeding 200 kilogrammes at any one time.	1(d)	LE-1	<p>(i) Form AE-1 and additional information like details of process;</p> <p>(ii) Plans of the proposed manufacturing shed and the site showing approach road net work to the premises; safety distance and equipments for ANFO manufacture;</p> <p>(iii) Particulars of competent technical persons and their experience in related fields;</p> <p>(iv) Passport size photographs of the occupier alongwith documentary evidence of nomination as occupier as per rule 2;</p> <p>(v) Scrutiny fee as per Schedule IV, part-2.</p>	<p>(i) Form AE-1 and additional information like details of process;</p> <p>(ii) Plans of the completed manufacturing shed and the site showing approach road net work to the premises; safety distance and equipments for ANFO manufacture;</p> <p>(iii) Particulars of competent technical persons and their experience in related fields;</p> <p>(iv) No objection certificate along with approved plan from competent issuing authority;</p> <p>(v) Completion certificate;</p> <p>(vi) Passport size photographs of the occupier along with documentary evidence of nomination as occupier as per rule 2;</p> <p>(vii) Indemnity bond in CE-3(not required if covered under the Mines Act, 1955)</p>

1	2	3	4	5	5
5.	Licence to manufacture 1(e) liquid oxygen explosives (LOX).	LE-1	<p>(i) Form AE-1 and additional information like details of process;</p> <p>(ii) Plans of the proposed LOX depot and the site showing approach road net work to the premises; safety distance, and equipments for LOX manufacture;</p> <p>(iii) Particulars of competent technical persons and their experience in related fields;</p> <p>(iv) Passport size photographs of the occupier along with documentary evidence of nomination as occupier as per rule 2;</p> <p>(v) Scrutiny fee as per Schedule IV, Part-2.</p>	<p>(vii) Indemnity bond in CE-3 (not required if covered under the Mines Act, 1955).</p> <p>(viii) Licence fee as per Schedule IV, Part-2.</p> <p>(i) Form AE-1 and additional information like details of process;</p> <p>(ii) Plans of the completed LOX depot and the site showing approach road net work to the premises; safety distance, and equipments for LOX manufacture;</p> <p>(iii) Particulars of competent technical persons and their experience in related fields;</p> <p>(iv) No objection certificate along with approved plan from competent issuing authority;</p> <p>(v) Completion certificate;</p> <p>(vi) Passport size photographs of the occupier along with documentary evidence of nomination as occupier as per rule 2;</p> <p>(vii) Indemnity bond in CE-3 (not required if covered under the Mines Act, 1955);</p> <p>(viii) Licence fee as per Schedule IV, Part-2.</p>	
6.	Licence to manufacture 1(f) site mixed explosives (SME).	LE-1	<p>(i) Form AE-1 and additional information like details of process;</p> <p>(ii) Plans of the proposed support plant and the site showing approach road net work to the premises; all buildings, distances, plant, equipment, attached BMD vehicles and annual capacity;</p> <p>(iii) Particulars of competent technical persons and their experience in related fields;</p> <p>(iv) Passport size photographs of the occupier along with documentary evidence of nomination as occupier as per rule 2;</p> <p>(v) Scrutiny fee as per Schedule IV, Part-2.</p>	<p>(i) Form AE-1 and additional information like details of process;</p> <p>(ii) Plans of the completed support plant and the site showing approach road net work to the premises; all buildings, distances, plant, equipment, attached BMD vehicles and annual capacity;</p> <p>(iii) Particulars of competent technical persons and their experience in related fields;</p> <p>(iv) No objection certificate along with approved plan from competent issuing authority;</p> <p>(v) Completion certificate;</p> <p>(vi) Passport size photographs of the occupier along with documentary evidence of</p>	

1	2	3	4	5	5
					nomination as occupier as per rule 2;
					(vii) Indemnity bond in CE-3 (not required if covered under the Mines Act, 1955);
					(viii) Licence fee as per Schedule IV, Part-2.
7.	Licence to manufacture explosives other than fireworks, gunpowder, ANFO, LOX and SME.	1(g)	LE-1	<p>(i) Form AE-1 and additional information like details of manufacturing process;</p> <p>(ii) Plans of the proposed buildings and the site showing full approach road net work to the factory/or premises; all buildings, mounds, safety distances, plant, equipment, explosives limit, man limit, annual capacity;</p> <p>(iii) Distance form DE-1;</p> <p>(iv) Quality control plan and procedures for raw materials, intermediate and finished products;</p> <p>(v) Safety management plan;</p> <p>(vi) Particulars of competent technical persons or foreman and their experience in related fields;</p> <p>(vii) Passport sized photographs of the occupier along with documentary evidence of nomination as occupier as per rule 2;</p> <p>(viii) Details of BMD vehicles in case of SME plant;</p> <p>(ix) Scrutiny fee as per Schedule IV, Part-2.</p>	<p>(i) Form AE-1 and additional information like details of manufacturing process;</p> <p>(ii) Plans of the proposed buildings and the site showing full approach road net work to the factory/or premises; all buildings, mounds, safety distances, plant, equipment, explosives limit, man limit, annual capacity;</p> <p>(iii) Distance form DE-1;</p> <p>(iv) Safety management plan;</p> <p>(v) Particulars of competent technical persons or foreman and their experience in related fields;</p> <p>(vi) Passport sized photographs of the occupier along with documentary evidence of nomination as occupier as per rule 2;</p> <p>(vii) No objection certificate along with approved plan from competent issuing authority;</p> <p>(viii) Indemnity bond in CE-3;</p> <p>(ix) Completion certificate;</p> <p>(x) Licence fee as per Schedule IV, Part-2.</p>
8.	Licence to possess gunpowder not exceeding 15 kilogramme at any one time for manufacture of adirverttus and possession of adirverttus not exceeding 200 in number at any one time.	2	LE-2	Not necessary as per sub-rule (4) of rule 101.	<p>(i) Form AE-2;</p> <p>(ii) The plan showing place for storage of Gun powder, filling and firing of Adirverttus and protected works within 100 metres on all sides;</p> <p>(iii) Passport sized photographs of the occupier along with documentary evidence of nomination as occupier as per rule 2;</p> <p>(iv) Licence fee as per Schedule IV, Part-2;</p> <p>(v) Public liability insurance.</p>

1	2	3	4	5	6
9.	Licence to possess for use, for agricultural purpose or in small quarry, explosives not exceeding 25 kilograms of Class 1, 2 or 3; 1500 numbers detonators; 1500 meters of Detonating Fuse or Safety Fuse at any one time in a magazine.	3(a)	LE-3	(i)Form AE-3 (for possession and use); (ii) Plans of the proposed magazine and the site showing approach road; safety distances, licensed capacity; (iii) Passport size photographs of the occupier along with documentary evidence of nomination as occupier as per rule 2; (iv) Scrutiny fee as per Schedule IV, Part-2.	(i)Form AE-3 (for possession and use); (ii) Plans of the completed magazine and the site showing approach road; safety distances, licensed capacity; (iii) Completion certificate; (iv) Passport size photographs of the occupier along with documentary evidence of nomination as occupier as per rule 2; (v) Licence fee as per Schedule IV, Part-2.
10.	Licence to possess for sale of explosives of Class 1,2,3,4, 5,6 or 7 in a magazine.	3(b)	LE-3	(i) Form AE-3; (ii) Plans of the proposed magazine and the site showing approach road; mounds, safety distances, licensed capacity; (iii) Distance form DE-1; (iv) Passport size photographs of the occupier along with documentary evidence of nomination as occupier as per rule 2; (v) Scrutiny fee as per Schedule IV, Part-2.	(i) Form AE-3; (ii) Plans of the completed magazine and the site showing approach road; mounds, safety distances, licensed capacity; (iii) Distance form DE-1; (iv) Completion certificate (v) No objection certificate with approved Plan from District Magistrate; (vi) Licence fee as per Schedule IV, Part-2.
11.	Licence to possess for use, explosives of class 1, 2, 3,4,5,6 or 7 in a magazine.	3(c)	LE-3	(i)Form AE-3; (ii) Plans of the proposed magazine and the site showing approach road; mounds, safety distances, licensed capacity; (iii) Distance form DE-1; (iv) Passport size photographs of the occupier along with documentary evidence of nomination as occupier as per rule 2; (v) Scrutiny fee as per Schedule IV, Part-2.	(i)Form AE-3; (ii) Plans of the completed magazine and the site showing approach road; mounds, safety distances, licensed capacity; (iii) Distance form DE-1; (iv) Passport size photographs of the occupier along with documentary evidence of nomination as occupier as per rule 2; (v) Completion certificate (vi) No objection certificate with approved Plan from District Magistrate; (vii) Licence fee as per Schedule IV, Part-2.
12.	Licence to possess fireworks not exceeding 5000 kilogramme or safety fuse not exceeding 50000 meters, in a storehouse, not	3(d)	LE-3	(i) Form AE-3; (ii) Plans of the proposed store house of site showing approach road, safety distance, licence capacity; (iii) Passport size photographs	(i) Form AE-3; (ii) Plans of the completed store house and the site showing approach road, licence capacity; (iii) Completion certificate;

1	2	3	4	5	5
	for sale but for transfer to own licensed shop			of the occupier along with documentary evidence of nomination as occupier as per rule 2; (iv) Scrutiny fee as per Schedule IV, Part-2.	(iv) No Objection Certificate with approved plan by District Magistrate (v) Passport size photographs of the occupier along with documentary evidence of nomination as occupier as per rule 2; (vi) Licence fee as per Schedule IV, Part 2.
13.	Licence to possess and transport explosives of class 2 or 3 not exceeding 25 kilogramms, electric or ordinary detonators not exceeding 200 numbers, detonating fuse not exceeding 100 meters and safety use not exceeding 200 meters in a compressor mounted motor truck or tractor for use in well sinking	4	LE-4	Not necessary as per sub-rule (4) of rule 101 (Type approval to be obtained from Chief Controller).	(i) Form AE-4; (ii) Plans of the tractor compressor conforming to Specification 5; (iii) Passport size Photographs of the occupier along with documentary evidence of nomination as occupier as per rule 2; (iv) Licence fee as per Schedule IV, Part-2.
14.	Licence to possess and sale from a shop, at any one time, not exceeding 25 kilogramms of small arms nitrocompound .	5(a)	LE-5	Not necessary as per sub-rule (4) of rule 101.	(i) Form AE-5; (ii) Plans of the shop showing storage capacity, approach road, surrounding facilities specifically indicating compliance of sub-rule (3) of rule 86; (iii) Passport size photograph of the occupier along with documentary evidence of nomination as occupier as per rule 2; (iv) Licence fee as per Schedule IV, Part 2.
15.	Licence to possess and sale from a shop at any one time, not exceeding 100 kilogrammes of manufactured fireworks of class 7, division 2, sub-division 2 and 500 kilogramms of Chinese crackers or sparklers.	5(b)	LE-5	Not necessary as per sub-rule (4) of rule 101.	(i) Form AE-5; (ii) Plans of the shop showing storage capacity, approach road, surrounding facilities specifically indicating compliance of sub-rule (3) of rule 86; (iii) Passport size photograph of the occupier along with documentary evidence of nomination as occupier as per rule 2; (iv) Licence fee as per Schedule IV, Part 2.

1	2	3	4	5	6
16.	Licence to possess and sale from a shop, at any one time, not exceeding 2000 nos. of pyrotechnic device explosives of class 6 division 1.	5(c)	LE-5	Not necessary as per sub rule (4) of rule 101	(i) Form AE-5; (ii) Plans of the shop showing storage capacity, approach road, surrounding facilities specifically indicating compliance of sub-rule (3) of rule 86; (iii) Passport size photograph of the occupier alongwith documentary evidence of nomination as occupier as per rule 2; (iv) Licence fee as per Schedule IV, Part 2.
17.	Licence to possess for use gunpowder not exceeding 5 kilogramms and safety fuse not exceeding 50 meters in the states of Bihar, West Bengal, Kerala and Tamil Nadu	5(d)	LE-5	Not necessary as per sub rule (4) of rule 101	(i) Form AE-5; (ii) Plans of the shop showing storage capacity, approach road, surrounding facilities specifically indicating compliance of sub-rule (3) of rule 86; (iii) Passport size photograph of the occupier alongwith documentary evidence of nomination as occupier as per rule 2; (iv) Licence fee as per Schedule IV, Part 2.
18.	Licence to possess, for use of small arms nitrocompound not exceeding 5 kilogramms in the state of Kerala.	5(e)	LE-5	Not necessary as per sub rule (4) of rule 101	(i) Form AE-5; (ii) Plans of the shop showing storage capacity, approach road, surrounding facilities specifically indicating compliance of sub-rule (3) of rule 86; (iii) Passport size photograph of the occupier alongwith documentary evidence of nomination as occupier as per rule 2; (iv) Licence fee as per Schedule IV, Part 2.
19.	Licence to possess and sale from a shop manufactured fireworks of class 7, division 2, subdivision 2 exceeding 100 kilogramms but not exceeding 300 kilogramms and Chinese crackers or sparklers exceeding 500 kilogramms but not exceeding 1200 kilogramms	5(f)	LE-5	Not necessary as per sub rule (i) (4) of rule 101.	(i) Form AE-5; (ii) Plans of the shop showing storage capacity, approach road, surrounding facilities specifically indicating compliance of sub-rule (3) of rule 86; (iii) Passport size photograph of the occupier alongwith documentary evidence of nomination as occupier as per rule 2;

1	2	3	4	5	6
					(iv) No Objection Certificate with approved plan by District Magistrate
					(v) Licence fee as per Schedule IV, Part 2.
20.	Licence to possess and use fireworks for public display	6	LE-6	Not necessary as per sub rule (4) of rule 101.	(i) Form AE-6; (ii) Site Plan for display of fireworks; (iii) Passport size photographs of the occupier alongwith documentary evidence of nomination as occupier as per rule 2; (iv) Licence fee as per schedule IV Part 2; (v) Public liability insurance.
21.	Licence to transport explosives in a road van	7	LE-7	(i) Form AE-7; (ii) Plans of the proposed Explosives Van as per Specification 4; (iii) Passport size photographs of the occupier along with documentary evidence of nomination as occupier as per rule 2; (iv) Scrutiny fee as per Schedule IV, Part-2.	(i) Form AE-7; (ii) Plans of the Explosives Van as per Specification.4; (iii) Completion certificate (iv) Attested copy of registration certificate of the vehicle; (v) No objection certificate from District Magistrate (not applicable where the applicant is holder of licence for possession of explosives for sale or use in which case a copy of the said licence to be submitted); (vi) Passport size photographs of the occupier alongwith documentary evidence of nomination as occupier as per rule 2; (vii) Licence fee as per Schedule IV Part 2.
22.	Licence to import or export explosives otherwise than by land	8	LE-8	Not necessary as per sub rule (4) of rule 101.	(i) Form AE-8; (ii) Passport size photographs of the occupier alongwith documentary evidence of nomination as occupier as per rule 2 or exporter; (iii) Licence fee as per Schedule IV, Part-2.
23.	Licence to manufacture, possess, sale, use etc. of explosives not provided in articles 1 to 8 of Part 1 of Schedule IV.	9	LE-9 (SPECIAL)	(i) Form AE-1; (ii) Plans of the proposed buildings and the site showing full approach road, network to the factory or premises, all buildings, mounds, safety	(i) Form AE-9; (ii) Plans of the proposed buildings and the site showing full approach road, network to the factory or premises, all buildings, mounds, safety

1	2	3	4	5	6
				distances, plant, equipments, explosives limit, man limit, annual capacity, as the case may be;	distances, plant, equipment, explosives limit, man limit, annual capacity, as the case may be;
				(iii) Any other document(s) as may be required by the Chief Controller;	(iii) Any other document(s) as may be required by the Chief Controller;
				(iv) Passport size photograph of the occupier alongwith documentary evidence of nomination as occupier as per rule 2;	(iv) No objection certificate with approved Plan from District Magistrate;
				(v) Scrutiny fee as per Schedule IV, Part 2.	(v) Completion certificate;
					(vi) Passport size photographs of the occupier alongwith documentary evidence of nomination as occupier as per rule 2;
					(vii) Licence fee as per Schedule IV, Part-2.
24.	Shot firer's Certificate	10	LE-10	Not required.	(i) Form AE-10;
					(ii) 2 copies of passport size photograph;
					(iii) Proof of date of birth;
					(iv) Certificate of educational qualification and experience;
					(v) Medical fitness certificate;
					(vi) No objection certificate from In-charge of Police Station,(not required in case competency is required only for blasting in connection with testing of explosives in a factory or recognised laboratory);
					(vii) Fee as per Schedule IV, Part-2.
25.	Foreman's Certificate		LE-11	Not required.	(i) Form AE-11;
					(ii) 2 copies of passport size photograph;
					(iii) Proof of date of birth;
					(iv) Certificate of educational qualification and experience;
					(v) Medical fitness certificate;
					(vi) Fee as per Schedule IV, Part-2.

114. Refusal to grant approval or licence.—The authority refusing to grant approval or licence including amendment and renewal shall record in writing the reasons for such refusal and communicate the same to the applicant. Before refusal, the applicant shall be given an opportunity of being heard.

115. Cancellation of no objection certificate.—(1) No objection certificate granted under rule 103, may be cancelled by the authority issuing the same or authority superior to it, if such authority is satisfied, that—

- (a) the licensee has ceased to have any right for the lawful possession over the licensed premises;
- (b) the licensee is convicted and sentenced for any criminal offence or ordered to execute under Chapter VIII of the Code of Criminal Procedure, 1973 (2 of 1974), a bond for keeping peace for good behaviour;
- (c) the cancellation of no objection certificate is absolutely necessary for public peace and safety:

Provided that before cancellation of the no objection certificate, the licensee shall be given a reasonable opportunity of being heard.

(2) The authority issuing the no objection certificate or the District Magistrate or the State Government cancelling no objection certificate shall record, in writing, the reasons for such cancellation and shall immediately furnish to the licensee and the licensing authority concerned, copy of the order cancelling the no objection certificate and the reason for such cancellation.

(3) In case an appeal is made against the cancellation of no objection certificate, the appellate authority may consult, if so desired, the Chief Controller.

116. Refusal to amend or renew a licence.—(1) The licensing authority refusing to amend or renew a licence shall record the reasons for such refusal in writing.

(2) The licensing authority shall refuse to renew a licence if such licence can be revoked in accordance with the Act or these rules.

(3) A brief statement of reasons for refusal to renew a licence shall be given to the holder of the licence on demand unless in any case the licensing authority is of the opinion that it will not be in public interest to furnish such statement.

(4) Where the renewal of the licence is refused, the fee paid for the renewal shall be refunded to the licensee after deducting the proportionate fee for the period beginning from the date from which the licence was to be renewed up to the date from which renewal thereof is refused.

(5) Before refusing renewal of a licence under the rule, the holder of the licence shall be given an opportunity of being heard.

117. Restriction on quantity or period.—If the authority grants, amends or renews a licence for a quantity or period less than the quantity or period applied by the applicant, the authority shall record in writing the reasons for such reduction in licence quantity and shall communicate the same to the applicant on demand.

118. Suspension and revocation or cancellation of licence.—(1) Every licence granted under these rules shall—

(I) stand cancelled, if—

- (a) the licensee has ceased to have any right for the lawful possession over the licensed premises;
- (b) the licensee is convicted and sentenced under any criminal offences or ordered to execute under Chapter VIII of the Code of Criminal Procedure, 1973 (2 of 1974), a bond for keeping peace for good behaviour.

(II) stand cancelled, if the no-objection certificate is cancelled by the authority issuing the same or District Magistrate or the State Government in accordance with rule 115.

(III) be liable to be suspended or cancelled by an order of the licensing authority for any contravention of the Act or these rules or of any condition contained in such licence, or by order of the Central Government, if it is satisfied that there are sufficient grounds for doing so:

Provided that before suspending or cancelling a licence under this rule, the holder of the licence shall be given an opportunity of being heard.

(2) The suspension or cancellation shall take effect from the date specified therein.

(3) An order of suspension or revocation of a licence shall be deemed to have been served if sent by post to the address of the licensee entered in the licence.

(4) The suspension of a licence shall not debar the holder of the licence from applying for the renewal.

(5) Notwithstanding anything contained in sub-rule (1), an opportunity of being heard may not be given to the holder of the licence before his licence is suspended or cancelled in cases—

- (i) where the licence is suspended by a licensing authority as an interim measure for violation of any of the provisions of the Act or these

rules or of any conditions contained in such licence and in his opinion such violation is likely to cause imminent danger to the public:

Provided that where a licence is so suspended, the licensing authority shall give the holder of the licence an opportunity of being heard before the order of suspension is confirmed; or

- (ii) where the licence is suspended or cancelled by the Central Government, if that Government considers that in the public interest or in the interest of the security of the State, such opportunity should not be given.

(6) A licensing authority or the Central Government suspending or cancelling a licence shall record its reason for so doing in writing.

119. Procedure on expiry, suspension or revocation or cancellation of licence.—(1) A licensee on the expiry, suspension or revocation or cancellation of the licence shall forthwith give notice to the licensing authority, of the description and quantity of explosives in his possession and shall comply with the directions which the licensing authority may give in regard to their disposal.

(2) In case the licence is revoked or cancelled by the licensing authority, fee for unexpired portion will be reimbursed to the applicant by the licensing authority.

120. Refusal or withdrawal of shot firer's certificate.—(1) A shot firer's certificate for use of explosive may be refused or withdrawn for any of the following reasons, namely :—

- (a) non-compliance with any order of the issuing authority within the time specified by such order;
- (b) the applicant or holder is an unlawful user of, or is addicted to, narcotics or dangerous drugs;
- (c) the applicant or holder advocates, or knowingly belongs to, any organisation or group that advocates violent overthrow of or violent action against any State Government or the Central Government;
- (d) the applicant or holder suffers from a mental or physical defect that would interfere with the safe handling of explosives;
- (e) violation by the applicant or holder of any provision of any of these rules or that false information was given or a misrepresentation was made to obtain the certificate;
- (f) the applicant belongs to any unlawful or barred organisation.

(2) In any case where the issuing authority refuses or withdraws a certificate, the issuing authority shall

communicate the same to the applicant or holder of the certificate and such communication shall specify the reason for refusal or withdrawal of the certificate and shall state that, upon written request by the applicant or the holder of the certificate, a hearing before the issuing authority will be held within twenty one days after the date of the request.

(3) Upon intimation of the revocation of any certificate, the holder of the certificate shall immediately surrender to the issuing authority the revoked certificate.

121. Provision for appeal.—(1) An appeal against an order of the authority refusing to grant or renew a licence or suspending or revoking a licence or certificate or varying the condition of a licence or certificate shall lie, if the order is passed by the—

- (a) Chief Controller,—to the Central Government;
- (b) Controller,—to the Chief Controller;
- (c) District Magistrate,—to the immediate superior to such authority.

(2) Every appeal referred to in sub-rule (1) shall be preferred in accordance with the provisions of the Act and shall be presented within sixty days of the date of the communication of such order.

(3) Every appeal shall be accompanied by fees specified in Schedule IV annexed to these rules and the fees shall be refunded to the appellant if the appeal is upheld by the appellate authority.

(4) The action taken by the appellate authority shall conform to the provisions of section 6F of the Act .

122. Procedure to be followed by the appellate authority.—(1) On receipt of the appeal and if such appeal can be admitted in accordance with the Act the appellate authority may call for records of the case from the authority who passed the order appealed against and may make such further enquiries as it may deem necessary and after giving the appellant a reasonable opportunity of being heard, pass final orders.

(2) When the State Government is the appellate authority, it may, if desired, may consult the Chief Controller regarding technical matter.

123. Procedure on death or disability of licensee.—(1) If a licensee dies or becomes insolvent or mentally incapable or otherwise disabled, the licence granted to him under these rules shall stand cancelled on the date of the licensee's death or mental incapacity or insolvency or disability, as the case may be.

(2) The legal heirs or representatives of the licensee referred to in sub-rule (1) shall as soon as may be, notify the licensing authority—

- (a) the date of death, insolvency, mental incapacity or other disability as the case may be, of the licensee, and

- (b) shall await the directions of the licensing authority with regard to the disposal of the explosives kept at the licensed premises.

124. Loss of licence.—Where a licence granted under these rules or an authenticated copy granted thereof, is lost or accidentally destroyed, a duplicate may be granted on payment of fees, specified in Part 2 of Schedule IV.

Chapter—IX

Powers vested with Authorities

125. Power of officers to demand licence or pass.—

(1) Every person holding or acting under a licence granted under these rules shall, when called upon to do so by any authority specified in rule 128, produce it, or an authenticated copy of it, at such time and place as may be directed by such officer.

(2) Every person in charge of a consignment of explosives in transit under cover of a pass issued under these rules shall produce it when called upon to do so by any authority specified in rule 128.

(3) Copies of any licence may, for the purposes of this rule, be authenticated free of charge by the authority, which granted the licence.

126. Executive control over authorities.—Every authority other than the Central Government acting under this Chapter shall be subject to the directions and control of the Central Government :

Provided that nothing in this rule shall be deemed to affect the powers of executive control of the Chief Controller over the officers subordinate to him.

127. Power of officers to prevent dangerous practices.—(1) If in any matter which is not provided for by any express provision of, or condition of a licence granted under these rules and a Controller or District Magistrate finds any factory, magazine or place where an explosive is being manufactured, possessed or sold, or used or any part thereof, or anything or practice therein or connected therewith or with the handling or transport of explosives to be unnecessarily dangerous or defective so as, in his opinion, to tend to endanger the public safety or the bodily safety of any person, such Controller or District Magistrate may, by an order in writing, require the occupier of such factory magazine, store house or place or the owner of the explosive, to remedy the same within such time as may be specified in the order.

(2) Where the occupier or owner objects to an order made under sub-rule (1), he may appeal to the appellate authority in accordance with rule 121.

128. Powers of search and seizure.—(1) Any authority specified in column (1) of the Table below may within the jurisdiction specified in the corresponding entry in column (2) of that Table—

- (a) enter, inspect and examine any place, aircraft, train, carriage, vessel or any mode of transport in which an explosive is being manufactured, possessed, used, sold, transported, exported or imported under a licence granted under these rules, or in which he has reason to believe that an explosive has been or is being manufactured, possessed, used, sold, transported, exported or imported in contravention of the Act or these rules;
- (b) search for explosives or ingredients thereof;
- (c) take samples of any explosive or ingredients found therein on payment of the value thereof, if such payment is demanded at the time of the sample are taken;
- (d) seize, detain and remove any explosive or ingredients thereof found therein together with connected documents thereof in respect of which he has reason to believe that any of the provisions of the Act or these rules have been contravened.

Table

Authority	Jurisdiction
The Chief Controller or Controller	All parts of India
All District Magistrates	Their respective jurisdiction
All Executive Magistrates subordinate to the District Magistrate	Their respective jurisdiction
All Commissioners of Police or Police Officers of rank not below that of a Sub-Inspector of Police	Their respective jurisdiction
The Director General of Mines or officers subordinate to him	Their respective jurisdiction

(2) Whenever any officer other than the Chief Controller seizes, detains or removes any explosive or ingredients thereof or any connected documents thereof under this rule, he shall forth with report the fact by telegram to the Chief Controller and the Controller under whose jurisdiction the place where the explosives were seized falls and whenever any officer not being the District Magistrate seizes, detains or removes any explosives or ingredients thereof or any connected documents thereof under this rule, he shall forthwith report the fact by telegram to the district authority concerned.

(3) Whenever any explosives are seized they shall be stored up in an isolated place under adequate guard until examination by the Chief Controller or Controller and receipt of instructions from him as to their disposal.

(4) Notwithstanding the above, the Executive Magistrates or Police Officers authorized in the table shall carry out inspection of the magazines located within their jurisdiction once in six months in order to ascertain if there has been any violation of the Act or the rules thereof. An assessment regarding adequacy of security guards provided by the licensee at the magazines as per Rule 21(2) should also be made during such inspection. A report of such inspection should be submitted to the concerned District Magistrate or Superintendent of Police or Commissioner of Police with a copy to the licensing authority.

129. Power to destroy explosives and ingredients thereof.—(1) The Chief Controller or a Controller—

- (a) shall destroy any explosive other than military ammunition of Indian or foreign origin, whenever found—
 - (i) the manufacture, possession or import of which has been prohibited absolutely under section 6 of the Act; or
 - (ii) if the explosive belongs to the Class 5 (Fulminate) and is being manufactured, possessed, used, sold, transported, exported or imported illegally without a licence under these rules;

(b) may destroy or render harmless any other explosives coming within the purview of these rules, or ingredient thereof in respect of which the Chief Controller or Controller has reasons to believe that any of the provisions of the Act or these rules have been contravened or which in his opinion are no longer fit for storage, transport or use and the matter appears to be urgent to such Controller and fraught with serious danger to public.

(2) Whenever the Chief Controller or a Controller destroys any explosive or ingredient thereof or renders it harmless under sub-rule (1), he shall take and keep a sample thereof :

Provided that if in his opinion such sample can be taken, transported and kept safely for the period required without any danger to any life or property and if required, he may give a portion of the sample to the person owning the explosive or having the same under his control at the time of seizure.

(3) Where any explosive or ingredient thereof is destroyed by a Controller, he shall report all the facts to the Chief Controller. The explosives shall be destroyed or rendered harmless as provided under this rule at the expense of the occupier of factory, magazine, storehouse or the place or owner of the explosives.

130. Procedure on reports of infringement—Whenever any report is made to the District Magistrate by the Chief Controller or Controller of an infringement of the act or of these rules, the District Magistrate shall take

immediate action and shall inform the Chief Controller or the Controller, as the case may be, of the action taken by him on such report.

Chapter X

Accidents, Enquiries and Reports

131. Notice of accident.—(1) The notice of an accident required to be given under section 8 of the Act shall be given within twenty four hours of the happening of the accident by telephone, telegram, E-mail, fax or in any other electronic mode or by special messenger followed by a written report signed by the occupier or authorised person to the same authorities giving particulars of circumstances leading to accident, loss of human life, injury to persons, damage to property, emergency action taken etc, to the—

- (a) Chief Controller;
- (b) Controller in whose jurisdiction accident has taken place;
- (c) District Magistrate; and
- (d) Officer-in-charge of the nearest police station.

(2) Pending the visit of the Chief Controller, or his authorised representative or instruction received from the Chief Controller or his representative that he does not wish any further investigation or inquiry to be made, all wreckage and debris shall be left untouched except in so far as its removal may be necessary for the rescue of persons injured and recovery of the bodies of any persons killed, by the accident or in the case of aerodromes or railways, for the restoration of thorough communication.

(3) The Chief Controller or his authorised representative, if so required by them, shall be provided with all assistance by the officer in charge of the nearest police station.

132. Procedure at courts of inquiry.—(1) The Chief Controller shall arrange with the heads of the Armed Forces or Ordnance Factories or other establishments of such forces to be represented at Courts of Inquiry where he so desires. The Chief Controller shall be provided with copies of the proceedings of Court where he is not represented. The heads of Armed Forces or Ordnance Factories or other establishments of such forces, as the case may be, shall co-operate with the Chief Controller by informing him immediately of occurrences, liable to lead to the summoning of Courts of Inquiry on matters of interest to the Chief Controller as indicated by him.

(2) The Chief Controller may attend in person or send a representative and in either case he shall have power to examine witnesses, where he so desires.

133. Inquiry into accident.—(1) Whenever a District Magistrate, holds an inquiry under sub-section (1) of section 9A of the Act, he shall adjourn such an inquiry unless the Chief Controller or an officer nominated by him is present to watch the proceedings or such Magistrate

has received information from the Chief Controller that officer does not wish to send a representative.

(2) The District Magistrate shall, at least twenty-one days before holding the adjourned inquiry, send to the Chief Controller notice in writing of the time and place of holding the adjourned inquiry.

(3) Where an accident has been attended with loss of human life, the District Magistrate, before the adjournment, may, take evidence to identify the dead bodies and may order the disposal thereof.

(4) The Chief Controller or his representative shall be at liberty at any such inquiry to examine any witness subject to the order of the District Magistrate on points of law.

(5) Where the Chief Controller is not present or represented at any inquiry held by a District Magistrate, a copy of the report of the proceedings thereof shall be sent to him.

134. Inquiry into more serious accidents.—(1) Whenever an inquiry is held under section 9A of the Act, the persons holding such inquiry shall hold the same in open court in such manner and under such conditions as they may think most effectual for ascertaining the causes and circumstances of the accidents and enabling them to make the report under this rule :

Provided that where the Central Government so directs the inquiry may be held in-camera.

(1) Whenever an inquiry under sub-rule (1) is held by a person other than the Chief Controller, such person shall arrange for the Chief Controller to be represented at such inquiry including any adjournment thereof. The person holding the inquiry shall, at least twenty one days before holding the inquiry or any adjourned inquiry, send to the Chief Controller a notice in writing of the time and place of holding such inquiry. The Chief Controller may attend in person or send a representative and in either case, he shall have power to examine witnesses where he so desires.

Chapter XI

Administrative and Penal Actions

135. Protection of action taken in good faith.—No suit, prosecution or other legal proceeding shall lie against the Government or any officer or other employee of the Government or any authority constituted under the Act and these rules in respect of anything which is done or intended to be done in good faith in pursuance of the Act and these rules made or orders or directions issued there under.

136. Administrative action after inspection for violation.—(1) The inspecting authority on inspection of the premises, shall communicate to the licensee and licensing authority in writing, his observation,

discrepancies or the violations, if any of the rules or contravention of conditions of the licence; and a copy of the inspection report shall be endorsed to the licensing authority for taking further necessary action.

137. Communication of administrative action on grant of licence.—(1) Copy of the licence granted under these rules shall be forwarded to the District Magistrate along with the copy of licence and approved drawings, if applicable.

(2) Every licence granted under these rules by the District Magistrate as mentioned in the Part 1 of Schedule IV, shall be communicated to the Chief Controller or the Controller, as the case may be, along with the copy of licence and approved drawings, if applicable.

138. Communication of administrative action on suspension or cancellation of licence.—(1) The administrative action taken by the District Magistrate for suspension or cancellation of licence granted by District Magistrate shall be communicated to the Chief Controller or the Controller, as the case may be.

(2) The administrative action taken by the Chief Controller or the Controller, as the case may be, for suspension and cancellation of licence shall be communicated to the District Magistrate.

139. Repeal and Savings.—(1) The Explosives Rules, 1983 are hereby repealed.

(2) Notwithstanding such repeal—

- (a) all licences, permits or duplicates thereof granted or renewed under the said rules and all fees imposed or levied shall be deemed to have been granted, renewed, imposed or levied, as the case may be, under the corresponding provisions of these rules;
- (b) all approvals given and all powers conferred by or under any notification or rule shall, so far as they are consistent with the Act and these rules, be deemed to have been given or conferred by under this Act or these rules.

SCHEDULE—I

Part—1

Classification of explosives

(see rule 4)

Explosives are divided into 8 classes as follows :

Class 1	Gunpowder Class
Class 2	Nitrate-Mixture Class
Class 3	Nitro-Compound Class
Class 4	Chlorate-Mixture Class
Class 5	Fulminate Class
Class 6	Ammunition Class

Class 7	Fireworks Class
Class 8	Liquid Oxygen Explosives Class.

Class 1—Gunpowder Class

“Gunpowder” means gunpowder ordinarily so called.

Class 2—Nitrate Mixture Class

"Nitrate-mixture" means any preparation, other than gunpowder which is formed by the mechanical mixture of a nitrate with any form of carbon or with any carbonaceous substance not possessed of explosives properties, whether sulphur be or be not added to such preparation, and whether such preparation be or be not mechanically mixed with any other non-explosive substance, and includes any explosive containing as per chlorate and not being a chlorate-mixture, fulminate or nitro-compound as defined in this Schedule

Class 3- Nitro-Compound Class

(1) "Nitro-compound" means any chemical compound which is possessed of explosive properties or is capable of combining with metals to form an explosive compound, and is produced by the chemical action of nitric acid (whether mixed or not, with sulphuric acid), or of a nitrate mixed with sulphuric acid, upon any carbonaceous substance, whether such compound is mechanically mixed with other substances or not.

(2) The nitro-compound class two divisions namely division 1 and division 2.

(3) Division 1, comprising any chemical compound or mechanically mixed preparation which consists, either wholly or partly, of nitro-glycerine or some other liquid nitro-compound.

(4) Division 2 comprising any nitro-compound, which is not comprised in Division 1 that is explosives such as Tri-nitro-toluene (T.N.T.) etc.

Class 4-Chlorate mixture Class

(1) "Chlorate-mixture" means any explosive containing a chlorate.

(2) Chlorate-mixture class has 2 divisions namely Division 1 and Division 2.

(3) Division 1, comprising any chlorate preparation which consists partly of nitro-glycerine or of some other liquid nitro-compound.

(4) Division 2, comprising any chlorate mixture which is not comprised in Division 1.

Class 5 -Fulminate Class

(1) "Fulminate" means any chemical compound or mechanical mixture whatever, which from its great susceptibility to detonation, is suitable for employment in percussion-caps or any other appliances for developing detonation, or which, from its extreme sensibility to

explosion, and from its great instability (that is to say, readiness to undergo decomposition from very slight exciting causes), is specially dangerous.

(2) The Fulminate class consists of two divisions namely division 1 and division 2.

(3) Division 1 comprising such compounds as the Fulminate of silver and of mercury, and preparations of those substances such as are used in percussion caps, and any preparation consisting of a mixture of chlorate with phosphorus, or certain descriptions of compounds of phosphorous, with or without the addition of carbonaceous matter, and any preparation consisting of a mixture of a chlorate with sulphur or with sulphuret, with or without carbonaceous matter.

(4) Division 2 comprises such substances as the chloride and the Iodide of Nitrogen, Fulminating Gold and Silver, Diazobenzol and the Nitrate of Diazobenzol, Lead Azide and Tetrazine.

Class 6-Ammunition Class

(1) "Ammunition" means an explosive of any of the foregoing classes when the same is enclosed in any case or contrivance, or is otherwise adapted or prepared so as to form: (a) a cartridge or charge for small arms, cannon or any other weapon, or (b) a safety or other fuse for blasting or for shells, or (c) a tube for firing explosive, or (d) a percussion cap, detonator, fog signal, shell, torpedo, war rocket or any other contrivance other than a firework.

(2) The ammunition class has three divisions, namely Division 1, Division 2 and Division 3.

(3) Division 1 comprises exclusively of (i) Safety cartridges (ii) Safety fuses for blasting (iii) Railway fog signal and (iv) Percussion caps.

(4) Division 2 comprises any ammunition, which does not contain its own means of ignition and is not included in Division 1, such as cartridges for small arms other than safety cartridge, cartridges and charges for cannon shells and torpedoes containing any explosives, tubes for firing explosives, and war rocket, which do not contain their own means of ignition.

(5) Division 3 comprises any ammunition which contains its own means of ignition and is not included in Division 1, such as detonators, fuses for blasting which are not safety fuses, tubes for firing explosives, containing their own means of ignition.

Note: The expression "ammunition containing its own means of ignition" means ammunition having an arrangement, whether attached to or forming part of the ammunition which is adapted to explode or fire the ammunition by friction or percussion. "Percussion cap" does not include a detonator.

Class 7-Fireworks Class

(1) Fireworks Class has four divisions, namely, Division 1, Division 2, Division 3, and Division 4.

(2) Division 1 comprises fireworks composition that is to say, any chemical compound or mechanically mixed preparation of an explosive or inflammable nature, which is used for the purpose of making manufactured firework, and is not an explosive of classes 1,2,3,4,5 & 6, any star and any coloured fire composition:

Provided that a substantially constructed hermetically closed metal case, containing not more than 500 grammes of coloured fire composition of such a nature, as not to be liable to spontaneous ignition shall be deemed to be "a manufactured firework" and not a "firework composition".

(3) Division 2 fireworks comprises manufactured fireworks i.e. to say any explosive of class 1,2,3,4 or 6 and any fireworks composition when such explosive or composition is enclosed in any case or contrivance or other articles specially adapted, for the production of pyrotechnic effect for pyrotechnic signal or sound signals.

(4) Division 2 fireworks comprises 3 sub-divisions, namely, Sub-division 1, Sub-division 2 and Sub-division 3.

(5) Sub-division 1 of Division 2 fireworks comprises low hazard fireworks which, in the opinion of Chief Controller are relatively innocuous in themselves and are not liable to explode violently or all at once e.g. sparklers [Chinese crackers, serpents, etc.]

(6) Sub-division 2 of Division 2 of fireworks comprises high hazard fireworks which, in the opinion of Chief Controller, present a special hazard to a person e.g. rockets, shells, maroons, wheels, barrages, fountains, illumination pieces, distress signals, pyrotechnic devices etc.

(7) Sub-division 3 of Division 2 fireworks comprises such fireworks, which are assembled at site purely for the purpose of display.

(8) Division 3 comprises any explosive contrivance required for the manufacture of manufactured fireworks e.g. quick match fuse, micro cord fuse etc.

(9) Division 4 comprises manufactured fireworks for use of Armed Forces of the Union.

Class 8-Liquid Oxygen Explosives Class

"Liquid Oxygen Explosives" means an absorbent carbonaceous material such as wood pulp, carbon black, metal powder, coal dust etc. impregnated with liquid air or liquid oxygen with or without the addition of other substances.

Part —2

UN Classification of Explosives

As per the United Nations recommendations in the Model Regulation on the Transport of Dangerous Goods published vide ST/SG/AL.10/1/ Rev 12 in ISBN 92 -1-13974-5, the UN Classification of dangerous goods have been made as U N Class 1 (Explosives), Class 2 (Gases), Class 3 (Flammable liquid), Class 4 (Flammable Solids; substances liable to spontaneous combustion; and substances which in contact with water emit flammable gases), Class 5 (Oxidizing substances; organic peroxides), Class 6 (Poisonous and infectious substances), Class 7 (Radioactive Materials), Class 8 (Corrosive substances) and class 9 (Miscellaneous dangerous substances).

Therefore explosives, which come within the purview of the Explosives Rules, are hazardous goods of UN Class 1.

The UN Class 1 i.e. explosives, have been further divided into 6 divisions as follows:

- | | |
|---------------------------------------|--|
| Division 1.1 (UN Class 1 Division 1): | Substances and articles which have a mass explosion hazard e.g., Gun powder, class 3 explosives, Detonators (ordinary or electric), Detonating fuse, shaped charge, demolition charge, boosters, tetryl, smoke less powder, fireworks composition etc. |
| Division 1.2 (UN Class 1 Division 2): | Substances and articles, which have a projection, hazard but not a mass explosion hazard. |
| Division 1.3 (UN Class 1 Division 3): | Substances and articles, which have a fire hazard and either a minor blast hazard or a minor projection hazard or both but not, a mass explosion hazard. |
| Division 1.4 (UN Class 1 Division 4): | Substances and articles, which present no significant hazard, e.g., practice grenades, Safety fuse, fireworks, |

Division 1.5 (U N Class 1 Division 5): Very insensitive substances, which have a mass explosion, hazard e.g., non-cap sensitive class 2 explosives.

Division 1.6 (U N Class 1 Division 6): Extremely insensitive articles, which do not have a mass explosion hazard.

Notes:

- (1) For the purpose of safety distances as applicable for manufacturing factories and magazines,
 - (a) Explosives of "X" category (except sparklers) can be considered as explosives belonging to U N Class 1.4;
 - (b) Explosives of "Y" category as explosives of U N Class 1.3;
 - (c) Explosives of "ZZ" category as explosives of U N Class 1.1 and 1.5;
- (2) For very low hazard fireworks like sparklers, separate Tables of Safety distances have been prescribed for manufacturing or storage purpose.

Part - 3

Table - 1

Compatibility Groups Pertaining to UN Classification of Explosives: -

The Compatibility Group pertaining to U N Classification Codes of hazardous goods for the purpose of packaging for transport, import and export shall be as follows:

Serial No.	Compatibility Group	Description of substance or article to be classified
1	A	Primary explosive substance
2	B	Article containing a primary explosive and not containing two or more independent safety features
3	C	Propellant explosive substance or other deflagrating explosive substance or article containing such explosive substance
4	D	Secondary detonating explosive substance or black powder or article containing a secondary detonating explosive substance, in each case without means of initiation and without a propelling charge, or article containing a primary explosive substance and containing two or more independent safety features
5	E	Article containing a secondary detonating explosive substance, without means of initiation with a propelling charge (other than one containing an inflammable or hypergolic liquid)
6	F	Article containing a secondary detonating explosive substance, without means of initiation, with a propelling charge (other than one containing an inflammable or hypergolic liquid) or without a propelling charge
7	G	Pyrotechnic substance or article containing a pyrotechnic substance or article containing both an explosive substance and an illuminating, incendiary lachrymatory or smoke-producing substance (other than a water-activated article or one containing white phosphorus, phosphide or inflammable liquid or gel)
8	H	Article containing both an explosive substance and white phosphorus
9	J	Article containing both an explosive substance and an inflammable liquid or gel
10	K	Article containing both an explosive substance and a toxic chemical agent
11	L	Explosive substance or article containing an explosive substance and presenting a special risk needing isolation or each type
12	S	Substance or article so packed or designed that any hazardous effects arising from accidental functioning are confined within the package unless the package has been degraded by fire, in which case all blast or projection effects are limited to the extent that they do not significantly hinder or prohibit fire-fighting or other emergency response efforts in the immediate vicinity of the package.

Note: As per the Explosives Rules, the methods of packaging of explosives for transport within India may be as per Part -1 of Schedule 2 but the methods of packaging of explosives for import and export of explosives shall be as per Part -2 of Schedule 2

Table - 2
Scheme of classification of goods of class 1

	Compatibility Group											
	A	B	C	D	E	F	G	H	J	K	L	S
Hazard Division												
1.1	1.1 A	1.1B	1.1C	1.1 D	1.1E	1.1F	1.1G		1.1 J		1.1L	
1.2		1.2B	1.2C	1.2D	1.2E	1.2F	1.2G	1.2H	1.2J	1.2K	1.2L	
1.3			1.3C			1.3F	1.3G	1.3H	1.3J	1.3K	1.3L	
1.4		1.4B	1.4C	1.4D	1.4E	1.4F	1.4G					1.4S
1.5				1.5D								

Table - 3

Compatibility Group	A	B	C	D	E	G	S
A	Yes	No	No	No	No	No	No
B	No	Yes	No*	No*	No*	No*	Yes
C	No	No*	Yes	Yes	Yes	No	Yes
D	No	No*	Yes	Yes	Yes	No	Yes
E	No	No*	Yes	Yes	Yes	No	Yes
G	No	No	No	No	No	No	Yes
S	No	Yes	Yes	Yes	Yes	Yes	Yes

Schedule II

Part-1

Methods of packing of explosives for inland transport.

(See rules 14 and 15)

- (1) In this Schedule, unless the context otherwise requires, the expression,-
 - (a) "outer package" means a box, barrel, case or cylinder of wood, metal, or corrugated boxes or other solid material, of such strength, construction and character as not to be liable to be broken or accidentally opened, or to become defective or insecure or to allow an explosive to escape;
 - (b) "inner package" means a substantial case, bag, canister, card board or other receptacle, made and closed so as to prevent any explosive from escaping;
 - (c) "propellant" means an authorised explosive of the class 3 adapted and intended exclusively for use as a propelling charge in cannon or small arms .
- (2) Wherever an explosive is distinguished as belonging to a particular class or division of a class, the reference is to be made to the classification specified in Schedule 1;
- (3) The packages of explosives shall conform to the requirements of relevant standards of Bureau of Indian Standards.

TABLE

Item No.	Class	Method of packing	Quantity in any one outer package	Quantity in any one inner package
(1)	(2)	(3)	(4)	(5)
1	Class 1	When the quantity in any one consignment does not exceed 2.5 kilogrammes, a single outer package. When the quantity exceeds 2.5 kilogrammes a double package, the inner and outer packages being as defined in clause (1) of this Schedule. Inner Packages if made of metal shall be secured by cushioning material.	50 kilogrammes Provided that where gun-powder and propellants are packed together the amount shall not exceed 25 Kilogrammes	2.5 kilogrammes
2	Class 2	The material except site mixed Ammonium Nitrate Fuel Oil explosive shall be suitably cartridged in wrappings made of suitable plastic material or papers so as to make it impermeable and protect from damp. Further packing as for Class 1.	25 Kilogrammes	12.5 Kilogrammes
3	Site Mixed Ammonium Nitrate Fuel Oil mixture (ANFO)	As approved by Chief Controller		
4	Class 3 Division 1 other than propellants	The material shall be cartridged in wrappings made of paper or polythene that has been made impermeable. The wrapping should also protect the material from damp. Further packing as for Class 1, provided that either the outer or inner package shall be thoroughly waterproof and no metal shall be used in the construction of the packages, except that (1) nails made of brass, zinc or other soft metal or coated with the same may be used for securing the outer package, and (2) wire stitching may be used for securing the inner package if the wire is effectively prevented from coming into contact with the explosive by means of a sheet of stout cardboard or otherwise.	25 Kilogrammes	2.5 Kilogrammes
5	Class 3 Division 1 propellants.	As for Class 1	25 Kilogrammes	2.5 Kilogrammes
6	Class 3 Division 2 Other than Picric Acid, Wet Gun Cotton Penta Erythritol Tetranitrate RDX, Tri-nitro Resorcinol (Styphnic Alid)	As for Class 1	25 Kilogrammes	2.5 Kilogrammes

(1)	(2)	(3)	(4)	(5)
7.	Picric Acid	As for Class 1	Unlimited	Unlimited
8.	Gun Cotton so wetted with water as to be absolutely un-inflammable	As for Class 1, provided that the inner or outer package or both of them shall be of such nature, and so closed, as to prevent any material loss of moisture.	Unlimited	Unlimited
9.	Penta-Erythritol Tetranitrate (P.E.T.N Penthrite) containing 25% of moisture	In double package, the inner package shall be a polythene bag closed at the top with twine thread and placed in a bright tin container. Both the bag and the tin container shall be so closed as to prevent any material loss of moisture. The outer package shall be as defined in clause (1) of the Schedule and so closed as to prevent any material loss of moisture.	22.5 Kilogrammes (dry basis)	11.25 Kilogrammes (dry basis)
10.	RDX	As for PETN	22.5 Kilogrammes (dry basis)	11.25 Kilogrammes (dry basis)
11.	Tri-Nitro-Resorcinol (Styphnic Acid)	As for Class 1, provided that Tri-nitro-Resorcinol (Styphnic Acid) shall be wetted with not less than 20% of water calculated on the wet explosives and that the inner package shall be a substantial bag, case or canister so made and closed as to prevent any loss of moisture or escape of explosives.	25 Kilogrammes of wet explosive	25 Kilogrammes of wet explosive
12.	Class 4 Division 1	As for Class 3, Division 1, other than propellants.	25 Kilogrammes	2.5 Kilogrammes
13.	Class 4 Division 2	As for Class 1	25 Kilogrammes .	2.5 Kilogrammes
14.	Class 5	The explosives shall be packed wet containing not less than 25% water, and shall in this condition be enclosed in a treble package; the inner most package containing the wet cloth or other suitable material of close mesh but permeable to water; the intermediate package shall contain all the individual packages and sufficient water to keep the explosive in them constantly wet, and may, consistent with the requirements of the security of the whole package, be in the form of a rubber bag, or of a case, or of such special lining to the other packages as will efficiently attain this object, and it must itself be constantly surrounded by or saturated with water, the outer package containing sufficient water constantly to surround the case. Both the intermediate package and the outer package shall be of such construction and material as will not allow water to escape.	100 Kilogrammes .	12.5 Kilogrammes
15.	Class 6, Division 1, other than Pin-fire cartridges for pistols.	A single outer package. Provided that clause (3) of this Schedule shall not apply to explosives of this Division: Provided also that bulletted cartridges of a calibre exceeding 1.27 centimetres. And belonging to this Division shall be packed in such a manner that the	Unlimited	

(1)	(2)	(3)	(4)	(5)
		point of any bullet cannot come in contact with the cap of another cartridge.		
16.	Pin-fire cartridges for pistols	<p>(a) Not exceeding 50 in number in any one consignment—So packed in a single package that the bases lie alternately in opposite directions. The bases and pins shall be so fitted into perforations in millboard or other suitable material as to prevent the firing of any one of the said cartridges by an explosion in any other of the said cartridges.</p> <p>(b) Exceeding 50 number—In an inner and outer package, the cartridges being packed in inner packages with millboards as above required.</p>	2500 in number	50 in number
17.	Class 6, Division 2	<p>Explosives made up into cartridges or charges for cannon, shell, torpedoes, mines, blasting or other like purposes shall be packed in such manner and in such quantity as is required for the same explosive when not so made up:</p> <p>Provided that, where a double package is required, the enclosing ease of such cartridges or charges may, if it satisfies the conditions required for an inner packages, be deemed to be such inner package. Other ammunition of this Division—A single outer package.</p>	2500 in number	50 in number
18.	Class 6 Division 3, other than Detonators and Electric Detonators	<p>As for Class 1</p> <p>Provided that bulleted cartridges of a calibre exceeding 1.27 centimetres. And belonging to this Division shall be packed in such a manner that the point of any bullet cannot come in contact with the cap of another cartridge.</p> <p>(a) Not exceeding 1,000 in any one consignment. As for Class 1, provided that the detonators and the spaces between the same and between the sides of the inner package and the said detonators shall all be filled as far as practicable, with fine sawdust or other similar material; a layer of felt or other soft yielding material shall be placed between both ends of all the detonators and the interior of the inner package in which the same are placed, in such manner and so secured, that both ends of the detonators will rest upon the said cotton wool or other material, every inner package, if of metal to be lined throughout with the paper or other soft material.</p> <p>(b) Exceeding 1,000 detonators. The detonators shall be packed in inner packages, with sawdust and cotton wool as above described. Such inner packages shall be placed inside a substantial case of wood or metal, made and closed so as to prevent any of the inner packages escaping there from, and such case shall be placed inside an outer package in such manner and so secured</p>	10,000 in number	1,000 in number

(1)	(2)	(3)	(4)	(5)
		as to leave a clear space of not less than 7.5 centimetres. Between the case and every part of the interior of the said outer packages, notwithstanding that such clear space may, if preferred be filled with sawdust, straw or other similar material or may contain a light framework or battens of wood to keep the case aforesaid in position in the outer package.		
		(c) Where the number of detonators exceeds 5,000 such other packages shall be provided with handles or other contrivance, by means of which it can be safely and conveniently carried.		
20.	Electric Detonators	As for Class 1, provided that the number in any outer package shall not exceeds 2,000.	2,000 in number	100 in number
21.	Class 7 Division 1	Double package, the inner package being hermetically closed and contained in an outer package as above defined.	10 Kilogrammes	0.5 Kilogrammes
22.	Class 7 Division 2 Sub-division 1, 2 and 3 except serpents and paper caps or amerces	Double package, the inner and outer packages made of wood being as defined in clause (1) of this Schedule. Inner Packages made of card board.	50 Kilogrammes	
23	Class 7 Division 2 Sub-division 1, 2 and 3 except serpents and paper caps or amerces	Double package, the inner and outer packages being as defined in clause (1) of this Schedule. Inner Packages made of card board	20 Kilogrammes	
24	Class 7 Division 2 Sub-division 1 for serpents	Double package, the inner and outer packages being as defined in clause (1) of this Schedule. Inner Packages shall be filled with cotton or suitable material to protect from breakage of serpents palates	15 Kilogrammes	
25	Class 7 Division 2 Sub-division 2 for paper caps or amerces	Double package, the inner and outer packages made of wood being as defined in clause (1) of this Schedule. Inner Packages shall be made as per rule 34	2.8 Kilogrammes	
26	Class 7 Division 2 Sub-division 2 for paper caps or amerces	Double package, the inner and outer packages corrugated boxes being as defined in clause (1) of this Schedule. Inner Packages shall be made as per rule 34	1.4 Kilogrammes	

(1)	(2)	(3)	(4)	(5)
27	Class 7 Division 3	Single out package and inside of outer box shall be secured by cushioning material	25 Kilogrammes	--
28	Class 7, Division 4	Single outer package provided that clause (3) of this Schedule shall not apply.	50 Kilogrammes . or as approved by Armed Forces of the Union	--
29.	Class 8, L.O.X. (Liquid Oxygen Explosives	Cartridges packed and transported for immediate use in insulated packing boxes of a design approved by the Chief Controller	--	--

Part - 2

Methods of packing of explosives for import and export

(see rules 14 and 15)

- (1) The methods of packing of explosives for import and export shall comply with the Scheme of classification of dangerous goods of U N class 1 (i.e., explosives) in combination with the hazard Division and the Compatibility Group devised by United Nations as 'Transport of Dangerous Goods' and accepted world wide as harmonised International Regulations as amended from time to time for governing the various modes of transport of dangerous goods.

Schedule III

Methods of testing

(see rule 48)

An explosive of the 3rd (Nitro-compound) Class or of the 4th (Chlorate-mixture) Class shall comply with the tests set forth in this Schedule as applicable to such explosive.

Heat test as applied to explosives

1. Apparatus and materials employed

Specifi- cation	Pattern No.	Article		
1	2	3	4	5
A		Acid, Acetic 56.8 cubic centimetres. Bottle		1
	I	Balance		1
	II	Bath, water		1
	III	Bath, water, for hot water heating *		1
	IV	Beaker, glass, 1 1/3 litres		1
	V	Bottle, dropper, brown glass, 28.4 cubic centimetres. (for glycerine and water mixture)		1
	VI	Bottle, glass-stoppered, brown glass, 28.4 cubic centimetres (for standard tint papers)		1
	VII	Bottle, glass-stoppered, brown glass, 56.8 cubic centimetres (for test papers)		1
	VIII	Brush, cleaning		2
	IX	Brush, cleaning, test tube		1

1	2	3	4	5
	X	Burner, gas, Argand, and screen		1
	XI	Caps, for test tubes	Sufficient supply	
B	XII	Chalk, French	Sufficient supply	
	XIII	Forceps, lifting, heat test papers		1
	XIV	Funnel, aluminium		1
C	XV	Funnel, glass		1
		Glycerine 28.4 cubic centimetres bottle		1
	XVI	Knife, cordite		1
	XVII	Lid, Water bath		1
	XVIII	Mill, cordite		1
	XIX	Needle, piercing, heat test papers		1
	XX	Oven, water		1
D		Paper, filter	Sufficient supply	
		Papers, filter, 5.5 centimetres.	-Do-	
	XXI	Papers, standard tint	-Do-	
E		Papers, test	-Do-	
	XXII	Pestle and mortar, wedgwoodware		1
	XXIII	Plate, glass, resting heat test papers on when piercing		1
	XXIV	Rings, rubber, test tube	Sufficient supply	
	XXV	Rod, glass, flat-headed		1
	XXVI	Rods, glass, platinum wire hook		6
	XXVII	Scoop, aluminium		1
	XXVIII	Screen, burner for water bath		1
	XXIX	Sieves, rectangular, tinned, brass wire		1
	XXX	Sieves with lid and base, Circular brass	A set	
	XXXI	Spatula, horn		1
	XXXII	Stand, heat test tubes		1
	XXXIII	Stand, water bath		1
	XXXIV	Stoppers, rubber, perforated	Sufficient supply	
	XXXV	Thermometers, glass, and wood case		2
	XXXVI	Trays, aluminium		6
	XXXVII	Tray, cordite knife		1
	XXXVIII	Tubes, heat test	Sufficient supply	
	XXXIX	Tubes, standard tint paper		1
	XL	Tubing, rubber, Argand gas burner	Sufficient supply	
	XLI	Weights, gramme and forceps in box	A set	

*Alternative pattern for use where hot water is available.

N.B.—The apparatus and materials are to comply in all respects with the specification and standard patterns.

Specification—acid, acetic

The acetic acid is to be clear, colourless and free from all impurities, and is not to contain less than 96 per cent CH_3COOH . When 1 cubic centimetre. Of N/10 potassium permanganate solution is added to 100 cubic centimetres of the acetic acid maintained at 15°C , the distinctive colour is to remain for not less than 15 minutes.

One drop of the diluted acetic acid—one volume acetic acid diluted with four volumes of distilled water—when placed by means of a glass rod on freshly-prepared potassium iodide-starch paper is to produce no colour.

Specification—chalk, french

The French chalk is to be equal in colour, to the standard sample and is not to contain more than 0.5 per cent of moisture.

The bulk of the French chalk is to be such that a volume of 50 cubic centimetres. will weigh 23.5 +1.0 grammes. This to be determined as follows:

A glass funnel, the stem of which is 11 centimetres in length tapering, internally from 8 mm. at the top to 5 mm. at the end, is to be clamped vertically above a 50 cubic centimetres cylinder so that the mouth of the latter is 7 centimetres. Below the lowest point of the funnel. The cylinder is to be 2.5 centimetres. in internal diameter, with a ground edge. The French Chalk is to be poured gradually into the funnel and allowed to flow into the cylinder until the latter overflows. This should take one minute. The surface of the chalk is then to be levelled off, without tapping into the funnel and allowed to flow into the cylinder until the latter overflows. This should take one minute. The surface of the chalk is then to be levelled off, without tapping or shaking the cylinder, by drawing a straight edge over the mouth of the cylinder. The cylinder and contents are then to be weighed.

The fitness of the French chalk is to be such that it will all pass, without rubbing, through a 0.075 mm. wire sieve of 6.400 meshes per square centimetre.

The French chalk is not to contain more than 0.1 per cent of soluble alkali salts calculated as CaCO_3 . This is to be determined as follows:

10 grams of the chalk are to be boiled with 250 cubic centimetres of water for one minute, filtered, washed and the filtrate titrated with N/10 hydrochloric acid.

The French chalk, when warmed with hydrochloric acid is not to give off more than 1 per cent and not less than 0.25 per cent of carbonic acid gas.

The French chalk is not to absorb more than 0.5 per cent of moisture after being dried at 100°C till constant in weight, and then exposed under a bell-jar to saturated atmosphere at 15°C to 20°C for 24 hours.

Note:— Before use in heat-test experiments the French chalk is to be carefully washed with distilled water, dried in a water oven at 65-70°C, and exposed to a saturated atmosphere for 24 hours. It is to be kept in a well-stoppered bottle.

Specification—glycerine

The glycerine is to comply with the latest edition of British Pharmacopoeia Specification in all respects.

Specification—paper, filters

The paper for making heat test paper is to consist entirely of pure normal cotton cellulose of strongly resistant quality and free from any loading or sizing.

During manufacture, the paper is not to be submitted to artificial heat of any kind.

The paper is to have a smooth white surface, and both sides are to be as nearly alike as possible.

The average length of the fibres is to be 2 ± 0.5 millimetres.

The sheets, when measured with a Ciceri smith's patent fixed pressure micrometer, are to have a thickness of 1.8 ± 0.2 millimetres.

The last treatment in its preparation is to be a thorough washing with pure distilled water and subsequent air drying in a pure atmosphere.

The paper is to be free from all traces of chemical or other impurity particularly acids, chlorine and peroxides.

On boiling with 3 per cent, caustic soda solution for 60 minutes, the paper is to lose more than 7.5 per cent of its weight.

When heated for 15 minutes at 100° C with Fehlings's solutions, diluted with twice its volume of boiling water, it is not to produce more than 1.25 per cent of its weight of cuprous oxide (Cu_2O).

It is to be supplied in sheets 50 centimetres. long by 15 centimetres. wide, and each 100 sheets packed separately in a hermetically sealed tin case closed by a tear-off strip.

For use in the extraction of nitro-glycerine from dynamite it is to be supplied in circles 5.5 centimetres in diameter, each 100 papers being packed separately.

Specification—papers, test

The papers are to be prepared and tested by the method laid down in Appendix II.

Each batch of papers is to be tested by carrying out four consecutive tests of four papers on each of two days. The mean test obtained is to be 18.5 ± 0.75 minutes. A test different from the mean by more than two minutes is to be considered abnormal, and is to be disregarded unless there are more than one of such abnormal tests amongst the 32 papers tested, in which case the batch is to be condemned.

Specification—papers, standard tint

The standard tint papers are to be made by the method described in, and are to conform to the conditions laid down in Appendix I.

II—Preparation of the sample to be tested:

All the operations in preparing a sample for testing are to be carried out as expeditiously as possible, avoiding exposure to light, as far as practicable and the test is to be carried out as soon as the sample is prepared.

In weighing out heat test quantities, an accuracy of ± 0.05 gramme is sufficient. These quantities are to be weighed out into test tubes which have been fitted with rubber rings, the Explosives of Class 3, Division 1.

(1) Friable Nitro-glycerine preparations from which the nitro-glycerine or liquid nitro-compound cannot be conveniently extracted with water-

- (a) A cartridge of the sample to be tested is to be opened at one end and rotated with one hand while with the other contents of the cartridge are to be loosened by means of pressure between the thumb and forefinger. The first 12.7 millimetres of the sample so loosened is to be rejected.
- (b) The cartridge is then to be inverted over the scoop and the loosening operation continued so as to transfer a portion of the explosive to the scoop.
- (c) When the weight of the sample in the scoop has been adjusted to 3.2 grammes the sample is to be transferred by means of the aluminium funnel to a heat test tubes collected at the bottom by gently tapping the side of the tube with the fingers and pressed down to a height of 3 centimetres by means of the flat-headed glass rod. The sample is then ready to be heat tested.

(2) Blasting Gelatine and Analogous Preparations-

- (a) The wrapper of the cartridge is to be opened out and 12.7 millimetres of the sample is to be removed with the spatula and rejected. A piece weighing 3.2 grammes as nearly as can be judged is then to be cut off for test. The sample is to lie on its own wrapper during these operations, and direct contact of the operator's hands with the sample is to be avoided.
- (b) The portion of the sample removed is to be weighted in the scoop and pieces added to, or removed from it, until 3.2 grammes are obtained. This quantity is then to be transferred to the mortar. 6.5 grammes of French Chalk are to be weighed out using the spatula and scoop and also transferred to the mortar.
- (c) The sample is to be incorporated with the French Chalk by repeatedly squeezing it with the end of the pestle, until it is in a condition in which it can be ground. The times for normal samples should generally be as follows:

Blasting gelatine	1 ½ minutes.
Gelatine dynamite	1 minute.
Gelignite and Similar	½ minute.
Explosives containing less than 63 per cent of Nitro-glycerine.	

The mixture is then to be ground by a circular movement of the pestle for a further period of half a minute, and should then be homogenous in appearance.

- (d) The mixture is to be transferred to a test-tube by means of the horn spatula and the aluminium funnel, and gently pressed down to a height of 5 centimetres with the flat headed glass rod. The sample is then ready to be heat tested.
 - (e) The pestle and mortar after each grinding are to be thoroughly washed with tap water, rinsed with distilled water, dried with a clean towel, and finally dried in a bath at 100° C. The pestle and mortar are to be allowed to cool to the ordinary temperature before being used again.
- (3) Cordite, Ballistite and other propellants of Class 3, Division 1-
- (i) Explosives in the form of sticks or tubes—
 - (a) The operator is to wash his hands carefully, thoroughly rinse them in distilled water, and dry them with a clean towel.
 - (b) The sticks or tubes to be tested are to be wiped out with clean filter paper.
 - (c) The sample is to be reduced to a condition suitable for grinding in the cordite mill by being cut into small piece about 3.175 millimetres. long by means of the cordite knife, 12.7 millimetres being rejected from each end of the sticks or tubes to be tested.
 - (d) The set of sieves with the lid removed is to be placed under the mill so as to allow the ground material to fall directly on the top sieve.
 - (e) The cut sample is to be transferred from the cordite tray to the mill and ground. The first portion passing through the mill is to be rejected. A sufficient quantity of the sample is to be taken to ensure that enough material is obtained on the second sieve without grinding the whole quantity introduced into the mill.
 - (f) The lid is to be replaced on the set of sieves and the sample is sieved for one minute. The material which remains on the second sieve is to be taken for heat test, except in the case of powder in sticks or tubes the nominal diameter of which is less than 0.762 millimetres. in this case, the material in the bottom compartment is to be taken for heat test.
 - (g) 1.6 grammes of the ground and sieved sample are to be weighed out in the scoop, transferred by means of the aluminium funnel to a heat test tube and collected at the bottom by gently tapping the side of the tube with the fingers. Three such test quantities are to be so weighed out. The sample is then ready to be heat tested.
 - (h) The set of sieves and the cordite mill are to be cleaned with the cleaning brush before and after the preparation of each sample.
 - (ii) Explosives in the form of grains for small arms.—1.6 grammes of the sample is to be weighed out in the scoop, transferred by means of the aluminium funnel to a heat test tube and collected at the bottom by gently tapping the side of the tube with the fingers. Three such test quantities are to be weighed out. The sample is then ready to be heat tested.

Explosives of Class 3, Division 2

(1) Nitro-cellulose Pulp—

- (a) The operator is to wash his hands carefully, thoroughly rinse them with distilled water and dry them with a clean towel.
- (b) Six thickness of filter paper are to be laid on top of one another. Sufficient quantity of the sample to be tested, to give about 5.6 grammes after the final pressing, is to be spread on the top sheet. Six other thickness of filter paper are to be similarly laid over the sample. The whole is then to be placed under pressure as, for instance, in a hand screw press, and pressure applied for three minutes. On removal from the press, the sample is to be rubbed up by hand on the filter paper and again pressed for three minutes on fresh filter paper. The sample is then to be transferred to the rectangular sieve and rubbed through it with the hand.
- (c) 5 grammes of the sieved sample are to be weighed out in the scoop and spread evenly on an aluminium tray.
- (d) The oven is to have been brought to, and is to be maintained at a temperature of 48.9°C (120°F) the tray is to be placed in the oven and kept there for 15 minutes with the door closed.
- (e) The tray is to be removed from the oven and the sample transferred to the top sieve of the set of sieves. The lid is to be replaced, and the sample sieved for two minutes. For this operation the second sieve is not to be used.

- (f) The portion of the sample, which passes through, the top sieve is again to be spread evenly on an aluminium tray and exposed to the air of the room for four hours.
- (g) 1.3 grammes of the exposed sample are to be weighed out in the scoop and transferred by means of the aluminium funnel to a heat test tube. Two such test quantities are to be so weighed out. The material in each is to be gently pressed down with the flat headed glass rod to a height of three centimetres. The sample is then ready to be heat tested.
- (h) The wire sieve and the set of sieves are to be cleaned with the cleaning brush before and after each sample has been sieved.

(2) **Compressed Guncotton** —

- (a) About 10 grammes of guncotton are to be removed from the centre of the primer or slab by scrapping with the horn spatula.
- (b) The scrapping so obtained are to be placed in the glass beaker two thirds full of cold distilled water. The sample is to be frequently stirred up on the water during 15 minutes with the flat headed glass rod, and then allowed to settle. The water is to be poured off and replaced by a similar quantity of distilled water in which the sample is to be frequently stirred up as before during 15 minutes. After setting, the second wash water is to be poured off.
- (c) The operator is to wash hands carefully, thoroughly rinse them with distilled water and collect the sample by hand squeezing out the excess of water.
- (d) Six thickness of filter paper are to be laid on top of one another. The washed guncotton is to be spread on the top sheet. Six other thickness of filter paper are to be similarly laid over the sample. The whole is then to be placed under pressure as, for instance, in a hand screw press and pressure applied for three minutes. On removal from the press, the sample is to be rubbed up on the filter paper by hand and again pressed for three minutes on fresh filter paper. The sample is then to be transferred to the rectangular sieve and rubbed through it by hand.
- (e) 5 grammes of the sieved sample are to be weighed out in the scoop and spread evenly on an aluminium tray.
- (f) The above is to have been brought to, and is to be maintained at a temperature of 48.9°C(120°F). The tray is to be placed in the oven and kept there for 15 minutes, with the door closed.
- (g) The tray is to be removed from the oven and the sample transferred to the top sieve of the set of sieves. The lid is to be replaced, and the sample sieved for two minutes. For this operation the second sieve is not to be used.
- (h) The portion of the sample, which passes through, the top sieve is to be again spread evenly on an aluminium tray and exposed to the air of the room for four hours.
- (i) 1.3 grammes of the exposed sample are to be weighed out in the scoop and transferred by means of the aluminium funnel to a heat test tube. Two such test quantities are to be so weighed out. The material in each is to be gently pressed down with the flat-headed glass rod to a height of three centimetres. The sample is then ready to be heat tested.
- (j) The wire sieve and the set of sieves are to be cleaned with the cleaning brush before and after each sample has been sieved.

(3) **Nitro-cellulose Propellant** —

- (i) Explosives in the form of sticks or tubes:
 - (a) The operator is to wash his hands carefully, thoroughly rinse them in distilled water, and dry them with a clean towel.
 - (b) The sticks or tubes to be tested are to be wiped with clean filter paper.
 - (c) The sample is to be reduced to a condition suitable for grinding in the cordite mill by being cut into small pieces about 3.175 millimetres long by means of the cordite knife 12.7 millimetres being rejected from each end of the sticks or tubes to be tested.
 - (d) The set of sieves with the lid removed, is to be placed under the mill so as to allow the ground material to fall directly on to the top sieve.

- (e) The cut sample is to be transferred from the cordite tray to the mill and ground. The first portion passing through the mill is to be rejected. A sufficient quantity of the sample is to be taken to ensure that enough material is obtained on the second sieve without grinding the whole quantity introduced into the mill.
- (f) The lid is to be replaced on the set of sieves and the sample is to be sieved for one minute. The material which remains on the second sieve is to be taken for heat test, except in the case of powder in sticks or tubes, the nominal diameter of which is less than 0.762 millimetres in this case, the material in the bottom compartment is to be taken for heat test.
- (g) 1.6 grammes of the ground and sieved sample are to be weighed out in the scoop, transferred by means of the aluminium funnel to a heat test tube, and collected at the bottom by gently tapping the side of the tube with the fingers. Three such test quantities are to be so weighted out. The sample is then ready to be heat tested.
- (h) The set of sieves and the cordite mill are to be cleaned with cleaning brush before and after the preparation of each sample.
- (i) The explosives in the form of grants for small arms—
 - (a) A quantity of the sample sufficient for the tests required is to be spread evenly on an aluminium tray.
 - (b) The oven is to have been brought to, and is to be maintained at a temperature of 48.9°C (120° F). The tray is to be placed in the oven and kept there for 15 minutes, with the door closed.
 - (c) The tray is to be removed from the oven and exposed to the air of the room for 4 hours.
 - (d) 1.3 grammes of the exposed sample are to be weighed out in the scoop and transferred, by means of the aluminium funnel to a heat test tube. Three such test quantities are to be so weighed out. The sample is then ready to be heat tested.

III—Application of the Test

- (a) The water bath is to be fitted up and is to be levelled and filled with water up to the outflow. It is to be placed on a table of convenient height in such a position that the heat test tint can readily be observed by reflected light. No part of the apparatus is to be exposed to direct sunlight.
- (b) The thermometer fixed in the rubber stopper, is to be inserted in the wire cage provided for the purpose on the under side of the water bath of 7.6 centimetres. The water is heated to the required temperature, and maintained at a constant temperature and depth. The temperatures for the various explosives are given in Table-I.
- (c) The glass rod with platinum wire hook is to be inserted in the rubber stopper. A test paper is then to be removed from the brown glass bottle by means of the forceps placed on the glass plate so that its edges coincide with the lines on the plate, and pierced by passing the needle through the paper and the hole in the plate. The test paper is then to be held by means of the forceps, and a mixture of equal volumes of distilled water and glycerine is to be applied to the upper edge of the test paper by means of the glass rod of the dropping bottle in sufficient quantity to moisten the upper half of the test paper by the time the test is complete. The platinum wire hook of the glass rod is then to be passed through the hole in the paper. At no time is the operator to touch the paper with his finger.
- (d) The rubber stopper carrying the glass rod and test paper is at once to be firmly pressed into the test tube containing the explosives to be tested until the bottom of the stopper coincides with the top line etched on the test tube and the position of the glass rod is to be adjusted, so that the lower edge of the wet portion of the test paper, which edge is to be approximately horizontal, coincides with the middle etched line on the test tube. The test tube is then to be inserted in one of the wire cages of the lid of the water bath, so that the bottom line etched on the test tube coincides with the upper surface of the lid. The rubber ring is to be pressed down on the bath and the cap placed in position over the tube.

The quantities of the various explosives to be placed in the test tube are given in Table-I.

The test paper is not to be inspected by lifting the cap until shortly before the time explosive ought to stand the test as given in Table-I.

- (e) The test is completed when the faint brown line, which after time makes its appearance at the margin between the wet and the dry positions of the test paper, equals in depth of tint the brown line on the standard tint paper.

For any given explosives to pass the test, the time elapsing between the introduction of the tube into the bath and the production of the tint equal to the standard must not be less than the time given in table below:

Class	Division	Explosive Nature	Temperature of Heat Test	Quantity of Explosive Heat Tested	Time explosive should stand the Test
3	1	Friable Nitro-glycerine preparations from which the Nitro-glycerine cannot conveniently be extracted by water.	71.1 (160° F)	3.2 grammes	Min 7
		Blasting Gelatine, and Analogous preparations.	71.1 (160° F)	3.2 grammes +6.5 grammes French chalk	10
		Cordite, Ballistic and other propellant of Class 3, Division 1.	71.1 (160° F)	1.6 grammes	10
3	2	Nitro-cellulose, pulp, compressed Gun cotton.	76.7 (170° F)	1.3 gramme	10
		Nitro-cellulose Propellants	76.7 (170° F)	1.3 grammes	10

After the test is finished, the explosive is to be carefully removed from the tubes, and the tubes thoroughly washed out with tap water by means of the test tube brush. They are then to be rinsed out and allowed to drain for a few minutes. The washing is repeated with distilled water, the tubes rinsed, allowed to drain, and finally dried in a bath at 100° C. The tubes are to be allowed to cool to the ordinary temperature before being used again.

IV—Exudation and liquefaction test for Blasting Gelatine and analogous preparations

Test for Liquefaction

A cylinder of blasting gelatine is to be cut from the cartridge to be tested, the length of the cylinder to be about equal to its diameter and the ends being cut flat.

The cylinder is to be placed on end on a flat surface without any wrapper and secured by a pin passing vertically through its centre.

In this condition the cylinder is to be exposed for one hundred and forty-four (144) consecutive hours (six days and nights) to a temperature ranging from 29.40° C to 32.2° C and during such exposure the cylinder shall not diminish in height by more than one-fourth of its original height, and the upper cut surface shall retain its flatness and the sharpness of its edge.

Note:— If the blasting gelatine and gelatine dynamite to be tested cannot be made up in cylindrical form, the test is to be applied with necessary modifications.

Test for liability to exudation

(“Freezing and thawing test”)

There shall be no separation from the general mass of the blasting gelatine or gelatine dynamite of any nitro glycerine or liquid nitro-compound under any conditions of storage, transport or use or when the material is subjected to the liquefaction test hereinbefore described or when subjected three times in succession to alternate freezing and thawing i.e. storage at -3 to -6° C for 16 hours (freezing) followed by 8 hours at room temperature (thawing). The cycle is repeated three times (3 days) and the explosives are examined for any abnormality in respect of gel segregation or oozing out of nitro glycerine

V-Picric Acid

- (1) The material shall contain not more than 0.3 part of mineral or non-combustible matter in 100 parts by weight of the material dried at 71.° C (160° F).
- (2) It should not contain more than a minute trace of lead.
- (3) One hundred parts of the dry material shall not contain more than 0.3 part of total (free and combined) sulphuric acid, of which not more than 0.1 part shall be free sulphuric acid.

- (4) Its melting point should be between 120° C and 122.8° C.

VI- Testing Chlorate mixtures

The material must not be too sensitive and must show no tendency to increase in sensitiveness on keeping.

The material must contain nothing liable to reduce the chlorate.

Chlorites calculated, as potassium chloride must not exceed 0.25 per cent.

The material must contain no free acid, or substance liable to produce free acid.

Explosives of this class containing nitro-compounds will be subject to the heat test as they belonged to Class 3.

Note:--These explosive will considered too sensitive if they can be exploded however, partially by means of a glancing blow with a broom stick on soft wood such as deal.

VII-PETN (Penta Erythritol Tetranitrate)

(A) Heat Test:--

If the sample is received dry, it is to be transferred to a clean sheet of paper and mixed thoroughly in an atmosphere free from dust. Sample of moist PETN is to be dried prior to being heat tested by taking the same in a tared flat-bottomed dish and expose the dish and its contents in a oven at a temperature not exceeding 60° C until constant in weight.

1.3 grammes of the dry sample is carefully transferred to a heat test tube by means of the aluminium funnel. After removal of the funnel the sample is to be collected at the bottom of the tube by tapping with the fingers. It is then to be heat tested at a temperature of 76.6° C and the time explosive should stand the test, should not be less than 10 minutes.

(B) Other tests and requirements-

- (1) The PETN should be in the form of white crystals.
- (2) It should be free from gritty particles, visible impurities and foreign matter.
- (3) Melting point-The melting point of the PETN should be between 139° C and 142° C.
- (4) Insoluble matter-The total insoluble matter in acetone should not be more than 0.05 per cent.
- (5) Volatile matter-Volatile matter should not be more than 0.15 per cent.
- (6) Acidity-The acidity, calculated as HNO_2 should not exceed 0.01%.
- (7) Alkalinity-The alkalinity, calculated as Na_2CO_3 , should not be more than 0.01%.
- (8) Nitrogen content-The nitrogen content should be not less than 17.40 per cent and not more than 27.80 per cent.

Appendix 1 to Schedule III

Preparation of Standard Tint Papers

0.48 grammes of the finest yellow ochre, 0.2 gramme of raw umber and 5 grammes of fine white gum arabic, all of which have been very finely ground in an agate mortar are weighed into a stoppered bottle of about 150 cubic centimetre capacity and 100 cubic centimetre of water added. The whole is shaken in the cold until the gum is dissolved. The suspension is then well shaken and allowed to stand for one hour.

A stylographic pen is then filled from the centre of the suspension and with the aid of a ruler lines are drawn at a steady pace across one side, of a sheet of filter paper to Specification D. The sheet is then cut up into rectangular strips 1 centimetres broad by 2 centimetres long, each with a line across the middle perpendicular to the length of the strip. The breadth of the line must be not less than 0.5 millimetres. not more than 1 millimetres.

In order to maintain continuity as regards depth of tint strips in which the tint does not correspond with that of the sealed pattern are to be rejected.

Appendix 2 to Schedule III

Preparation and Testing of Heat Papers

Preparation

Potassium Iodide:

The purest potassium iodide obtainable commercially is to be purified by triple re-crystallisation from pure ethyl alcohol, diluted by the addition of one-twentieth of its volume of distilled water. The crystals are to be kept as small as possible, and are to be spread out on clean filter paper, resting on a glass plate, and allowed to dry in the dark,. When dry,

they are to be placed in a thin layer on the bottom of a platinum crucible and heated to a dull red heat for one minute over a spirit lamp burning pure alcohol. When cold the crystals are to be transferred to a brown glass stoppered bottle from which the quantities required are to be weighed out.

The potassium iodide used for each batch of filter paper is to be prepared as above immediately before use.

Starch :

The starch used is to be best maize starch in the form of cornflower. It is to be purified immediately before use by washing six times by decantation with freshly distilled water. It is then to be placed on a porous plate of unglazed porcelain, allowed to dry in a warm atmosphere in the dark, and stopped in a brown bottle from which the quantities required are to be weighed out.

Preparation of the Dipping Solution:

220 cubic centimetres of freshly distilled water are to be placed in a Jena glass flask and raised to boiling point over a spirit lamp burning pure spirit. 3 gram of the starch, prepared as above, are to be suspended in 30 cubic centimetre of distilled water and the mixture poured into the 220 cubic centimetres of boiling water, with continuous shaking. The whole is to be kept boiling gently, and shaken occasionally for 5 minutes. The solution of starch so prepared is to be added to a solution of 1 gramme of the purified potassium iodide in 250 cubic centimetre of freshly distilled water, and the solution well mixed. The mixture is to stand overnight in a dark room. The following day, the clear supernatant liquid is to be carefully siphoned off and used immediately for dipping the paper.

If it is desired to dip a large batch of paper, the foregoing quantities may be multiplied in order to obtain sufficient solution.

Dipping the papers:

The clear potassium iodide and starch solution is to be poured into a porcelain tray, which is to be kept exclusively for this operation. Sheets of filter paper to Specification D are to be passed through it singly, so that all except 3 centimetres at the end of the strip of paper passes beneath the surface of the liquid.

The strip of paper is to be held above the tray by the dry portion and a glass rod passed down each side to remove the excess of solution. It is then to be suspended by the undipped portion in a warm dark room, cupboard, or oven until dry.

It is advisable to nip a small piece, out of the edge of each sheet at the boundary line between the wet and dry portions as a guide in subsequent cutting.

Cutting and Trimming the Test Paper :

In cutting and trimming heat test paper the operator is to wear clean cotton gloves.

When the sheets are dry they are to be trimmed by cutting off the unclipped end about 0.5 centimetre below the edge of the undipped portion, 0.5 centimetres strips are also cut from the other three edges. The sheets are then to be stored in amber coloured glass jars, kept in the dark.

When a batch of paper has been passed for issue the sheets are to be cut up into rectangular pieces 1 centimetre by 2 centimetres, and are to be issued in this form.

All the above operations are to be carried out in a building specially reserved for this work. This building is to be protected from the direct access of the sun's rays, and is, as far as possible, to be kept dark.

Testing of Heat Test Paper by the Diffusion Test

Apparatus and Materials required :

No.			
1.	Acheson graphite	Pieces,	1
2.	Acid, Sulphuric, normal solution	Sufficient supply	
3.	Annulus aluminium		2
4.	Cap, light-tightpaste board		1
5.	Cylinder, glass, with rubber stopper		1
6.	Cylinder, measuring 100 cubic centimetres		1
7.	Ferrous ammonium sulphate	Sufficient supply	

No.		
8.	Jar, cylindrical, brown glass	1
9.	Pipette 10 cubic centimetres	1
10.	Rod, stirring, glass	1
11.	Sodium nitrite solution containing 1.7 grams in 1 litre	Sufficient supply
12.	Stopper, rubber, with 4 platinum hooks	1

Application of the Test :

The solution is to be brought to 15° C before use. 2 grammes of ferrous ammonium sulphate are weighed out and placed in the glass jar, 90 cubic centimetres of the normal sulphuric acid added and solution effected by stirring with the glass rod. The jar is then placed in a bath of water at 15° C, and must be kept at the temperature of the air should be 15° C to 17° C. 10 cubic centimetres of the sodium nitrite solution are then added by means of the pipette and well stirred in. An aluminium annulus is placed centrally over the mouth of the jar and the orifice covered by the graphite slab; over this is placed a second annulus. Good contact between surfaces is to be ensured by exerting a slight pressure and twisting motion.

The glass cylinder with rubber stopper and light tight cap are then placed on the second annulus, and the assembled apparatus is allowed to stand for 20 minutes. After the expiration of the 20 minutes, the light tight cap and the glass cylinder are removed, the rubber stopper taken out of the cylinder waved several times through the air. As soon as possible, four of the heat test papers to be tested are moistened with glycerine solution, placed on the platinum hooks of the stopper, the stopper inserted in the cylinder, and the cylinder and light tight cap again placed in position of the second annulus, and the time noted.

When the papers read by reflected light reach the standard, tint, the time is again noted; the difference gives the time of test. Standard tint papers to be read by reflected light are used for comparison.

The cylinder is then removed uncorked, waved several times through the air, and a fresh set of papers is at once put on for test. After four sets of tests have been made the graphite slab must be heated to 200° C for 1 hour allowed to cool in an evacuated desiccators over potash for at least 16 hours before being used again.

A batch of papers is to be tested by carrying out four consecutive tests of four papers on each of two days.

SCHEDULE IV

Part 1

(See rule 99)

Licences and licensing authorities

Article No.	Purpose for which granted	Licence Form	Licensing Authority
1	2	3	4
1	(a) Licence to manufacture fireworks or gunpowder or both not exceeding 15 kilogrammes at any one time.	LE-1	District Magistrate.
	(b) Licence to manufacture fireworks or gunpowder or both exceeding 15 kilogrammes but not exceeding 500 kilogrammes at any one time.	LE-1	Controller of Explosives.
	(c) Licence to manufacture fireworks or gunpowder or both exceeding 500 kilograms at any one time.	LE-1	Chief Controller or Controller of Explosives authorised by Chief Controller.
	(d) Licence to manufacture at site, ANFO explosives not exceeding 200 kilogrammes at any one time.	LE-1	Controller of Explosives
	(e) Licence to manufacture liquid oxygen explosives (LOX).	LE-1	Chief Controller or Controller of Explosives authorised by Chief Controller.
	(f) Licence to manufacture site mixed explosives (SME)	LE-1	Chief Controller or Controller of Explosives authorised by Chief Controller.

1	2	3	4
	(g) Licence to manufacture explosives other than fireworks, gunpowder, ANFO, LOX and SME.	LE-1	Chief Controller or Controller of Explosives authorised by Chief Controller
2	Licence to possess gunpowder not exceeding 15 kilogramme at any one time for manufacture of adirverttus and possession of adirverttus not exceeding 200 in number at any one time.	LE-2	District Magistrate
3	(a) Licence to possess for use, for agricultural purpose or in small quarry, explosives not exceeding 25 kilogrammes of Class 1 or 2 or 3 and 1500 numbers detonators; and 1500 meters of detonating fuse or safety fuse at any one time in a magazine.	LE-3	District Magistrate
	(b) Licence to possess for sale, explosives of Class 1, 2, 3, 4, 5, 6 or 7 in a magazine.	LE-3	Chief Controller or Controller of Explosives authorised by Chief Controller
	(c) Licence to possess for use, explosives of Class 1, 2, 3, 4, 5, 6 or 7 in a magazine.	LE-3	Chief Controller or Controller of Explosives authorised by Chief Controller
	(d) Licence to possess fireworks not exceeding 5000 kilogramme or safety fuse not exceeding 50000 meters, in a storehouse, not for sale but for transfer to own licensed shop.	LE-3	Chief Controller or Controller of Explosives authorised by Chief Controller
4	Licence to possess and transport explosives of class 2 or class 3 not exceeding 25 kilograms, electric or ordinary detonators not exceeding 200 numbers, detonating fuse not exceeding 100 metres and safety fuse not exceeding 200 metres in a compressor mounted motor truck or tractor for use in well sinking.	LE-4	District Magistrate
5	(a) Licence to possess and sell from a shop, at any one time, not exceeding 25 kilogrammes of small-arms nitro- compound	LE-5	District Magistrate
	(b) Licence to possess and sell from a shop, at any one time, not exceeding 100 kilogrammes of manufactured fireworks of Class 7, Division 2, sub-division 2; and 500 kilogrammes of chinese crackers or sparklers	LE-5	District Magistrate
	(c) Licence to possess and sell from a shop, at any one time, not exceeding 2000 numbers of pyrotechnic device explosives of Class 6 Division 1	LE-5	District Magistrate
	(d) Licence to possess for use Gunpowder not exceeding 5 kilogrammes and safety fuse not exceeding 50 metres in the States of Bihar, West Bengal, Kerala and Tamilnadu.	LE-5	District Magistrate
	(e) Licence to possess for use of small-arms nitro-compound not exceeding 5 kilogrammes in the State of Kerala.	LE-5	District Magistrate
	(f) Licence to possess and sell from a shop manufactured fireworks of Class 7 Division 2 sub-division 2 exceeding 100 kilogrammes but not exceeding 300 kilogrammes, and chinese crackers or sparklers exceeding 500 kilogrammes but not exceeding 1200 kilogrammes.	LE-5	Controller of Explosives
6	Licence to possess and use fireworks for public display.	LE-6	District Magistrate
7	Licence to transport explosives in a road van.	LE-7	Controller of Explosives

1	2	3	4
8	Licence to import or export explosives otherwise than by land.	LE-8	Chief Controller
9	Licence to manufacture, possess, sell, use, etc of explosives not provided in articles 1 to 8.	LE-9(SPECIAL)	Chief Controller
10	Shot firer's Certificate.	LE-10	Controller of Explosives
11	Foreman's Certificate.	LE-11	Controller of Explosives

Part 2

(See rules 100 and 113)

A. Fees other than licence fees and fees for testing in the departmental testing station : The following Fees other than licence fees and fees for testing in the departmental testing station shall be payable:

- | | | |
|------|---|--|
| (1) | Scrutiny fee for each proposal for inclusion of any explosive in the authorised list of explosives | Rs. 500 |
| (2) | Fees for testing each sample of imported explosives | Rs. 100 |
| (3) | (i) Fees for testing each sample to issue certificate of safety | Rs. 100 |
| | (ii) Fees to renew each certificate issued under (i) above without fresh test. | Rs. 50 |
| | (iii) Fees for testing each sample to renew certificate issued under (i) above after fresh test. | Rs. 500 |
| | (iv) Scrutiny fee for approval of manufacturing process for any new explosives. | Rs. 2000 |
| (4) | Fees for storage of explosives in excess of licensed capacity on each occasion. | Rs. 500 for first 15 days and Rs. 200 for every additional day |
| (5) | Fees for permit for temporary possession of fireworks in excess of licensed quantity | Rs. 200 |
| (6) | Scrutiny fee for application for approval before grant of a licence to manufacture | |
| | (i) any explosives other than those mentioned under (ii), (iii) and (iv) below | Rs. 2000 |
| | (ii) site mixed ANFO Explosives | Rs. 500 |
| | (iii) Liquid Oxygen explosive | Rs. 500 |
| | (iv) (a) Fireworks or Gunpowder in a quantity not exceeding 15 Kilogrammes at a time. | Rs. 50 |
| | (b) Fireworks or Gunpowder in a quantity exceeding 15 Kilogrammes but not exceeding 200 Kilogrammes at a time. | Rs. 500 |
| | (c) Fireworks or Gunpowder in a quantity exceeding 200 Kilogrammes at a time | Rs. 500 |
| (7) | Scrutiny fee for grant of approval to manufacture colour matches | Rs. 1000 |
| (8) | Scrutiny fee for application for approval before grant of licence to possess explosives in | |
| | (a) magazine or store house | Rs. 500 |
| | (b) shops | Rs. 200 |
| (9) | Scrutiny fee for application for grant of each licence to import or export explosives | Rs. 500 |
| (10) | Scrutiny fee for application for grant of each licence to transport explosives | Rs. 100 |
| (11) | Scrutiny fee for each application for grant of a licence for a road van compressor mounted motor truck or tractor | Rs. 200 |
| (12) | Scrutiny fee for each application for grant of a shot-firer's certificate | Rs. 300 |
| (13) | (a) Scrutiny fee for application for amendment or transfer of each licence or certificate | |
| | (i) to manufacture high explosives and of Class 6 and other explosives not mentioned below: | Rs. 1500 |
| | (ii) to manufacture fireworks or Gunpowder in a quantity not exceeding 15 Kilogrammes at a time; | Rs. 50 |

(iii) to manufacture fireworks or Gunpowder in a quantity exceeding 15 Kilogrammes but not exceeding 200 kilogrammes at a time;	Rs. 300
(iv) to manufacture fireworks or Gunpowder in a quantity exceeding 200 Kilogrammes at a time;	Rs. 300
(v) to manufacture site mixed ANFO explosives;	Rs. 300
(vi) to manufacture liquid oxygen explosives;	Rs. 300
(vii) to possess explosives in magazine for sale or use or in store house;	Rs. 300
(viii) to possess fireworks in a shop for sale;	Rs. 300
(ix) to transport explosives in explosives van;	Rs. 300
(x) in Form LE-3.	Rs. 50
(xi) shot firer's or foreman's certificate	Rs. 100
(b) Amendment or transfer fee for each licence	
(i) to manufacture high explosives and explosives of Class 6 and other explosives not mentioned below;	Rs. 200
(ii) to manufacture fireworks or Gunpowder in a quantity not exceeding 15 Kilogrammes at a time;	Rs. 50
(iii) to manufacture fireworks or Gunpowder in a quantity exceeding 15 Kilogrammes but not exceeding 200 Kilogrammes at a time;	Rs. 200
(iv) to manufacture fireworks or Gunpowder in a quantity exceeding 200 Kilogrammes at a time;	Rs. 200
(v) to manufacture site mixed ANFO explosives;	Rs. 200
(vi) to manufacture liquid oxygen explosives;	Rs. 200
(vii) to possess explosives in magazine for sale or use or in store house;	Rs. 200
(viii) to possess fireworks in a shop for sale;	Rs. 200
(ix) to transport explosives in explosives van;	Rs. 200
(x) in form LE-3	Rs. 50
(xi) shot firer's or foreman's certificate	Rs. 100
(c) Scrutiny fee for a proposal for any change in the manufacturing process of explosives	Rs. 1000
(d) Scrutiny fee for a proposal for any change in the composition of an authorised explosives	Rs. 500
(14) For appeal against an order of a licensing authority	
(i) if such appeal is preferred to Central Government or Chief Controller	Rs. 1000
(ii) if such appeal is preferred to immediate official superior to District Magistrate.	Rs. 200
(15) For issue of a duplicate copy of licence or certificate	Rs. 200
(16) For approval of -	
(a) a packing box or container.	Rs. 1000
(b) a new design of equipment, machinery or composite vehicle used for manufacture and transport of explosives	Rs. 1000
(c) a magazine 'Mode B'	Rs. 1000
(d) BMD vehicle	Rs. 1000
(17) Lightning Conductor testing fee for each test conducted by Departmental officer.	Rs. 500

B. Licence fee -(1) The following fees shall be payable per year for each licence issued under these rules :

(I) Licenses fees for manufacture of explosives	Rs.1000 per 1000 tonnes or part thereof of the installed annual plant capacity for each explosive subject to a maximum of Rs.20,000
(a) of classes 2,3,4 and 5 other than site mixed Ammonium Nitrate Fuel Oil explosive	

(b) of class 6	Rs.1000 per one million metres or numbers or part thereof of the installed annual plant capacity of each explosives subject to a maximum of Rs.20,000
(c) of class 1 or class 7	
(i) in a quantity not exceeding 15 Kilogrammes at a time;	Rs. 200
(ii) in a quantity exceeding 15 Kilogrammes but not exceeding 200 Kilogrammes at a time;	Rs. 2000
(iii) in quantities exceeding 200 Kilogrammes at a time;	Rs. 2000 for the first 200 Kilogrammes plus Rs. 500 for every additional 50 Kilogrammes or part thereof at a time subject to a maximum of Rs. 15000
(d) of class 8 (Liquid Oxygen Explosive)	Rs. 5000
(e) of site mixed ANFO explosives	Rs. 1000
(II) Licence fees for possession and sale of explosives in a magazine.	(a) Rs.1000 for every 1000 Kilogrammes or part thereof of the licensed capacity of each explosive of Class 1, 2, 3, 4, 5 or 7 subject to a maximum of Rs. 15000 (b) Rs. 500 for every 10000 metres or numbers or part thereof of each explosive of Class 6 subject to a maximum of Rs. 15000
(III) Licence fees for possession of explosives in a magazine for use.	(a) Rs. 1000 for every 1000 Kilogrammes or part thereof of the licensed capacity of each explosives of Class 1, 2, 3, 4, 5 or 7 subject to a maximum of Rs.15000, and (b) Rs. 500 for every 10,000 metres or numbers or part thereof of each explosive of Class 6 subject to a maximum of Rs. 15000
(IV) Licence fees for possession and sale of fireworks or Gunpowder or smallarms nitrocompound from a shop	
(a) licensed by District Magistrate	Rs. 500
(b) licensed by Controller of Explosives	Rs. 1000
(V) Licence fees for possession of fireworks in storehouse.	Rs. 3000
(VI) Licence fees for road van	Rs. 2000
(VII) Licence fees for compressor mounted motor truck or tractor.	Rs. 1000
(VIII) Licence fee for possession of Gunpowder for manufacture of adirvettus	Rs. 500
(IX) Licence for possession of explosives for use (other than agricultural purpose) in Form LE-3 issued by District Magistrate	Rs. 1000

(2) The following fees(one time) shall be payable for each licence issued under these rules:

Licence fees for -

(i) import of explosives	Rs.1500
(ii) export of explosives	Rs.1000
(iii) possession and public display of fireworks	Rs. 500
(iv) possession of explosives for use for agricultural purpose in Form LE-3 issued by District Magistrate	Rs. 100

C. Testing fees - The following fees shall be payable for testing of explosives in the Departmental Testing Station.

Sl. No.	Name or type of explosive	Class and Division	Tests to be conducted	Fees (in rupees)
1	2	3	4	5
1.	Gun Powder	1	1.1 Physical Properties i.e Moisture, Bulk density	200
			1.2 Chemical analysis of composition	1000
			1.3 Any additional test as per BIS specification	500
2.	Slurry or Gel or Emulsion Explosives or ANFO or Non-explosives emulsion matrix or SME	2	2.1 Physical Properties	
			2.1.1 Physical examination (Examination of dimensions, markings and nature of inner package)	200
			2.1.2 Density	300
			2.1.3 Consistency (Examination of quality of gel or slurry or emulsion)	500
			2.1.4 Segregation (Segregation of constituents in transport)	500
			2.1.5 Behaviour on low and high temperature	1000
			2.1.6 Tendency to absorb moisture	500
			2.2 Chemical analysis of composition	5000
			2.3 Stability Test	
			(Determination of stability after subjecting to such varying environmental conditions as would tend to produce spontaneous ignition or variation in sensitivity of an explosive)	1000
			2.4 Ignition characteristics	1000
			(Behaviour on ignition, liability to spontaneous ignition, behaviour on ignition in bulk)	
			2.5 Mechanical Sensitivity to	
			2.5.1 Friction	1500
			2.5.2 Impact	1500
			2.6 Air Gap Sensitivity	2000
			2.7 Continuity of detonation	2000
			2.8 Velocity of detonation	2000
			2.9 Cap sensitivity	1500
			2.10 Booster sensitivity	2000
			2.11 Strength by ballistic Mortar	5000
			2.12 Any additional test as per BIS specification	500
3	Nitro-glycerine Explosives	3	3.1 Physical properties	
			3.1.1 Physical examination (examination of dimensions, markings and nature of inner package)	200
			3.1.2 Heat test (testing of stability of explosives at specified temperature)	500
			3.1.3 Density.	300

1	2	3	4	5
				3.1.4 Consistency (examination of quality of gel). 500
				3.1.5 Exudation 500
				3.1.6 Tendency to absorb moisture 500
				3.2 Chemical analysis of composition 5000
				3.3 Stability Test 1000 (Determination of stability after subjecting to such varying environmental conditions as would tend to produce spontaneous ignition or variation in sensitivity of an explosive)
				3.4 Ignition characteristics 1000 (Behaviour on ignition, liability to spontaneous ignition, behaviour on ignition in bulk)
				3.5 Mechanical Sensitivity to
				3.5.1 Friction 1500
				3.5.2 Impact 1500
				3.6 Air Gap Sensitivity 2000
				3.7 Continuity of Detonation 2000
				3.8 Velocity of Detonation 2000
				3.9 Cap Sensitivity 1500
				3.10 Strength by Ballistic Mortar 5000
				3.11 Freezing and Thawing Test 1000
				3.12 Liquefaction Test 1000
				3.13 Any additional test as per BIS specification 500
4	Booster or Cast Booster		3(2)	4.1 Physical Properties
				4.1.1 Physical Examination (examination of dimensions, markings and nature of inner package) 200
				4.1.2 Density 300
				4.1.3 Consistency (examination of quality of gel or emulsion or slurry or casting) 500
				4.1.4 Segregation (separation of constituents in transport) 500
				4.1.5 Behaviour on low and high temperature 1000
				4.1.6 Tendency to absorb moisture 500
				4.1.7 Melting point (for cast booster) 200
				4.2 Chemical analysis of composition 3000
				4.3 Stability Test 1000 (Determination of stability after subjecting to such varying environmental conditions as would tend to produce spontaneous ignition or variation in sensitivity of an explosive)
				4.4 Ignition characteristics 1000

1	2	3	4	5	
				(Behaviour on ignition, liability to spontaneous ignition, behaviour on ignition in bulk)	1000
				4.5 Mechanical Sensitivity to	
				4.5.1 Friction	1500
				4.5.2 Impact	1500
				4.6 Determination of strength by ballistic mortar	5000
				4.7 Cap Sensitivity	1500
				4.8 Performance Test	1500
				4.9 Any additional test as per BIS specification	500
5	Safety fuse or Micro cord fuse	6(1)		5.1 Physical Properties (dimensions, smoothness etc)	200
				5.2 Chemical analysis of composition of core.	500
				5.3 Stability Test (Determination of stability after subjecting to such varying environmental conditions as would tend to produce spontaneous ignition or variation in sensitivity of an explosive)	500
				5.4 Burning Rate	200
				5.5 Water Immersion Test	200
				5.6 Lateral Transmission Test	500
				5.7 Any additional test as per BIS specification	500
6	Detonating Fuse	6(2)		6.1 Physical Properties (dimensions, smoothness, finishing, inspection of foreign material, pinholes etc).	200
				6.2 Chemical analysis of composition	1000
				6.3 Stability Test (Determination of stability after subjecting to such varying environmental conditions as would tend to produce spontaneous ignition or variation in sensitivity of an explosive)	1000
				6.4 Flexibility Test at Low and High Temperature	500
				6.5 Water proofness Test	1000
				6.6 Velocity of Detonation	2000
				6.7 Transmission of detonation	1000
				6.8 Determination of Core load	1000
				6.9 Breaking load test	1000
				6.10 Any additional test as per BIS specification	500
7.	NONEL (Shock Tube)	6(2)		7.1 Physical examination (dimensions, finishing, pinholes etc)	200
				7.2 Detonator sensitivity test	1000
				7.3 Detonating fuse sensitivity test	1000
				7.4 Series test	1000

1	2	3	4	5
				7.5 Parallel test 1000
				7.6 Kninck and Knot test 1000
				7.7 180° bend test 1000
				7.8 Side initiation test
				7.8.1 with another nonel tube 500
				7.8.2 with detonating fuse 500
				7.9 Tensile strength test 1000
				7.10 Delay timings test
				7.10.1 surface trunk line 500
				7.10.2 down the hole line 500
				7.10.3 velocity of detonation 2000
				7.11 Any additional test as per BIS specification 500

Sr. No.	Name/Type of explosive	Class/Div	Tests to be conducted	Ordinary detonator	Electric detonator	Delay detonator
8.	Detonator	6(3)	8.1 Physical Examination (Dimensions, Finishing etc.)	200	200	200
			8.2 Water Resistance	--	500	500
			8.3 Drop Test	500	500	500
			8.4 Snatch Test	--	500	500
			8.5 Vibration Test	500	500	500
			8.6 Strength Test	2000	2000	2000
			8.7 Electric Resistance	--	500	500
			8.8 No Fire Current Test	--	1000	1000
			8.9 Delay Time Test	--	--	1000
			8.10 Minimum Series Firing Current Test	--	1000	1000
			8.11 Any additional test as per BIS specification	500	500	500
9.	Fireworks	7(2)	9.1 Test for Sound level			200
		7(3)				
		or	9.2 All other test (physical, chemical, performance etc.)			250
		7(4)				(consolidated)

D. The following fees shall be payable for testing of packages of explosives in the Departmental Testing Station

Sl No.	Tests to be conducted	Fees (in rupees)
1	2	3
1.	Bursting Strength of Paper or Paper Board	325
2.	Burst Factor	400
3.	Compression Strength	650
4.	Drop Test	650
5.	Exudation Test (For Bitumen / Pitch Coal tar impregnated Paper)	350

1	2	3
6.	Grammage of Paper	300
	Grammage for 3 Ply	350
	Grammage for 5 Ply	400
	Grammage for 7 Ply	550
7.	Inclined Impact Test	550
8.	Observations on CFB Box Style, No. of Plies, No. of Joints and external defects	325
9.	Dimension of carton / box, per dimension	300
10.	Puncture Resistance	325
11.	Rain Test	550
12.	Scuff Proofness	400
13.	Stack Load Test	550
14.	Cobb Test	350
15.	Studies on the effect of humidity and temperature on filled (dummy) package	5000
16.	Tensile Strength and % elongation for Paper and paper board	400
17.	Tear Factor	400
18.	Tests as per IMDG Code	
	1. IMDG Testing(drop test and stack load test)	2350
	2. Dimensions (3)	600
	3. Bursting Strength	325
	4. Cobb Test	350
	5. Scuff Proof ness Test	400
19.	Tests as per UN Recommendations on Transport of Dangerous Goods for classification	
	Series -1 and 2	
	1. UN Gap test	5,000
	2. Koenen test	5,000
	3. Time/Pressure test	5,000
	4. Internal ignition test	5,000
	Series- 3	
	1. Impact sensitivity test	5,000
	2. Friction sensitivity test	5,000
	3. Thermal stability test	20,000
	4. Small scale burning test	5,000
	Series-4	
	1. Thermal Stability Test at 75°C	20,000
	2. Drop Test	10,000
	Series-5	
	1. Cap sensitivity test	5,000
	2. Deflagration to detonation test	10,000
	3. External fire test for Division 1.5	45,000
	Series - 6	
	1. Single Package Test	10,000
	2. Stack Test	10,000
	3. External Fire (Bonfire) Test	45,000

Schedule -V
(See rule 113)

Part-1

APPLICATION FORMS

Form AE-1

(See rule 113 of the Explosives Rules, 2008)

Application for approval or grant or amendment or transfer of licence for manufacture of explosives

I,.....on behalf of.....apply for approval or grant or amendment⁽¹⁾ of licence for the following purpose.

1. Purpose: (Write the purpose corresponding to particular article as per Schedule IV, Part 1)

.....
.....
.....

2. Name: I require licence in the following name and postal address:

(a) Name in which licence is required
to be granted (see notes below)

(b) Status⁽¹⁾

(c) Age⁽²⁾

(d) Postal address:

.....
..... City
District..... State..... Pin Code.....
Police Station..... Railway Station / Steamer Ghat.....
Phone..... E-mail..... Fax.....

3. The proposed premises are situated at the following address:

.....
..... Survey number City
District..... State..... Pin Code.....
Police Station..... Railway Station / Steamer Ghat.....
Phone..... E-mail..... Fax.....

4. Qualifications and experience of applicant
and the technical personnel employed by him.
(Give individual details and attach separate
sheet if required)

5. Explosives proposed to be manufactured
(a) Class
(b) Division (if any)
(c) Name and description
(d) UN Classification and number
(e) Annual capacity of the manufacturing plant
(f) Quantity of explosives present at any one time in
each shed of the manufacturing plant
(g) Quantity of explosives proposed to be manufactured
in one day
(h) Details of BMD vehicles approved (in case of SME Plant)
(i) Details of amendment proposed or additional
information, if any

6 Has the applicant been convicted under any offence
or ordered to execute bond under Chapter VIII of
Code of Criminal Procedure, 1973, during the last
10 years. If yes, please give details.

- 7 (a) particulars of other licenses under
 Explosives Act, 1884, if any held by
 the applicant during the last 10 years Yes.....No.....
 (b) was any licence cancelled or not renewed?
 (c) If yes, give details

I hereby certify that the above particulars given by me are correct.

Date.....

Signature of applicant.....
 (Authorised person in case of a Company)
 Full Name.....
 Address.....

Notes:

Please see the rule for the purpose and documents to be enclosed

(1) In case where application is made by a person other than an individual, the names and addresses of the occupier as per rule 2 and directors or partners or members, as the case may be, and specimen signatures of authorised person to be attached.

(2) Passport size photographs of the occupier to be attached.

(3) Any change in the above information should be immediately communicated to the licensing authority and authority renewing the licence.

(4) Age to be given in case the applicant is an individual.

Statutory Warning: Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

Form AE-2

(See rule 113 of the Explosives Rules, 2008)

Application for approval or grant or amendment or transfer of licence to possess gunpowder not exceeding 15 kilogrammes at any one time for manufacture of adirverttus and possession of adirverttus not exceeding 200 in number at any one time.

I,on behalf of, apply for grant of licence/amendment of licence No..... to possess gunpowder for manufacture of adirverttus and possession of adirverttus

1. Name in which licence is required to be granted. (see notes below)

2. Status:(Individual, Company or Society)

3. Age (see notes below) :

4. Postal Address :

.....
City.....

District.....State.....Pin code.....

Police Station..... Railway Station / Steamer Ghat.....

Phone.....E-mail.....Fax.....

5. Qualifications and experience of the applicant and the technical personnel employed by him (Give individual details and attach separate sheet if required)

6. Situation of the Premises:

.....
Survey numberCity.....

District.....State.....Pin code.....

Police Station..... Railway Station / Steamer Ghat.....

Phone.....E-mail.....Fax.....

6.(a) Quantity of gunpowder proposed to be possessed at any one time.....

(b) Quantity of adirverttus proposed to be manufactured and possessed at any one time.....

: I hereby certify that the above particulars given by me are correct.

Date.....

Signature of applicant.....

(Authorised person in case of a Company)

Full Name.....

Address.....

Notes:

Please see the rule for the purpose and documents to be enclosed

(1) In case where application is made by a person other than an individual, the names and addresses of the occupier as per rule 2 and directors or partners or members, as the case may be, and specimen signatures of authorised person to be attached.

(2) Passport size photographs of the occupier to be attached.

(3) Any change in the above information should be immediately communicated to the licensing authority and authority renewing the licence.

(4) Age to be given in case the applicant is an individual.

Statutory Warning: Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

Form AE-3

(See rule 113 of the Explosives Rules, 2008)

Application for approval or grant or amendment or transfer of licence for possession and sale of explosives; for possession and use of explosives; or for possession of fireworks or safety fuse in a store house

I.....on behalf of.....apply for approval or grant or amendment⁽¹⁾ of licence for the following purpose.

1. Purpose: (Write the purpose corresponding to particular article as per Schedule IV, Part 1)

.....

2. Name: I require licence in the following name and postal address:

(a) Name in which licence is required
 to be granted (see notes below)

(b) Status⁽¹⁾

(c) Age⁽²⁾

(d) Postal address:

.....

District.....State.....Pin code.....City.....

Police Station..... Railway Station / Steamer Ghat.....

Phone.....E-mail.....Fax.....

3. The proposed premises are situated at the following address:

.....

District.....State.....Pin code.....Survey number.....City.....

Police Station..... Railway Station / Steamer Ghat.....

Phone.....E-mail.....Fax.....

4. Qualifications and experience of applicant
 And the technical personnel employed by him.
 (Give individual details and attach separate
 sheet if required)

5. (a) Explosives proposed to be possessed and sold:*

Name and Description	Class	Division if any	Quantity	
			at any one time	In one month
i.				
ii.				
iii.				
iv.				
v.				
vi.				

- (b) Are the premises attached to a factory licensed to manufacture explosives?
If so, please give the licence number

6. (a) Explosives proposed to be possessed and used* -

Name and Description	Class	Division if any	Quantity		
			To be possessed at any one time	To be used per day	To be used in one month
i.					
ii.					
iii.					
iv.					
v.					
vi.					

- (b) Details of site where explosives will be used

- (c) Whether the site is coming under the Mines Act, 1952:.....

(If yes, documentary evidence to be submitted ; if not, particulars of proposed activity, documentary evidence and shot firer employed to be furnished)

- (d) List of documents attached with reference to clause (c) above

- (i)...
(ii)...
(iii)...

- (e) Distance of site where the explosives will be used from the storage premises mentioned in item 6

- (f) Mode of transport of explosives

- (g) Licence particulars of road van, if used

7. Has the applicant been convicted under any offence or ordered to execute bond under Chapter VIII of Code of Criminal Procedure, 1973, during the last 10 years. If yes, please give details.

8. (a) particulars of other licenses under Explosives Act, 1884, if any held by the applicant during the last 10 years

- (b) was any licence cancelled or not renewed?Yes.....No.....

- (c) If yes, give details

I hereby certify that the above particulars given by me are correct.

Date.....

Signature of applicant.....
(Authorised person in case of a Company)
Full Name
Address

*~~strikeout inapplicable portion~~

Notes:

Please see the rule for the purpose and documents to be enclosed

(1) In case where application is made by a person other than an individual, the names and addresses of the occupier as per rule 2 and directors or partners or members, as the case may be, and specimen signatures of authorised person to be attached.

(2) Passport size photographs of the occupier to be attached.

(3) Any change in the above information should be immediately communicated to the licensing authority and authority renewing the licence.

(4) Age to be given in case the applicant is an individual.

Statutory Warning: Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

Form AE-4

(See rule 113 of the Explosives Rules, 2008)

Application for approval or grant or amendment or transfer of licence for tractor compressor

I,.....on behalf of.....apply for approval or grant or amendment⁽¹⁾ of licence for the following purpose.

1. Purpose: (Write the purpose corresponding to particular article as per Schedule IV, Part 1)

.....

2. Name: I require licence in the following name and postal address:

(a) Name in which licence is required
to be granted (see notes below)

(b) Status⁽¹⁾

(c) Age⁽²⁾

(d) Postal address:

.....

..... City.....
District..... State..... Pin code.....

Police Station..... Railway Station/ Steamer Ghat.....

Phone..... E-mail..... Fax.....

3. Qualifications and experience of applicant
and particulars of shot firer employed by him.
(Give individual details and attach separate sheet if required)

5. Experience of the applicant in handling:
& blasting of explosives

6. Address of the premises where the :
compressor mounted motor truck or tractor
is to be normally parked when not in use.

7. Particulars of the area where the :
compressor mounted motor truck or
tractor is to be used for well sinking purpose.

8. Explosives to be possessed and transported—

	Max. Capacity Permitted
(i) Class 2 and/or Class 3 explosiveskilogrammes.	25 kilogrammes
(ii) Detonators Ordinary or Electricnumbers	200 numbers
(iii) Detonating fuse meters	100 meters.
(iv) Safety fuse meters.	200 mtrs.

9. Description of the compressor mounted motor truck or tractor of the applicant -
 Make :
 Registration No. :
 Engine No. :
 Chassis No. :
 Description of other fittings on the vehicle :
10. Has the applicant been convicted under any offence
 Or ordered to execute bond under Chapter VIII of
 Code of Criminal Procedure, 1973, during the last
 10 years. If yes, please give details.
11. (a) particulars of other licenses under
 Explosives Act, 1884, if any held by
 the applicant during the last 10 years Yes.....No.....
 (b) was any licence cancelled or not renewed?
 (c) If yes, give details

I hereby certify that the above particulars given by me are correct.

Date.....

Signature of applicant.....

(Authorised person in case of a Company)

Full Name

Address

Notes :

Please see the rule for the purpose and documents to be enclosed

- (1) In case where application is made by a person other than an individual, the names and addresses of the occupier as per rule 2 and directors or partners or members, as the case may be, and specimen signatures of authorised person to be attached.
- (2) Passport size photographs of the occupier to be attached.
- (5) Any change in the above information should be immediately communicated to the licensing authority and authority renewing the licence.
- (4) Age to be given in case the applicant is an individual.

Statutory Warning: Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

Form AE-5

(See rule 113 of the Explosives Rules, 2008)

Application for approval or grant or amendment or transfer of licence in Form LE-5 as per article 5(a) to (f) of Part 1 of Schedule IV

I,.....on behalf of.....apply for approval or grant or amendment⁽¹⁾ of licence for the following purpose.

1. Purpose: (Write the purpose corresponding to particular article as per Schedule IV, Part 1)

.....

2. Name: I require licence in the following name and postal address :

- (a) Name in which licence is required
 to be granted (see notes below)

(b) Status⁽¹⁾(c) Age⁽²⁾

(d) Postal address :

.....
 City.....
 District.....State.....Pincode.....
 Police Station..... Railway Station / Steamer Ghat.....
 Phone.....E-mail.....Fax.....

3. The proposed premises are situated at the following address :

.....
 Survey number.....City.....District.....State.....
 Pin code..... Police Station..... Railway Station / Steamer Ghat.....
 Phone.....E-mail.....Fax.....

4. Explosives proposed to be possessed :

Name and Description	Class	Division if any	Quantity at any one time
i.			
ii.			
iii.			

5. If the explosives are to be used, furnish the particulars related to the purpose of use.....

6. Has the applicant been convicted under any offence.....
 or ordered to execute bond under Chapter VIII of
 Code of Criminal Procedure, 1973, during the last
 10 years. If yes, please give details.

7. (a) Particulars of other licenses under
 Explosives Act, 1884, if any held by
 the applicant during the last 10 years Yes.....No.....
 (b) was any licence cancelled or not renewed?
 (c) If yes, give details

I hereby certify that the above particulars given by me are correct.

Date..... Signature of applicant.....
 (Authorised person in case of a Company)
 Full Name.....
 Address.....

Notes:

Please see the rule for the purpose and documents to be enclosed

- (1) In case where application is made by a person other than an individual, the names and addresses of the occupier as per rule 2 and directors or partners or members, as the case may be, and specimen signatures of authorised person to be attached.
- (2) Passport size photographs of the occupier to be attached.
- (3) Any change in the above information should be immediately communicated to the licensing authority and authority renewing the licence.
- (4) Age to be given in case the applicant is an individual.

Statutory Warning: Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

Form AE-6

(See rule 113 of the Explosives Rules, 2008)

Application for approval or grant of licence for public display of fireworks

I,.....on behalf of.....apply for approval or grant or amendment⁽¹⁾ of licence for the following purpose.

1. Purpose: (Write the purpose corresponding to particular article as per Schedule IV, Part 1)

.....

2. Name: I require licence in the following name and postal address:

(a) Name in which licence is required
 to be granted (see notes below)

(b) Status⁽¹⁾

(c) Age⁽²⁾

(d) Postal address.....City.....

District.....State.....Pin code.....

Police Station.....Railway Station / Steamer Ghat.....

Phone.....E-mail.....Fax.....

3. The proposed premises are situated at the following address:

.....
 Survey number.....City.....District.....State.....

Pin code.....

Police Station.....Railway Station / Steamer Ghat.....

Phone.....E-mail.....Fax.....

4. Qualifications and experience of applicant

And the technical personnel employed by him.

(Give individual details and attach separate

sheet if required)

5. Name, qualification and experience of the persons

supervising the display

6. Description and quantity of fireworks to be used

7. (a) Licensee from whom the fireworks will be obtained

Name

Address

Particulars of licence (licence number and form, issuing authority and validity)

.....

(b) Location of the place where

the fireworks will be stored prior to display

8. (a) Description and quantity of fireworks to be displayed

(b) Date and time of display

(c) Location of the place where the display will be held

9. Has the applicant been convicted under any offence

Or ordered to execute bond under Chapter VIII of

Code of Criminal Procedure, 1973, during the last

10 years. If yes, please give details.

10. (a) particulars of other licenses under

Explosives Act, 1884, if any held by

the applicant during the last 10 years Yes.....No.....

(b) was any licence cancelled or not renewed?

(c) If yes, give details

I hereby certify that the above particulars given by me are correct.

Date.....

Signature of applicant.....

(Authorised person in case of a Company)

Full Name.....

Address.....

Notes :

Please see the rule for the purpose and documents to be enclosed

(1) In case where application is made by a person other than an individual, the names and addresses of the occupier as per rule 2 and directors or partners or members, as the case may be, and specimen signatures of authorised person to be attached.

(2) Passport size photographs of the occupier to be attached.

(3) Any change in the above information should be immediately communicated to the licensing authority and authority renewing the licence.

(4) Age to be given in case the applicant is an individual.

Statutory Warning: Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

Form AE-7

(See rule 113 of the Explosives Rules, 2008)

Application for approval or grant or amendment or transfer of licence for transport of explosives in road van

I,.....on behalf of.....apply for approval or grant or amendment⁽¹⁾ of licence for the following purpose.

1. Purpose: (Write the purpose corresponding to particular article as per Schedule IV, Part 1)

.....
.....
.....

2. Name: I require licence in the following name and postal address:

(a) Name in which licence is required

to be granted (see notes below)

(b) Status⁽¹⁾

(c) Age⁽²⁾

(d) Postal address:

.....
.....City.....District.....State.....Pin code.....

Police Station.....Railway Station/Steamer Ghat.....

Phone.....E-mail.....Fax.....

3. Address of the premises where the vehicle is to be normally stationed

4. Kinds and quantities of explosives to be carried

5. Places (states or districts) where the van will normally ply

6. Description of vehicle

Make

Registration No.

Engine No.

Chassis No.

Gross vehicle weightkilogrammes

Unladen weightkilogrammes

7. Description of other fittings on the vehicle

8. Carrying capacity permitted by Regional Transport Authority
9. Has the applicant been convicted under any offence
Or ordered to execute bond under Chapter VIII of
Code of Criminal Procedure, 1973, during the last
10 years. If yes, please give details.
10. (a) Particulars of other licenses under
Explosives Act, 1884, if any held by
the applicant during the last 10 years Yes.....No.....
(b) was any licence cancelled or not renewed?
(c) If yes, give details

I hereby certify that the above particulars given by me are correct.

Date.....

Signature of applicant.....
(Authorised person in case of a Company)
Full Name
Address

Notes:

Please see the rule for the purpose and documents to be enclosed

(1) In case where application is made by a person other than an individual, the names and addresses of the occupier as per rule 2 and directors or partners or members, as the case may be, and specimen signatures of authorised person to be attached.

(2) Passport size photographs of the occupier to be attached.

(3) Any change in the above information should be immediately communicated to the licensing authority and authority renewing the licence.

(4) Age to be given in case the applicant is an individual.

Statutory Warning: Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

Form AE-8

(See rule 113 of the Explosives Rules, 2008)

Application for approval or grant of licence for import or export of explosives

I,.....on behalf of.....apply for approval or grant or amendment (1) of licence for the following purpose.

1. Purpose: (Write the purpose corresponding to particular article as per Schedule IV, Part 1)

.....
.....

2. Name: I require licence in the following name and postal address:

(a) Name in which licence is required
to be granted (see notes below)

(b) Status⁽¹⁾

(c) Age⁽²⁾

(d) Postal address:

.....
.....City.....

District.....State.....Pin code.....

Police Station.....Railway Station/Steamer Ghat.....

Phone.....E-mail.....Fax.....

3(a). **(In case of Import)** Explosives proposed to be imported at a time

(i) Name & Description	Class	Division, if any	Quantity
------------------------	-------	------------------	----------

- (ii) Are the explosives to be imported authorised explosives Yes.....No.....
- (iii) Name and address of the manufacturer of explosives to be imported.....
- (iv) Licence particulars of the premises where explosives will be stored :
- (v) Port or place of import
- (vi) Mode of Import
- 3.(b) (**In case of Export**) Quantity of explosives to be exported
- (i) Name & Description Class Division, if any Quantity
- (ii) Name and address of consignee
- (iii) Place or port from which explosives will be exported
- (iv) Name of the ship carrying explosives and likely date of sailing.....
- (v) Mode of import
- (vi) Quantity of each explosives to be loaded on the ship
- 4. Has the applicant been convicted under any offence or ordered to execute bond under Chapter VIII of Code of Criminal Procedure, 1973, during the last 10 years. If yes, please give details.
- 5. (a) particulars of other licenses under Explosives Act, 1884, if any held by the applicant during the last 10 years Yes..... No.....
- (b) was any licence cancelled or not renewed?
- (c) If yes, give details

I hereby certify that the above particulars given by me are correct.

Date.....

Signature of applicant.....
 (Authorised person in case of a Company)
 Full Name

Address

Notes :

Please see the rule for the purpose and documents to be enclosed

- (1) In case where application is made by a person other than an individual, the names and addresses of the occupier as per rule 2 and directors or partners or members, as the case may be, and specimen signatures of authorised person to be attached.
- (2) Passport size photographs of the occupier to be attached.
- (3) Any change in the above information should be immediately communicated to the licensing authority and authority renewing the licence.
- (4) Age to be given in case the applicant is an individual.

Statutory Warning : Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

Form AE-9

(See rule 113 of the Explosives Rules, 2008)

Application for grant or amendment or transfer of licence in Form LE-9(SPECIAL)

I,.....on behalf of.....apply for approval or grant or amendment⁽¹⁾ of licence for the following purpose.

1 Purpose: (Write the purpose corresponding to particular article as per Schedule IV, Part 1)

.....

2. Name: I require licence in the following name and postal address:

(a) Name in which licence is required

to be granted (see notes below)

(b) Status⁽¹⁾

(c) Age⁽²⁾

(d) Postal address:

.....
..... City

District.....State.....Pin code.....

Police Station..... Railway Station / Steamer Ghat.....

Phone.....E-mail.....Fax.....

3. The proposed premises are situated at the following address:

.....
.....Survey number.....City

District.....State.....Pin code.....

Police Station..... Railway Station / Steamer Ghat.....

Phone.....E-mail.....Fax.....

4. Qualifications and experience of applicant
and the technical personnel employed by him.
(Give individual details and attach separate
sheet if required)

5. Explosives proposed to be manufactured or possessed
(a) Class
(b) Division, (if any)
(c) Name and description
(d) UN Classification and number
(e) Annual capacity of the manufacturing plant
(f) Quantity of explosives present at any one time in
each shed of the manufacturing plant
(g) Quantity of explosives proposed to be manufactured
in one day
(h) Details of amendment proposed or additional
information, if any

6. Has the applicant been convicted under any offence
or ordered to execute bond under Chapter VIII of
Code of Criminal Procedure, 1973, during the last
10 years. If yes, please give details.

7. (a) Particulars of other licenses under
Explosives Act, 1884, if any held by
the applicant during the last 10 years Yes.....No.....
(d) was any licence cancelled or not renewed?
(e) If yes, give details

I hereby certify that the above particulars given by me are correct.

Date.....

Signature of applicant.....

(Authorised person in case of a Company)

Full Name

Address

Notes:

Please see the rule for the purpose and documents to be enclosed

(1) In case where application is made by a person other than an individual, the names and addresses of the occupier as per rule 2 and directors or partners or members, as the case may be, and specimen signatures of authorised person to be attached.

(2) Passport size photographs of the occupier to be attached.

(3) Any change in the above information should be immediately communicated to the licensing authority and authority renewing the licence.

(4) Age to be given in case the applicant is an individual.

Statutory Warning: Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

Form AE-10

(See rule 113 of the Explosives Rules, 2008)

Application for grant or amendment of Shot firer's certificate to carry out blasting of explosives in areas not coming under Mines Act, 1952.

I,..... apply for approval or grant or amendment⁽¹⁾ of Shot firer's certificate

1. (a) Name in which certificate is required

to be granted

(b) Age

(c) Postal address:

.....City.....
District.....State.....Pin code.....

Police Station..... Railway Station / Steamer Ghat.....

Phone.....E-mail.....Fax.....

(d) Residential address:

.....City.....
District.....State.....Pin code.....

Police Station..... Railway Station / Steamer Ghat.....

Phone.....E-mail.....Fax.....

(e) Whether the applicant is employed; if yes, name and address of the employer.....

2. Qualifications and experience of applicant

(attach documentary evidence)

3. Field of specialisation

4. Particulars of no objection certificate. number.....dated..... issued by

5. Particular of category and type for which certificate is required (see note below):

6. I certify that

(i) the above particulars are true and correct.

(ii) I am aware that permit to conduct blasting operation is required to be obtained by me from the local authority before conducting blasting.

(iii) I am aware that if explosives are illegally transferred by me to any unauthorised person(s), it may lead to terrorist activity for which I shall commit a punishable offence.

(iv) Annoucement before blasting and after sunrise and before sunset.

Date.....

.....
(Signature of applicant)

Note : (1) Please enclose certified copies of certificates showing Date of Birth, Educational qualifications, experience and **medical fitness certificate**.

(2) Category and type of blasting as per rule 107 :

Class	Category	Type of blasting permitted
A	Unlimited	All types of blasting
B	General aboveground	All phases of aboveground blasting operation
C	General underground	All phases of underground blasting operation
D	Demolition	All phases of blasting in demolition projects
E	Seismic	All phases of blasting in seismic prospecting or production
F	Agricultural	All phase of blasting in agricultural and well sinking
G	Special	Blasting for special purpose not covered under the above categories

Statutory Warning : Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

.....

Form AE-11

(See rule 113 of the Explosives Rules, 2008)

Application for grant or amendment of foreman's certificate to supervise manufacture of fireworks or safety fuse

I, hereby apply for a Foreman's certificate to supervise manufacture of fireworks / safety fuse (strike off which is not relevant).

The necessary particulars are given below and required documents are enclosed.

- Name of the Applicant in full :
- Age of the Applicant :
- Father's Name :
- (a) Postal Address :
.....
..... City
District State Pin code
Police Station Railway Station/Steamer Ghat
Phone E-mail Fax
(b) Residential address :
.....
Survey number City District State
Pincode
Police Station Railway Station/Steamer Ghat
Phone E-mail Fax
- Qualifications and experience of the applicant
- Field of Specialisation
- (a) Name and address of the factory where the applicant has acquired experience

(b) Particulars of process or operation in which the applicant has gained experience
.....
- (a) Name and address of the factory where the applicant is working at present
(b) Capacity in which the applicant is working at present
- Any other information

I certify that the above particulars are true and correct.

.....
Signature of applicant

Date

Place

NOTE : Please attach the following with the application :

- Two copies of pass-port size photograph.
- Experience certificate.

- (3) Certificate of age proof.
- (4) Medical certificate stating that the applicant is not handicapped and having good health.

Statutory Warning : Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

.....

Form AE-12

(See rule 113 of the Explosives Rules, 2008)

Form of application for grant of no objection certificate under the Explosives Rules, 2008

To

(Designation and address of the no objection certificate issuing authority)

Sub : Application for grant of no objection certificate under the Explosives Rules, 2008.

I,.....on behalf of.....apply for no objection certificate under the Explosives Rules, 2008 required for grant of licence for the following purpose.

1. Purpose : (Write the purpose corresponding to particular article as per Schedule IV, Part 1)

.....
.....
.....

2. (a) Name in which no objection certificate and licence is required (see notes below):

.....

(b) Age

(c) Postal address:

.....

.....City.....

District.....State.....Pin code.....

Police Station..... Railway Station / Steamer Ghat.....

Phone.....E-mail.....Fax.....

3. Situation of the premises : The proposed premises are situated at the following address :

.....

Survey number.....City.....District.....State.....Pin code.....

Police Station..... Railway Station / Steamer Ghat.....

Phone.....E-mail.....Fax.....

4. Quantity of Explosives proposed to be manufactured/possessed for the purpose stated at serial No. 1 above :

	Name and Description	Class	Division if any	Quantity	
				at any one time	In one month
i.					
ii.					
iii.					
iv.					
v.					
vi.					

5. Details of site where explosives will be used and distance of site of use from the storage premises **(in case of licence for use)**

6. Details of explosives road van which will be used for transportation of explosives (in case of no objection certificate for road van)

7. Additional information:

(i) I or We have not been convicted under any offence or ordered to execute bond under Chapter VIII of Code of Criminal Procedure, 1973, during the last 10 years (If yes, please give details).

(ii) Particulars of other licenses: I / We possess under Explosives Act, 1884 (Note: Please write the licence no(s), if any)

(iii) I/We have obtained approval as required under rule 101 from the competent authority: (Note: Please enclose the approval letter, approved drawing(s), other enclosures, if any)

(iv) Any other relevant information:

I/We hereby certify that the above particulars given by me/us are correct, nothing therein has been concealed and there is no title dispute pertaining to the site of the proposed premises.

Therefore no objection certificate may be granted to me /us as per rule 103 of the Explosives Rules, 2008 in format specified in Part 2 of Schedule V of the Explosives Rules, 2008.

I/We enclose the following documents:

Signature of applicant.....
(Authorised person in case of a Company)
Full Name
Address

Date.....

Notes:

Please see the rule for the purpose and documents to be enclosed

- (1) In case where application is made by a person other than an individual, the names and addresses of the occupier as per rule 2 and directors or partners or members, as the case may be, and specimen signatures of authorised person to be attached.
- (2) Passport size photographs of the occupier to be attached.
- (3) Any change in the above information should be immediately communicated to the licensing authority and authority renewing the licence.
- (4) Proof of the status of the company to be attached.
- (5) Age to be given in case the applicant is an individual.

Statutory Warning: Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

Part-2

Format of no objection certificate

(See Rules 102 and 103)

Subject: No objection certificate under the Explosives Rules, 2008

No.....

Date

With reference to the application in Form AE - 12 datedsubmitted by.....and in pursuance of rules 102 and 103 of the Explosives Rules, 2008, there is no objection for granting licence under the Explosives Rules, 2008 to Shri/M/s. _____ of address..... for the following purpose, kinds and quantities of explosives in the premises at Survey No./Gat No./Khasra No....., Village Taluka..... District State..... as shown in the site plan duly endorsed and enclosed herewith.

1. **Purpose** (Note: Please write only one purpose corresponding to one Article No. as stated in Table of purposes and authority in Part 1 of Schedule IV annexed to the Explosives Rules, 2008):

.....

2. **Kinds and quantities of explosives:**

Name of Explosives	Class	Div.	Quantity
(a)			
(b)			

Signature of the no objection certificate issuing authority with his office seal
(District Magistrate or Directorate General of Mines Safety)

Note: The following particulars have been verified/considered while issuing this No Objection Certificate.

- (a) The antecedents of the applicant (in case of individual or proprietary firm) /partners (in case of partnership company) or directors (in case of limited company) or office bearers in case of society or association and also occupier of the premises.
- (b) The lawful possession of the site by the applicant.
- (c) Interest of public.

- (d) Requirement of explosives for use in mines or quarries (possessed by the applicant) or in the area proposed by the licensee have been considered
- (e) Genuineness of purpose

Notes:—

- (1) Genuineness of purpose means relating to manufacture - whether there is need for manufacture of the explosives for lawful constructive use in the area or state or country or for export purpose.
- (2) Verification of antecedents and lawful position of site by applicant as stated in serial Nos. 1 and 2 are not applicable in case of no objection certificate granted by Directorate General of Mines Safety.

.....
Part 3

Forms of licence or certificate

LICENCE FORM LE-1.

[See article 1(a) to (g) of Part 1 of Schedule IV of the Explosives Rules, 2008]

Licence to manufacture:

- (a) fireworks or gunpowder or both not exceeding 15 kilogrammes at any one time;
or
- (b) fireworks or gunpowder or both exceeding 15 kilogrammes but not exceeding 500 kilogrammes at any one time;
or
- (c) fireworks or gunpowder or both exceeding 500 kilogrammes at any one time;
or
- (d) at site, ANFO explosives not exceeding 200 kilogrammes at any one time;
or
- (e) liquid oxygen explosives (LOX);
or
- (f) site mixed explosives (SME);
or
- (g) explosives other than Fireworks, Gunpowder, ANFO, LOX and SME.

Space for
photograph
of the licensee
or occupier
with signature

Licence No.....
Annual Fees Rs.....

1. Licence is hereby granted to:

Name:.....
Postal address:.....
.....City.....
District.....State.....Pin Code.....
Police Station..... Railway Station / Steamer Ghat.....
Phone.....E-mail.....Fax.....

2. Status of licensee:

3. Licence is valid for the following purpose: Manufacture of

.....
.....

4. Licence is valid for the following kinds and quantity of explosives:

(Name, description, Class, Division, sub-division, quantity at any one time and annual capacity) :

Name of explosive	Description	Class, Division, sub-division	Quantity at any one time	Quantity annual capacity [only for licence under article 1(g)]

5. The licensed premises shall conform to the following drawing(s):

Drawing No.dated.....

Drawing No.dated.....

Drawing No.dated.....

6. The licensed premises are situated at following address:

.....Survey No.....City

District.....State.....Pin code.....

Police Station..... Railway Station / Steamer Ghat.....

Phone.....E-mail.....Fax.....

7. The licensed premises consist of following facilities:

8. The licence is granted subject to the provision of Explosives Act 1884 as amended from time to time and the Explosives Rules, 2008 framed there under and the conditions, additional conditions and annexure.

(1) Drawings (showing site, constructional and other details) as stated in serial no. 5 above.

(2) Conditions and Additional Conditions of this licence signed by the licensing authority.

(3) Distance Form

(4) Annexure

9. This licence shall remain valid till 31st day of March ...20.....

This licence is liable to be suspended or revoked for any violation of the Act or rules framed there under or the conditions of this licence as set forth under SET-1 to SET-VI, wherever applicable, referred to in Part 4 of Schedule V or if the licensed premises are not found conforming to the description shown in the plans and annexure attached hereto.

The20.... Signature, Designation and seal of licensing authority

[District Magistrate for article 1(a)]

[Chief Controller of Explosives or Controller of Explosives
authorised by Chief Controller for Articles 1(b) to (g)]

Statutory Warning: Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

FORM LE-2.

Licence to possess Gunpowder not exceeding 15 kilogrammes at any one time for manufacture of adirverttus and possession of adirverttus not exceeding 200 in number at any one time.

(See article 2 of Part 1 of Schedule IV of the Explosives Rules, 2008)

Licence No.....

Annual Fees Rs.....

Space for
photograph
of the licensee
or occupier
with signature

1. Licence is hereby granted to :

Name:

Address:

.....City

District.....State.....Pin Code.....

Police Station..... Railway Station / Steamer Ghat.....

Phone.....E-mail.....Fax.....

2. Status of licensee:

3. Licence is valid for the following purpose :

.....

4. Licence is valid for the following kinds and quantity of explosives:

possession ofkilogrammes of gunpowder at any one time for manufacture of adirverttus and possession of adirverttus not exceeding numbers at any one time.

5. The licensed premises shall conform to the following drawing(s):

Drawing No.dated.....
 Drawing No.dated.....
 Drawing No.dated.....
 Drawing No.dated.....
 Drawing No.dated.....

6. The licensed premises are situated at following address:

.....
Survey NoCity
 District.....State.....Pin Code.....
 Police Station..... Railway Station / Steamer Ghat.....
 Phone.....E-mail.....Fax.....

7. The licensed premises consist of following facilities:

.....

8. The licence is granted subject to the provision of Explosives Act 1884 as amended from time to time and the Explosives Rules, 2008 framed there under and the conditions, additional conditions and annexures:

- (1) Drawings (showing site, constructional and other details) as stated in serial No. 5 above.
- (2) Conditions of this licence signed by the licensing authority.

9. This licence shall remain valid till 31st day of March ...20.....

This licence is liable to be suspended or revoked for any violation of the Act or rules framed thereunder or the conditions of this licence or if the licensed premises are not found conforming to the description shown in the plans and annexure attached hereto.

The.....20....

Signature, Designation and seal of licensing authority
 [District Magistrate]

Statutory Warning: Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

CONDITIONS

- (1) The maximum quantity of gunpowder, which may be kept at any one time on the licensed premises, shall not exceed 15 Kilogrammes.
- (2) The gun powder or adirvettus shall be kept in a storage shed constructed of non-flammable materials in a fireproof box as may be approved by the licensing authority, separated from any other building used for storage of explosives or another licensed premises under this rule or storage of flammable substances or other hazardous material by fire proof wall.
- (3) The total number of tubes for making adirvettus shall be recorded in the licence as licensed tubes.
- (4) The tubes which are pitted or badly rusted, or visibly defective shall not be used.
- (5) Internal diameter of the tubes shall not be less than 40 millimetre and thickness of walls not less than 10 millimetre.
- (6) Not more than 50 grammes of gunpowder shall be used in each tube and no tube shall be filled to more than ¼ its total length.
- (7) "Tamping" of gunpowder in the tubes shall not be done with iron rods. Only wooden implements shall be used.
- (8) The tubes shall be securely mounted and fixed to a log of wood or other suitable base.
- (9) No person under 18 years of age and no person who is in a state of intoxication or of unsound mind or physically handicapped shall be employed in manufacture of adirvettus.
- (10) The tubes shall be produced for inspection before the licensing authority or other authority specified by the licensing authority at the time of grant of licence and thereafter at such intervals as the licensing authority may direct.
- (11) The interior of the storage shed or the box as a case may be and all fittings therein shall be so constructed, covered, or lined, as to prevent the exposure of any iron or steel, or of any hard or gritty surface or the entry, detaching or accumulating of any grit, iron, steel or similar substance.

- (12) Adequate provision shall be made for the ventilation and the interior of the storage shed or box shall be kept scrupulously cleaned.
- (13) The doors of the storage shed or the box shall open outwards, and shall be kept clearly closed or locked except when required to be opened for receipt or issue of explosives or for other necessary purposes.
- (14) All articles or substances of explosive or highly inflammable nature shall be kept at a safe distance from the explosives and from any room or part of a building or fire proof box containing the explosive, and no person entering such room or part of building or opening such safe shall have any iron or steel in his possession or attached to or on his boots or shoes.
- (15) No tools, implements, balance, weights, etc. made of iron or steel shall be kept at any time on the premises.
- (16) The licensee shall maintain records of purchase of gunpowder with supplier's name, address and his licence particulars; and also of daily stock and account of use of gunpowder, adirvettus manufactured and fired and produce the same to the inspecting authority.
- (17) Gun powder purchased on the strength of this licence shall not be sold or transferred to any other person.
- (18) Experienced person shall be engaged for manufacture and firing adirvettus.
- (19) The licensee may manufacture adirvettus by filling in manufacturing shed.
- (20) The total quantity of adirvettus on the licensed premises including the manufacturing shed in which such adaptation or preparation is carried on, shall not exceed the quantity the licensee is authorised to possess.
- (21) No work unconnected with such adaptation, or preparation or manufacture shall be carried on in the said manufacturing shed while such adaptation or preparation or manufacture is being carried on.
- (22) The said manufacturing shed shall be situated at a distance of 18 meters from storage shed.
- (23) The area of firing of adirvettus shall maintain a distance of at least 45 meters from the place of storage shed, manufacturing shed and spectators or devotees. Where the confines of a street or temple precincts do not permit this distance to be observed readily in all directions from the spot where the adirvettus is fired, the person firing the adirvettus shall give prior warning to all persons within a distance of 45 metres that the adirvettus are to be fired and request them to remove themselves to a safe place for shelter. This warning should be conveyed orally as well as by placard in the vernacular language. The licensing authority shall not grant permission to fire adirvettus at a location where the above requirement cannot be complied.
- (24) The licensee and his employees shall be conversant with procedure to be taken during the emergency within the premises.
- (25) Free access to the licensed premises shall be given at all reasonable times to any inspecting or sampling officer and every facility shall be afforded to the officer for ascertaining that the provisions of the Act and these rules and the safety conditions are duly observed.
- (26) If the licensing authority informs in writing, the holder of the licence to execute any repairs or to make any additions or alterations to the licensed premises or machinery, tools or apparatus or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and so necessary for the safety of either on-site or off-site of the premises or persons, the holder of the license shall execute the recommendations and report compliance within the period specified by such authority.
- (27) No chlorate shall be used in the manufacture of adirvettus and in the gun powder.
- (28) Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority.

Signature, Designation and seal of licensing authority
[District Magistrate]

LICENCE FORM LE-3.

[See articles 3(a) to (d) of Part 1 of Schedule IV of the Explosives Rules, 2008]

Licence to :

- (a) possess for use, for agricultural purpose or in small quarry, explosives not exceeding 25 kilogrammes of Class 1, 2 or 3; 1500 numbers detonators; and 1500 metres of Detonating Fuse or Safety Fuse at any one time in a magazine; or
- (b) possess for sale, explosives of Class 1, 2, 3, 4, 5, 6 or 7 in a magazine; or
- (c) possess for use, explosives of Class 1, 2, 3, 4, 5, 6 or 7 in a magazine; or
- (d) possess fireworks not exceeding 5000 kilogrammes or safety fuse not exceeding 50000 metres, in a storehouse, not for sale but for transfer to own licensed shop.

Licence No.....

Annual Fees Rs.

1. Licence is hereby granted to:

Name:

Postal Address: City

District State Pin Code

Police Station Railway Station / Steamer Ghat

Phone E-mail Fax

Space for
photograph
of the licensee
or occupier
with signature

2. Status of licensee:

3. Licence is valid for the following purpose :

.....
.....

4. Licence is valid for the following kinds and quantity of explosives :

(a) Name, Description, Class, Division, Sub-division, Quantity at any one time

.....
.....

(b) Quantity of explosives to be purchased in a calendar month [applicable for licence under article 3(b) and (c)]...

Name, Description, Class, Division, Sub-division, Quantity in a month

.....
.....

5. The licensed premises shall conform to the following drawing(s) :

Drawing No. dated

Drawing No. dated

Drawing No. dated

6. The licensed premises are situated at following address :

.....

..... City

District State Pin code

Police Station Railway Station / Steamer Ghat

Phone E-mail Fax

7. The licensed premises consist of following facilities:

.....
.....
.....

8. The licence is granted subject to the provision of Explosives Act, 1884 as amended from time to time and the Explosives Rules, 2008 framed thereunder and the conditions, additional conditions and the following annexure

(1) Drawings (showing site, constructional and other details) as stated in serial No. 5 above.

(2) Conditions and additional conditions of this licence signed by the licensing authority.

(3) Distance Form

(4) Annexure

9. This licence shall remain valid till 31st day of March ...20.....

This licence is liable to be suspended or revoked for any violation of the Act or rules framed there under or the conditions of this licence as set forth under SET-VII to SET-IX wherever applicable, referred to in Part 4 of Schedule V or if the licensed premises are not found conforming to the description shown in the plans and annexure attached hereto.

The20....

Signature, Designation and seal of licensing authority

[District Magistrate for article 3(a)]

[Chief Controller of Explosives or Controller of

Explosives authorised by Chief Controller for Articles

3(b)-(d)]

Statutory Warning: Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

LICENCE FORM LE-4.

Licence to possess and transport explosives of Class 2 or Class 3 not exceeding 25 kilogrammes, electric or ordinary detonators not exceeding 200 numbers, detonating fuse not exceeding 100 metres and safety fuse not exceeding 200 metres in a compressor mounted motor truck or tractor for use in well sinking.

(See article 4 of Part 1 of Schedule IV of the Explosives Rules, 2008)

Licence No.

Annual Fees Rs.

Space for
photograph
of the licensee
or occupier
with signature

1. Licence is hereby granted to:

Name:

Address:

..... City.....

District..... State..... Pin code..... Police Station.....

Railway Station / Steamer

Ghat..... Phone..... E-Mail..... Fax.....

2 Status of licensee:

3. Licence is valid for the following kinds and quantity of explosives:

(Name, description, Class, Division, sub-division, quantity at any one time).....

.....

.....

4. The licensed premises shall conform to the following drawing(s):

Drawing No.....dated.....

5. Particulars of the Compressor mounted motor truck or tractor:

(a) Registration number

(b) Make and model

6. The licence is granted subject to the provision of Explosives Act, 1884 as amended from time to time and the Explosives Rules, 2008 framed thereunder and the following annexure.

(1) Drawings (showing constructional and other details) as stated in serial no. 4 above.

(2) Conditions of this licence signed by the licensing authority.

7. This licence shall remain valid till 31st day of March ...20.....

This licence is liable to be suspended or revoked for any violation of the Act or rules framed there under or the conditions of this licence or if the licensed premises are not found conforming to the description shown in the plans and annexure attached hereto.

The.....20....

Signature, Designation and seal of Licensing authority
[District Magistrate]

Statutory Warning: Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

Conditions

- (1) The licence shall be valid only for the particular Tractor-Compressor described above.
- (2) The Compressor mounted motor truck or tractor shall conform in all respect to the Specification 5 in Schedule VII of the Explosives Rules, 2008.
- (3) This licence or its authenticated copy shall at all times be kept in the Compressor mounted motor truck or tractor and produced on demand by an inspecting officer.
- (4) The Compressor mounted motor truck or tractor shall not be used for transport of any other inflammable and hazardous material other than that authorised by this licence.
- (5) No smoking, fire, artificial light or any article capable of causing fire shall be allowed on the Compressor mounted motor truck or tractor.
- (6) The Compressor mounted motor truck or tractor especially its compressor fittings like safety valve, limiting pressure switch and pressure gauge shall be maintained in good working condition and checked at least once in a year for correct operation.
- (7) (i) The explosives shall be procured from a licensed magazine and shall be used up in well-sinking carefully and in case of any inordinate delay in completing the work during daytime the same shall be reported to nearest police station.

- (ii) The receipt and use of the explosives shall be recorded in the Record sheet annexed to this licence. The entries shall be signed by the licensee or his authorised agent in respect of explosives procured and used and the entries should be endorsed by the local authority.
- (8) The explosives of Class 2 or 3 and Detonating Fuse class 6, division 2 shall be kept in an wooden box; and Detonators of class 6 division 3 shall be kept in another wooden box. Both the boxes of the type approved by the Chief Controller of Explosives shall be locked and placed inside the two separate steel boxes fixed to the Compressor mounted motor truck or tractor. These outer boxes also shall be locked. Explosives shall neither be primed nor primed explosives shall be kept in the Compressor mounted motor truck or tractor.
- (9) While running the Compressor mounted motor truck or tractor, the locked wooden boxes shall be removed from the vehicle and kept at a secluded place under guard. The two boxes for high explosives and detonators shall be at least kept 2 meters apart and no source of fire and smoking shall be allowed within a distance of 15 meters. The place shall be adequately away from the site of blasting and protected.
- (10) (i) After the drilling of all the holes, the persons engaged in drilling shall retire from the site, and the drilling equipments shall be restored to the Compressor mounted motor truck or tractor.
(ii) The explosives required for blasting the holes shall be kept apart and the rest of the explosives shall be restored to the steel boxes fixed on the Compressor mounted motor truck or tractor and the vehicle shall be driven away.
(iii) The explosives kept apart shall be prepared for blasting by the shot-firer. Sufficient time, not less than 30 minutes in any case, shall be allowed for the drill holes to cool down to ambient temperature. The primed cartridges shall be placed in the drill holes and the connections shall be checked by the shot-firer. The key of the exploder used for blasting by electric detonator shall be kept with the shot firer during charging the holes.
(iv) The firing of the shots shall be carried out by the shot-firer from a safe distance of at least 30 meters under protection in case of electrical firing and in case of firing by safety fuse, sufficient length of fuse shall be used to enable him to move to safe distance from the blasting site.
(v) Before firing the shots, warning by shouting or whistling and by red flags shall be given and the shot-firer shall ensure that no person is present within 100 meters of the blasting site.
- (11) After allowing adequate time, not less than 30 minutes after firing of the shots, the shot-firer shall ensure that all the holes are fired. No other person shall be allowed to the site of blasting before this is checked by the shot-firer.
- (12) The Compressor mounted motor truck or tractor shall not carry any person at any time other than driver and shot-firer having a valid driving licence and a shot-firer's permit respectively.
- (13) The licensee shall inform the nearest police station in advance of the location where blasting is to be carried out for well sinking.
- (14) (i) When not in use in the day or at night, the Compressor mounted motor truck or tractor shall be parked in open place duly guarded maintaining at least 45 meters safe distance all-round. No source of fire or smoking shall be allowed within 15 meters of the vehicle.
(ii) The boxes containing explosives fixed on the Compressor mounted motor truck or tractor shall be protected from sun and rain as far as practicable by covering with a tarpaulin.
(iii) The nearest police station or outpost shall be kept informed of the location where the vehicle is parked at night.
- (15) Any accident and all losses, shortage of stock and thefts of explosives shall be reported without delay to the nearest police station and the licensing authority.
- (16) The licensee and the shot-firer shall be responsible for preparation of charges, the charging of holes and the firing of shots and shall take all precautions against fire and accident involving the explosives.
- (17) For charging or stemming a shot hole, no person shall use an iron or steel tools, scraper, or tamping rod, nor shall forcibly press the explosive into a hole of insufficient size. A tamping rod made entirely of wood shall be used.
- (18) Before exploding any blasting charge, adequate measures shall be taken so as to prevent as far as possible, the projection of fragments of stone by the explosion of the blasting charge.
- (19) No person shall re-bore or tamper a hole that has once been charged or attempt to withdraw a charge either before firing or after a misfire or deepen or tamper with empty holes or sockets left after blasting.
- (20) The licensee of the magazine shall submit at the end of every month a return in Form RE-6 to the District Magistrate, Superintendent or Commissioner of Police in whose jurisdiction the magazine is situated in the proforma prescribed from time to time so as to reach the above authorities by 10th day of the succeeding month.
- (21) The licensee and the employee shall be conversant with procedure to be taken during the emergency within the premises.
- (22) Free access shall be given at all reasonable times to any inspecting or sampling officer and every facility shall be afforded to the officer for ascertaining that the provisions of the Act and these rules and the safety conditions are duly observed.

- (23) If the licensing authority informs in writing, the holder of the licence to carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and so necessary for the safety of either on-site or off-site persons, the holder of the license shall execute the recommendations and report compliance within the period specified by such authority.
- (24) Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority.

Signature, Designation and seal of Licensing authority
[District Magistrate]

Record sheet attached to licence No.....for Compressor mounted motor truck or tractor Registration No.....

RECEIPT OF EXPLOSIVES FROM MAGAZINE

Date	Name of licensee, location and licence number	Quantity received	Signature of the licensee of the magazine or his authorised agent
------	---	-------------------	---

USE OF EXPLOSIVES

Date	Place where used	Number of Holes blasted	Quantity used	Remarks	Signature of occupier of the well where explosives used	Signature of licensee of Compressor mounted motor truck or tractor or the shot-firer	Particulars (number, issuing authority and validity) or the shot-firer's certificate	Endorsement by local authority
------	------------------	-------------------------	---------------	---------	---	--	--	--------------------------------

LICENCE FORM LE-5.

[See article 5(a) to (f) of Part 1 of Schedule IV of the Explosives Rules, 2008]

Licence to

- possess and sell from a shop, at any one time, not exceeding 25 kilogrammes of small-arms nitro- compound; or
- possess and sell from a shop, at any one time, not exceeding 100 kilogrammes of manufactured fireworks of Class 7, Division 2, sub-division 2 and 500 kilograms of Chinese crackers or sparklers; or
- possess and sell from a shop, at any one time, not exceeding 2000 numbers of pyrotechnic device explosives of Class 6 Division 1; or
- possess for use gunpowder not exceeding 5 kilogrammes and safety fuse not exceeding 50 metres in the States of Bihar, West Bengal, Kerala and Tamilnadu; or
- possess for use of small-arms nitro-compound not exceeding 5 kilogrammes in the State of Kerala; or
- possess and sell from a shop manufactured fireworks of Class 7 Division 2 sub-division 2 exceeding 100 kilogrammes but not exceeding 300 kilogrammes, and Chinese Crackers or Sparklers exceeding 500 kilogrammes but not exceeding 1200 kilogrammes

Licence No.

Annual Fees Rs.

Space for photograph of the licensee or occupier with signature

1. Licence is hereby granted to:

Name:
 Postal Address: City
 District State Pin code
 Police Station Railway Station / Steamer Ghat
 Phone E-mail Fax

2. Status of licensee:

3. Licence is valid for the following purpose:

.....

4. Licence is valid for the following kinds and quantity of explosives:

(Name, description, Class, Division, sub-division, quantity at any one time.

5. The licensed premises shall conform to the following drawing(s):

Drawing No. dated
 Drawing No. dated
 Drawing No. dated
 Drawing No. dated
 Drawing No. dated

6. The licensed premises are situated at following address:

Survey No: City
 District State Pin code
 Police Station Railway Station / Steamer Ghat
 Phone E-mail Fax

7. The licensed premises consist of following facilities:

.....

8. The licence is granted subject to the provision of Explosives Act, 1884 as amended from time to time and the Explosives Rules, 2008 framed thereunder and the conditions, and annexures

(1) Drawings (showing site, constructional and other details) as stated in serial no. 5 above.

(2) Conditions of this licence signed by the licensing authority.

9. This licence shall remain valid till 31st day of March 20.....except for temporary licences issued under rule 84 for which the maximum period should be 15 days from the date of issue.

This licence is liable to be suspended or revoked for any violation of the Act or rules framed thereunder or the conditions of this licence as set forth under SET-X to SET-XV, wherever applicable, referred to in Part 4 of Schedule V or if the licensed premises are not found conforming to the description shown in the plans and annexure attached hereto.

The20....

Signature, Designation and seal of licensing authority

[District Magistrate for articles 5(a) to 5(e)]

[Controller of Explosives for article 5(f)]

Statutory Warning: Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

LICENCE FORM LE-6.

(See article 6 of Part 1 of Schedule IV of the Explosives Rules, 2008)

Licence to possess and use fireworks for public display

Licence No.

Annual Fees Rs.

Space for
photograph
of the licensee
or occupier
with signature

1. Licence is hereby granted to :

Name:

Address:

.....City.....

District.....State.....Pincode.....

Police Station..... Railway Station / Steamer Ghat.....

Phone.....E-mail.....Fax.....

2. Status of licensee:

3. Licence is valid for the following purpose:

.....

4. The licensed premises shall conform to the following drawing(s) :

Drawing No.dated.....

Drawing No.dated.....

Drawing No.dated.....(space for signature)

5. The licensed premises are situated at following address :

Survey No. :.....City.....District.....State.....

Pin code.....

Police Station..... Railway Station / Steamer Ghat.....

Phone.....E-mail.....Fax.....

6. The licence is granted subject to the provision of Explosives Act, 1884 as amended from time to time and the Explosives Rules, 2008 framed thereunder and the conditions and the following annexures :

(1) Drawings (showing site and other details) as stated in serial no. 4 above.

(2) Conditions of this licence signed by the licensing authority.

7. This licence shall remain valid till.....day of.....20..... (maximum one month)

This licence is liable to be suspended or revoked for any violation of the Act or rules framed thereunder or the conditions of this licence or if the licensed premises are not found conforming to the description shown in the plans and annexure attached hereto.

The.....20....

Signature, Designation and Seal of licensing authority
[District Magistrate]**Statutory Warning:** Mishandling and misuse of explosives shall constitute serious criminal offence under the law.**Conditions**

- (1) The licensee shall intimate the licensing authority at least seven days in advance before conducting fireworks display :
 - (a) time and place at which the public display is to be held,
 - (b) the types of fireworks to be used in the display,
 - (c) the name, address and licence number of the supplier of fireworks for use in display,
 - (d) names, addresses and experience of persons who will be supervising the display.
- (2) The fireworks shall be stored and displayed only at the places shown in the plan attached with the licence.
- (3) A minimum distance of 100 meter shall be maintained between the spectators and the area where the display is carried out.

- (4) Only authorised fireworks shall be used. Such fireworks shall be purchased directly from persons holding valid licence granted to manufacture such fireworks.
- (5) The fireworks shall be assembled at site for the purpose of display.
- (6) No fireworks shall contain chlorate or prohibited explosives mixture.
- (7) No display of fireworks shall be carried out when the wind velocity exceeds 50 kilometres per hour or the control over spectators has been lost.
- (8) Only minimum persons shall be employed for making and display of fireworks. The site should be constantly supervised and the persons employed shall wear protective clothings, ear defenders, safety glasses and other protective devices.
- (9) Once fireworks have been taken to the site, the site must not be left unattended or unprotected.
- (10) No fireworks shall be ignited inside of or closer than 15 metres of any tent, trailer, canvas shelter of vehicle.
- (11) No fireworks shall be ignited within 250 metres of a hospital, nursing home, schools unless consent from local authorities and the owner or its agent is obtained.
- (12) Adequate fire fighting equipments, facilities and first-aids shall be provided in consultation with the fire service authorities.
- (13) After the display, the wastes and remnants shall be carefully collected, removed from the site and destroyed by burning under supervision of a competent person, taking due precautions.
- (14) The licensee shall follow the provisions of the Act and these rules made thereunder as otherwise applicable.
- (15) No electrical wire shall be allowed within 15 metres of the area where the fireworks are laid down.
- (16) Half the length of the iron mortars used for display shall be buried in the ground. The mortars of the same size shall be grouped and spaced not less than 50 centimetres apart. Groups of different size mortars shall be placed at least 10 metres apart. The mortars or frames shall be securely anchored to the ground.

Note: Mortars made of card board or paper of sufficient strength may be used in case small shell.

- (17) Before starting the display it shall be ensured that the fireworks explode and the debris fall in the safe area.
- (18) No matches, lights or any article of flammable or hazardous nature liable to cause fire or explosion shall be brought or kept in the licensed premises except for firing purpose only.
- (19) No tools, implements etc. made of iron or steel except mortars used for display shall be kept at any time in the premises and no person on the licensed premises shall have any iron or steel in his possession or on his boots or shoes.
- (20) The licensee shall keep records and accounts of all fireworks received, used and stock on hand.
- (21) The licensee shall follow the local bye-laws at the place of storage and display and obtain necessary permission whenever required.
- (22) The kinds and quantities of explosives remaining after the expiry of licence shall be intimated to the licensing authority and the licensee shall abide by the instructions of such authority regarding disposal of explosives.
- (23) If the licensing authority directs the licensee by notice in writing to make any additions or alterations, which, in the opinion of such authority, is considered necessary for the safety, of the premises or of the person working therein or the spectators the licensee shall execute such additions or alterations within such period as may be specified.
- (24) The licensee and the employee shall be conversant with procedure to be taken during the emergency within the premises.
- (25) Free access to the licensed premises shall be given at all reasonable times to any inspecting or sampling officer and every facility shall be provided to the officer for ascertaining that the provisions of the Act, these rules and the conditions are complied with.
- (26) If the licensing authority informs in writing, the holder of the licence to execute any repairs or to make any additions or alterations to the licensed premises or machinery, tools or apparatus or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and so necessary for the safety of either on-site or off-site of the premises or persons, the holder of the license shall execute the recommendations and report compliance within the period specified by such authority.
- (27) Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority.

Signature,
Designation and Seal of licensing authority
[District Magistrate]

LICENCE FORM LE-7.

Licence to transport explosives in a road van
(See article 7 of Part 1 Schedule IV of the Explosives Rules, 2008)

Licence No.
Annual Fees Rs.

Space for
photograph
of the licensee
or occupier
with signature

1. Licence is hereby granted to:

Name:
Address:
..... City
District State Pincode
Police Station Railway Station / Steamer Ghat
Phone E-mail Fax

2. Status of licensee:

3. Particulars of the road van :

- Registration number
- Make and model of vehicle
- Unladen weight
- Maximum laden weight
- Maximum quantity of explosives permitted for transport

4. The licensed premises shall conform to the following drawing(s):

Drawing No. dated

5. The licence is granted subject to the provision of Explosives Act, 1884 as amended from time to time and the Explosives Rules, 2008 framed thereunder and the conditions and the following annexures

- Drawings of the road van as stated in serial no.4 above.
- Conditions signed by the licensing authority.

6. This licence shall remain valid till 31st day of March ...20.....

This licence is liable to be suspended or revoked for any violation of the Act or rules framed thereunder or the conditions of this licence or if the licensed premises are not found conforming to the description shown in the plans and annexure attached hereto.

The20....

Signature, Designation and Seal of licensing authority
[Controller of Explosives]

Statutory Warning : Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

Conditions

- This licence is not transferable to any other explosives van.
- No alterations should be made to the vehicle, its body and other fittings without approval from the licensing authority.
- This licence or its authenticated copy shall at all times be kept in the van and produced on demand by an inspecting officer.
- The road van shall not be used for transport of explosives unless it is in a fit condition and complies with the Explosives Rules, 2008.
- The road van shall not be used for transport of any material other than that authorised by this licence, unless permitted by licensing authority in writing.
- No smoking and no fire or artificial light or any article capable of causing fire shall be allowed on the explosives van.
- The vehicle shall not be used for carrying passenger.
- Road van, while explosives are being loaded or unloaded or transported shall always be under the charge of competent person who shall be experienced in handling of explosives and fully conversant thereunder. Where the vehicle is not driven by the licence holder, a document signed by the licensee naming persons authorised to drive and accompany the vehicle shall be carried in the van and produced on demand to an inspecting officer.

- (9) No explosives unless they are packed in accordance with the Explosives Rules or in a manner specified by the Chief Controller shall be transported in the explosives van.
- (10) Detonators shall not be transported with any other explosives.
- (11) Any breakdown, accident, fire or explosion occurring in or involving the road van, shall be immediately reported to the licensing authority together with a full report of such breakdown, accident, fire or explosion. If such accident, fire or explosion is attended with loss of human life or serious injury to person or property, a report shall also be made immediately to the nearest Police Station.
- (12) The explosives shall be loaded into the van only at the licensed premises of consignor and unloaded from the van at the licensed premises of the consignee.
- (13) The licensee shall maintain account of explosives transported in Form RE-5 and present the same on demand by an inspecting officer.
- (14) The licensee and the employee shall be conversant with procedure to be taken during the emergency within the premises.
- (15) Free access shall be given at all reasonable times to any inspecting or sampling officer and every facility shall be afforded to the officer for ascertaining that the provisions of the Act or these rules and these conditions are duly observed.
- (16) If the licensing authority or a Controller of Explosives informs in writing, the holder of the licence to carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and so necessary for the safety of either on-site or off-site persons, the holder of the licence shall execute the recommendations and report compliance within the period specified by such authority.
- (17) Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority.

Signature, Designation and Seal of licensing authority
[Controller of Explosives]

LICENCE FORM LE-8.

(See article 8 of Part 1 of Schedule IV of the Explosives Rules, 2008)

Licence to import or export explosives otherwise than by land.

Licence No.....
Fees Rs.....

Space for
photograph
of the licensee
or occupier
with signature

1. Licence is hereby granted to
Name:.....
Postal Address:.....
.....City.....
District.....State.....Pin code.....Police Station.....
Railway Station / Steamer Ghat.....Phone.....E mail.....
Fax.....

2. Status of licensee:

3. Licence is valid for the following purpose :

4. Licence is valid for the following kinds and quantity of explosives :

(a) **For import**

Description of explosives and consignor :

Name of explosives Class & Division	Weight in kilogram or number or metres	Number of packages	Consignor's name and address from where explosives will be imported	Licence number of the magazine or store house of the consignee	Port of import	Mode of import

(b) For export

Description of explosives and consignee :

Name of explosives Class & Division	Weight in kilograms or number or metres	Number of packages	Consignee's name and address	Port of export	Mode of export

5. The licence is granted subject to the provision of Explosives Act, 1884 as amended from time to time and the Explosives Rules, 2008 framed thereunder and the conditions and the following annexure :

- (1) Conditions signed by the licensing authority.
- (2) Annexure.

6. This licence shall remain valid till(maximum six months from the date of issue).

This licence is liable to be suspended or revoked for any violation of the Act or rules framed thereunder or the conditions of this licence or if the licensed premises are not found conforming to the description shown in the plans and annexure attached hereto.

The.....20....

Signature, Designation and seal of licensing authority
[Chief Controller of Explosives]

Statutory Warning : Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

Conditions

- (1) No explosives other than those permitted under this licence shall be imported.
- (2) The quantity of explosives imported shall not exceed that authorised by this licence.
- (3) All explosives imported under this licence shall be packed and marked in accordance with the provisions of Explosives Rules, 2008.
- (4) No ship or boat or aircraft containing explosive imported on the strength of this licence shall bring to or more and no such explosive shall be unloaded or trans-shipped from any ship or boat or aircraft except at the port authorised by this licence.
- (5) The licensee shall comply with all the rules and regulations in force at the port of import mentioned in this licence.
- (6) The owner and master of the ship or boat or aircraft in which explosives are imported on the strength of this licence, shall, if and when required by an inspecting authority or the custom's authority having jurisdiction over the place of importation, allow such inspector or officer to take for examination samples of any explosive so imported.
- (7) As soon as the explosive has been cleared from the place or port and despatched to the magazine for storage, the licensee shall complete the importer's transmission Schedule in Form RE-9 and forward it to the Chief Controller.
- (8) The explosive shall be despatched to the various consignees mentioned in the licence directly from the port and the licensee shall make prior arrangements to ensure that there is no hold up of explosives at any place.
- (9) The imported explosives if of Class 3 or Class 4 shall not be unloaded from the ship or boat unless such explosives have been tested and permission to unload given by the Chief Controller or Controller authorised for the purpose.
- (10) The licensee and the employee shall be conversant with procedure to be taken during the emergency within the premises.
- (11) Free access shall be given at all reasonable times to any inspecting or sampling officer and every facility shall be afforded to the officer for ascertaining that the provisions of the Act or these rules and these conditions are duly observed.
- (12) If the licensing authority or a Controller informs in writing, the holder of the licence to carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and so necessary for the safety of either on-site or off-site persons, the holder of the licence shall execute the recommendations and report compliance within the period specified by such authority.
- (13) Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority.

Signature, Designation and Seal of licensing authority
[Chief Controller of Explosives]

LICENCE FORM LE-9 (SPECIAL)

(See article 9 of Part 1 of Schedule IV of the Explosives Rules, 2008)

Licence to manufacture, possess, sell, use etc. of explosives not provided in articles 1 to 8 of Part 1 of Schedule IV

Licence No.

Annual Fees Rs.

1. Licence is hereby granted to : Name :

.....

Postal Address :

..... City

District..... State..... Pin code.....

Police Station..... Railway Station / Steamer Ghat.....

Phone..... E-mail..... Fax.....

2. Status of licensee:

3. Licence is valid for the following purpose :

.....

4. Licence is valid for the following kinds and quantity of explosives :

(Name, description, Class, Division, sub-division, quantity at any one time, in a month and annual capacity as applicable).....

.....

5. The licensed premises shall conform to the following drawing(s) :

Drawing No. dated.....

Drawing No. dated.....

Drawing No. dated..... (space for signature)

6. The licensed premises are situated at following address: Name :

.....

Postal Address:.....

..... Survey No. City

..... District..... State..... Pin code..... Police

Station..... Railway Station / Steamer Ghat.....

Phone..... E-mail..... Fax.....

7. The licensed premises consist of following facilities :

.....

8. The licence is granted subject to the provision of Explosives Act, 1884 as amended from time to time and the Explosives Rules, 2008 framed thereunder and the conditions, and the following annexures :

(1) Drawings (showing site, constructional and other details) as stated in serial No. 5 above.

(2) Conditions of this licence signed by the licensing authority.

(3) Distance Form.

(4)

9. This licence shall remain valid till 31st day of March ...20.....

This licence is liable to be suspended or revoked for any violation of the Act or rules framed thereunder or the conditions of this licence or if the licensed premises are not found conforming to the description shown in the plans and annexure attached hereto.

The20.....

Signature, Designation and Seal of Licensing Authority

[Chief Controller of Explosives]

Statutory Warning : Mishandling and misuse of explosives shall constitute serious criminal offence under the law.**Conditions :** (To be specified by the Chief Controller)

Signature, Designation and Seal of Licensing Authority

[Chief Controller of Explosives]

.....

Form LE-10

Shot Firer's Certificate

(See article 10 of Part 1 of Schedule IV)

[See rule 107(5) of the Explosives Rules, 2008]

(Certificate of competency to carry out blasting of explosives in area not coming under the Mines Act, 1952)

No.

This is to certify that

(name)

born onresident of

(date of birth)

(address)

...../passed the.....

(date)

(name of examination)

held on by.....

(date)

(authority conducting examination)

and is authorised to conduct blasting operations as mentioned below using explosives in areas other than mines coming under the purview of the Mines Act 1952, subject to the provisions of the Explosives Act, 1884 and the rules framed there under.

Authorised class, category and type of blasting

[See explanation to sub-rule (5) of rule 107]

This certificate shall remain valid till(five years from the date of issue)

This certificate is liable to be suspended or revoked for any violation of the Act or rules framed there under or the conditions of this certificate or if there is any discrepancy or deviation in the information or suppression of facts furnished by the applicant in his application form.

Place :

[Controller of Explosives]

Date :

Statutory Warning: Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

.....

Endorsement for revalidation

.....

Conditions

- (1) All local laws and regulations applicable for obtaining, owning, transporting, storing, handling and using explosive materials shall be followed.
- (2) Explosive materials shall be protected from unauthorised possession and shall not be abandoned.
- (3) Explosive materials shall be used only by experienced persons who are familiar with the hazards involved and who hold all required permits.
- (4) Loading and firing shall be performed or supervised only by a person possessing an appropriate shot firer certificate and permit to blast.
- (5) Trainees helpers and other persons who do not hold the required shot firer certificate or permits shall work only under the supervision of persons holding such permits.
- (6) No explosive materials shall be located or stored where they may be exposed to flame excessive heat sparks or impact.
- (7) No smoking shall be permitted within 15 metre of any location where explosive are being handled or used.
- (8) No person within 15 metres of any location where explosive are being handled or used shall carry any matches open light or other fire or flame. However, suitable devices for lighting safety fuse are exempted from this requirement.
- (9) No person under the influence of intoxicating liquors narcotics or other dangerous drugs shall be allowed to handle explosive materials.

Space for photograph of the Shot Firer's with signature

- (10) Explosive materials shall be kept in close approved containers or packages while being transported between the storage magazine and the blasting site.
- (11) A holder of a shot firer certificate and Permit to Blast shall keep a daily record of all explosive materials received and fired or otherwise disposed of by the permit holder. Such records shall be retained for five years.
- (12) The shot firer and the employee shall be conversant with procedure to be taken during the emergency.
- (13) The holder of the shot firer certificate shall comply with all or any of the directions as may be given by the Controller from time to time in the interest of safety.
- (14) Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the Controller of Explosives having jurisdiction over the area.

[Controller of Explosives]

.....

Form LE—11**Foreman's Certificate****(See article 11 of Part 1 of Schedule IV)****[See rule 107(6) of the Explosives Rules, 2008]****(Certificate of competency to supervise manufacture of fireworks or safety fuse)**

No.

This is to certify that

(name)

born on resident of

(date of birth)

(address)

...../passed the.....

(date)

(name of examination)

held on by.....

(date)

(authority conducting examination)

and is authorised to supervise manufacture of ----- in a factory licensed under Explosives Rules, 2008

This certificate shall remain valid till(five years from the date of issue) This certificate is liable to be suspended or revoked for any violation of the Act or rules framed there under or the conditions of this certificate or if there is any discrepancy or deviation in the information furnished by the applicant in his application form.

Place :

[Controller of Explosives]

Date :

Statutory Warning: Mishandling and misuse of explosives shall constitute serious criminal offence under the law.

.....

Endorsement for revalidation

.....

Conditions

- (1) All local laws and regulations applicable for manufacture of explosives shall be followed.
- (2) No person under the influence of intoxicating liquors narcotics or other dangerous drugs shall be allowed to handle explosive materials.
- (3) The holder of the this certificate shall comply with all or any of the directions as may be given by the Controller from time to time in the interest of safety.
- (4) Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to licensee, the nearest police station and the Controller of Explosive having jurisdiction over the area.

[Controller of Explosives]

Part 4
(Conditions of Various Licences)

SET-I

The Following are the conditions of licence number to manufacture fireworks or gunpowder, or both, not exceeding 15 kilogrammes at any one time in Form LE-1 [article 1(a)] granted by District Magistrate

- (1) The maximum quantity of explosives in the whole factory at any one time, including those in process of manufacture as well as those stored in the licensed premises, shall not exceed as mentioned in item 4 in from LE-1.
- (2) All explosives in the premises shall be manufactured and kept in a building substantially constructed of brick, stone or concrete or in a securely constructed fireproof safe and shall be separated from any dwelling house, highway, street, public thoroughfare building or public place or another licensed premises by the safe distances as mentioned in the licence and its enclosures.
- (3) No explosive other than specified in the licence in form LE-1 shall be kept in the premises
- (4) The fireworks/gunpowder shall be manufactured in single storied building and all doors of the building shall open outwards.
- (5) The interior of every building and receptacle used for explosives and the shelves and fittings therein shall be so constructed or so lined and covered as to prevent the exposure of any iron or steel, or the detaching of any grit, iron steel or similar substance, in such manner as to come into contact with the explosives. Such interior, shelves and fittings shall, so far as reasonably practicable, be kept free from grit and otherwise clean.
- (6) The building or receptacle in which explosive is kept shall be used only for the keeping of such explosive and for no other purpose whatsoever.
- (7) Fireworks shall be kept in separate receptacles or shall be so separated as to prevent explosion or fire communicating from one to the other.
- (8) All explosives exceeding 0.5 kilogramme in amount shall be packed and marked in accordance with the Schedule II of the Explosives Rules 2008.
- (9) The explosive shall be manufactured in rooms of lightly constructed one-storied building kept and used only for the purpose of such manufacture and separated from the storage place by a distance of 45metres and separated from any dwelling house, other building, another licensed premises, highway, street, public thoroughfare or public place by a distance of 45 metres.

The facilities of the factory shall maintain the following inter-distances in metres :

From shed or room	To ingredient store, road, dwelling house and place of public assembly	To manufacturing sheed	To drying platform	To magazine
Ingredient Shed	—	45	45	45
Manufacturing Shed	45	10	10	45
Drying platform	45	10	10	45
Magazine	45	45	45	more than one magazine not permitted

- (10) The ingredients for the manufacture of gunpowder shall be kept in separate stores distinct from each other and separated by a distance of at least 45 meters from the place where gunpowder/fireworks is manufactured or stored as per above table.
- (11) Not more than four persons shall be allowed at any one time in any one building or tent in which the explosive is being manufactured and only persons actually employed in manufacturing or superintending manufacture shall be allowed inside the place of manufacture.
- (12) No iron or steel implements or stone implements, such as mortars, pestles, grinders (chukkis) shall be used in the manufacture of explosives or shall be kept at any time in the licensed premises.. Only copper, gun metal or wooden tools are permissible.

- (13) All explosives, as and when they are manufactured, shall be removed, without delay to the licensed place of storage and no explosive shall be allowed to accumulate in the place of manufacture.
- (14) Manufacture shall only be carried on between sunrise and sunset and no smoking or lights shall be allowed in or near the place where explosives are being manufactured.
- (15) No oils, paints, matches, lights, any article of a highly inflammable or explosive nature or liable to cause fire or explosion or any acids or similar substances shall be brought or kept in the licensed premises. No smoking shall be allowed inside the factory.
- (16) The licensee shall keep records and accounts of all explosives manufactured and of all stocks in hand in forms RE-2 and RE-4 and exhibit the stock books and records to the officers authorised under Explosives Rules, 2008, whenever such officer may call upon him to do so.
- (17) No activity other than those specified in licence shall be carried out in the factory premises.
- (18) The licensee and the employee shall be conversant with procedure to be observed during the emergency within the premises.
- (19) Free access to the licensed premises shall be given at all reasonable times to any inspecting or sampling officer and every facility shall be afforded to the officer for ascertaining that the provisions of the Act and the Rules and the safety conditions are duly observed.
- (20) If the licensing authority informs in writing, the holder of the licence to execute any repairs or to make any additions or alterations to the licensed premises or machinery, tools or apparatus or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and so necessary for the safety of either on-site or off-site of the premises/persons, the holder of the license shall execute the recommendations and report compliance within the period specified by such authority.
- (21) Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority.
- (22) No person under 18 years of age and no person who is in a state of intoxication or of unsound mind or physically handicapped shall be employed in or allowed to enter the factory.
- (23) No electronic appliances or instruments like mobile phones, pagers shall be allowed in or near the premises where explosives are manufactured handled, stored and used.
- (24) The date of manufacture shall be marked in conspicuous indelible character, by means of stamping or printing on the label/outer package of the sound producing cracker.
- (25) No chlorate shall be used in the manufacture of fireworks.
- (26) The manufacture or sale of fire-crackers generating noise level exceeding;
 - (a) 125 dB(AI) or 145 dB(C)_{pk} at 4 meters distance from the point of bursting shall be prohibited
 - (b) For individual fire-cracker constituting the series (joined fire-crackers), the above mentioned limit be reduced by $5 \log_{10} (N)$ dB, where N = number of crackers joined together

Signature, Designation and seal of licensing authority

SET - II

The Following are the conditions of licence number to manufacture fireworks in Form LE-1 [articles 1(b) and (c)] granted by the Chief Controller or Controller of Explosives.

CONDITIONS

General :

(1) All explosives in the premises shall be manufactured and kept in a building substantially constructed of brick, stone or concrete as per specification No. 3 under Schedule-VII or in a securely constructed fireproof safe or of a type and design approved by the Chief Controller of Explosives.

(2) The interior of every building and receptacle used for explosives and the shelves and fittings therein shall be so constructed or so lined and covered as to prevent the exposure of any iron or steel, or the detaching of any grit, iron steel or similar substance, in such manner as to come into contact with the explosive. Such interior, shelves and fittings shall, so far as reasonably practicable, be kept free from grit and otherwise clean.

- (3) The building or receptacle in which explosive is kept shall be used only for keeping of such explosive and for no other purpose whatsoever.
- (4) Fireworks shall be kept in separate receptacles or shall be so separated as to prevent explosion or fire communicating from one to the other.
- (5) All explosives exceeding 0.5 kilogramme in amount shall be packed and marked in accordance with the Schedule II.
- (6) The ingredients for the manufacture of fireworks, serpents, paper caps, safety fuse/micro cord fuse or sparklers shall be kept in separate stores distinct from each other and separated by safety distances as mentioned in the table 4 or 6 of Schedule VIII.
- (7) No iron or steel implements or stone implements, such as mortars, pestles, grinders (chukkis) shall be used in the manufacture of explosives or shall be kept at any time in the licensed premises. Only copper, gun metal or wooden tools are permissible.
- (8) All explosives, as and when they are manufactured, shall be removed, without delay to the licensed place of storage and no explosive shall be allowed to accumulate in the place of manufacture.
- (9) Manufacture shall only be carried in between sunrise and sunset and no lights shall be allowed in or near the place where fireworks are manufactured provided that nothing in this rule shall apply to handling/manufacture of fireworks during dark hours if proper illumination with flame and/or dust proof motors, light and fittings is provided in the area and the place is guarded.
- (10) No oils, paints, matches, lights, any article of a highly inflammable or explosive nature or liable to cause fire or explosion or any acids or similar substances shall be brought or kept in the licensed premises. No smoking shall be allowed inside the factory.
- (11) The licensee shall keep records and accounts of all explosives manufactured and of all stocks in hand in forms RE-2 and RE-4 and exhibit the stock books and records to the officers authorised under rule 128 of the Explosives Rules, 2008, whenever such officer may call upon him to do so.
- (12) No activity other than those specified in licence shall be carried out in the factory premises.
- (13) The licensee and the employee shall be conversant with procedure to be observed during the emergency within the premises.
- (14) Free access to the licensed premises shall be given at all reasonable times to any inspecting or sampling officer and every facility shall be afforded to the officer for ascertaining that the provisions of the Act and the Rules and the safety conditions are duly observed.
- (15) If the licensing authority or a Controller of Explosives informs in writing, the holder of the licence to execute any repairs or to make any additions or alterations to the licensed premises or machinery, tools or apparatus or carry out recommendations, which in the opinion of such authority may pose unacceptable risk and so necessary for the safety of either on-site or off-site of the premises or persons, the holder of the license shall execute the recommendations and report compliance within the period specified by such authority.
- (16) Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority.
- (17) The maximum number of process buildings excluding mixing/filling, transit building and drying platform in a factory shall not exceed 85.
- (18) Unless specifically exempted by the Chief Controller of Explosives, the minimum capacity for store house attached to any factory shall be 1/5th of its annual manufacturing capacity.
- (19) Licensee shall appoint minimum one qualified foreman certified by the Controller of Explosives, for every 20 process buildings to supervise the manufacture of fireworks.
- (20) Every process building where electrically operated machinery is used in the manufacture of explosives shall have attached thereto one or more efficient lighting conductors designed and erected in accordance with the specification laid down in Indian Standard Specification No.2309 as amended from time to time.
- (21) No electronic appliances or instruments like mobile phones, pagers shall be allowed in or near the premises where explosives are manufactured, handled, stored and used.
- (22) No person under 18 years of age and no person who is in a state of intoxication or of unsound mind or physically handicapped shall be employed in or allowed to enter the factory.

- (23) The doors of any process building shall not face each other. If doors of adjoining sheds face each other, a screen wall of 23 cm cement and brick should be provided at a distance of 1 to 2 M from the building and 0.5 m wider than the door opening on both sides and up to the height of the doors.
- (24) The maximum quantity of explosives in the whole factory at any one time, including those in process of manufacture as well as those stored on the licensed premises, shall not exceed as mentioned in item 4 in from LE-1.

Special conditions for fireworks

- (25) The Mixing /filling building shall be surrounded by a blast wall as per specification no. 3 under Schedule-VII.
- (26) Manufacturing building , mixing, filling, transit building and drying platform shall observe inner safety distance to and from any process building and an outer safety distance from the fence as per table 6 of Schedule VIII.
- (27) The total quantity of explosives and person/persons in any manufacturing building, mixing, filling, transit building and drying platform shall be as per table 6 of Schedule VIII.
- (28) The licensed premises shall be surrounded by a wall or barbed wire fencing at least 2 meters high of such strength and construction as to prevent entry of unauthorised persons at safe distance as mentioned in the table 6 of schedule VIII.
- (29) One drying platform shall be provided for every five manufacturing sheds (excluding filling/mixing/transit building).
- (30) Black powder and fireworks shall not be kept in the same receptacle and shall be so separated as to prevent explosion or fire communicating from one to the other.
- (31) No chlorate shall be used in the manufacture of fireworks.
- (32) No loose fireworks composition, dry or wet, shall be allowed to be kept in the factory at the close of any single working day. All such compositions that remain at the close of the day shall be destroyed..
- (33) The fireworks shall be manufactured in single storied building and all doors of the building shall open outwards :
Provided that nothing in this condition shall apply to manufacture of explosives with aid of electrically operated machinery and such process of manufacture and machinery approved by Licensing Authority
- (34) Every process building shall have required number of doors as approved by Licensing Authority
- (35) The safety distance is required to be kept clear between any licensed factory building, magazine or store house, public road and protected works as per Table-6 of Schedule VIII
- (36) The date of manufacture shall be marked in conspicuous indelible character, by means of stamping or printing on the label/outer package of the sound producing cracker
- (37) The manufacture or sale of fire-crackers generating noise level exceeding;
 - (a) 125 dB(AI) or 145 dB(C)pk at 4 meters distance from the point of bursting shall be prohibited
 - (b) For individual fire-cracker constituting the series (joined fire-crackers), the above mentioned limit be reduced by $5 \log_{10} (N)$ dB, where N = number of crackers joined together

Special conditions for paper caps or amorces

- (38) The composition of dots in the amercers or paper caps shall be a mixture of potassium chlorate, amorphous-phosphorus, starch and calcium carbonate with or without the addition of sulphur (free from acid), provided that amount of amorphous-phosphorus, present in the mixture shall not exceed the proportion of 0.65 grams, in 1000 dots.
- (39) The composition used in the amercers or paper caps shall be in a proportion not exceeding 4.54 mgs. to every 1000 dots, i.e. no one dot shall individually contain more than 0.0045 gram. of the composition. If the amercers or paper caps be manufactured in the form of a tape, it shall not have more than 30 dots for one tape.
- (40) Not more than one kilogram of explosives composition required for the manufacture of amercers or paper caps shall be prepared at a time.
- (41) The ingredients shall be kept separately until mixed wet in a mixing vat, which shall not have any exposed iron.
- (42) Potassium chlorate shall be kept in a separate store room distinct from other ingredients.
- (43) Sulphur shall be kept in a separate store room distinct from other ingredients.
- (44) Licence under Arms Rule, 1962 shall be obtained for storage of sulphur and chlorate.

- (45) Amorges shall be packed in approved closed boxes of cardboard of not less than .33 mm thickness. The boxes shall be of round shape and not less than 25 mm in dia and 20 mm in height and shall contain not more than 50 amorces in each. A round corrugated cardboard sheet shall be placed in each box before amorces are packed in it. (If, however, not more than 30 amorces are packed in a cardboard box, such sheet need not be placed in each box). The round cardboard boxes shall then be bunched and rolled in a paper wrapper forming 10's packets, and ten such 10's packets shall be packed in a strong cardboard box making the 100's package. Such 100's boxes not exceeding 80 in number shall finally be packed in approved strong wooden cases bound with hoop iron or corrugated boxes of a type and structure approved by Chief Controller of Explosives.
- (46) Net weight of paper caps containing 80 units shall not exceeds 2.8 kilogrammes.
- (47) The over pasting building may be an extension of first stage drying building through window in amorces factory.
- (48) The Second stage drying shed shall be constructed of a type and design approved by the Chief Controller of Explosives.
- (49) The dipped amorces sheets shall be dried inside second stage drying building by placing them in singles without lying on each other.
- (50) The gum used for over pasting of amorces sheet shall not contain copper sulphate or a chemical acidic in nature.
- (51) Manufacturing building , mixing, filling , transit building and drying platform shall observe inner safety distance to and from any process building and an outer safety distance from the fence as per Table 6 of Schedule VIII.
- (52) The licensed premises shall be surrounded by a wall or barbed wire fencing at least 2 meters high of such strength and construction as to prevent entry of unauthorised persons at safe distance as mentioned in the Table 6 of schedule VIII.
- (53) The manufacture or sale of fire-crackers generating noise level exceeding;
- (a) 125 dB(AI) or 145 dB(C)_{pk} at 4 meters distance from the point of bursting shall be prohibited.
- (b) For individual fire-cracker constituting the series (joined fire-crackers), the above mentioned limit be reduced by $5 \log_{10} (N)$ dB, where N = number of crackers joined together.

Special Conditions for Saparklers

- (54) Manufacturing building, mixing, filling , transit building and drying platform shall observe inner safety distance to and from any process building and an outer safety distance from the fence as per Table 4 of Schedule VIII.
- (55) The sparklers shall be manufactured in one storied building and all doors of the building shall open outwards.
- (56) Every process building expect transit building shall have four doors.
- (57) Mixing building shall be constructed as per specification no. 3 under schedule VII.
- (58) Manufacturing (packing) building/transit shed shall be constructed as per specification no. 3 under schedule VII.
- (59) Drying space shall of hard smooth surface without rising from the ground level.
- (60) The doors of different buildings shall not face each other.
- (61) The steel filings or iron borings or magnesium metal should be coated with linseed oil or paraffin wax or pitch before mixing along with other chemical in wet condition.
- (62) The wires of sparklers shall be G.I. wire or shall be coated with copper.
- (63) The wires of sparklers shall not be dipped with any other material except with the mixture of chemical approved by the Chief Controller.
- (64) The total quantity of explosives and person/persons in any manufacturing (packing) building, mixing, dipping shed transit building and drying platform shall be as per Table 4 of Schedule VIII.
- (65) A transit building shall be provided for storing semi finished or unpacked sparklers at end of day.
- (66) No chlorate shall be used in the manufacture of fireworks.
- (67) Manufacturing (packing) building, mixing, dipping, transit building and drying space shall observe inner safety distance to and from any process building and an outer safety distance from the fence, as per Table 4 of Schedule VIII.
- (68) The total quantity of explosives and person/persons in any manufacturing building, mixing, transit building and drying space shall be as per Table 4 of Schedule VIII.

- (69) The licensed premises shall be surrounded by a wall or barbed wire fencing at least 2 meters high of such strength and construction as to prevent entry of unauthorised persons at safe distance as mentioned in the Table 4 of Schedule VIII.

Special Conditions for Serpent Eggs

- (70) All the process building shall be of a type and design approved by the Chief Controller of Explosives.
- (71) Nitration - Nitration of bitumen shall be done in room having acid proof tiles or brick floor with efficient ventilation system to disperse acid fumes or a building of a type and design approved by the Chief Controller of Explosives.
- (72) Washing-Nitrated bitumen shall be washed thoroughly by water to remove the trace of acid before taking to drying platform or grinding or mixing building.
- (73) The floor of washing building shall be made of acid proof tiles or bricks with sufficient water drainage system.
- (74) Every person employed in Nitration and wash building shall use goggles, acid proof gloves and apron.
- (75) Utensil used in Nitration shall be made of acid proof material.
- (76) The mixture of chemical shall be moist, before making pellet or tablet to prevent fire due to friction.
- (77) The pellets or tablets shall be packed in a cardboard box along with cushioning material to prevent the breakage of pellets or tablets if packaging is done by hand.
- (78) No chlorate shall be used in the manufacture of fireworks.
- (79) Manufacturing building, mixing, filling, transit building and drying platform shall observe inner safety distance to and from any process building and an outer safety distance from the fence as per Table 6 of Schedule VIII.
- (80) The licensed premises shall be surrounded by a wall or barbed wire fencing at least 2 meters high of such strength and construction as to prevent entry of unauthorised persons at safe distance as mentioned in the Table 6 of Schedule VIII.

Signature, Designation and seal of Licensing Authority

SET-III

The following are the conditions of licence number for manufacture of ANFO explosives in Form LE-1 [article 1(d)] granted by Chief Controller or Controller of Explosives. —

CONDITIONS

- (1) The quantity of ANFO explosives in the premises or any part thereof shall not exceed at any one time the quantity for which licence has been issued.
- (2) The ANFO manufacturing shed shall be protected by a fencing at a distance of 15 metres and it shall maintain safety distance from protected works as specified in Table 1 of Schedule VIII.
- (3) Work in the shed shall be carried out strictly in accordance with the laid down safe working procedures and instructions.
- (4) The ANFO explosives shall be manufactured under the immediate supervision of a qualified responsible person appointed by the licensee.
- (5) The licensee and every person employed shall take all due precautions for the prevention of accidents by fire or explosion in the place or places where the ANFO explosives is manufactured, handled or used.
- (6) All spillage of ANFO explosive shall be collected and destroyed at a safe place away from the licensed premises under the supervision of experienced person.
- (7) All containers and mixers used for manufacturing the ANFO explosive shall after use, be thoroughly cleaned with suitable detergent solution and washed with water.
- (8) The licensee and the employee shall be conversant with procedure to be taken during the emergency within the premises.
- (9) Free access to the licensed premises shall be given at all reasonable times to any inspecting or sampling officer and every facility shall be afforded to the officer for ascertaining that the provisions of the Act and these rules and the safety conditions are duly observed.

- (10) If the licensing authority or a Controller of Explosives informs in writing, the holder of the licence to execute any repairs or to make any additions or alterations to the licensed premises or machinery, tools or apparatus or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and so necessary for the safety of either on-site or off-site of the premises or persons, the holder of the license shall execute the recommendations and report compliance within the period specified by such authority.
- (11) Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority.

Signature, Designation and seal of Licensing Authority

SET - IV

The following are the conditions of licence number for manufacture of Liquid Oxygen Explosives (LOX) in Form LE-1 [Article 1(e)] granted by Chief Controller or Controller of Explosives. —

CONDITIONS

- (1) The quantity of Liquid Oxygen Explosives (LOX) on the premises or any part thereof shall not exceed at any one time the quantity for which licence has been issued.
- (2) Soaking of Liquid Oxygen Explosives (LOX) cartridges shall be done in a secured location within a fenced area maintaining safety distance from protected works as specified in table 1 of Schedule VIII.
- (3) Work shall be carried out strictly in accordance with the laid down safe working procedures and instructions.
- (4) The Liquid Oxygen Explosives (LOX) shall be manufactured under the immediate supervision of a qualified responsible person appointed in writing by the licensee.
- (5) The licensee and every person employed shall take all due precautions for the prevention of accidents by fire or explosion in the place or places where the Liquid Oxygen Explosives is manufactured, handled or used.
- (6) The licensee and the employee shall be conversant with procedure to be taken during the emergency within the premises.
- (7) Free access to the licensed premises shall be given at all reasonable times to any inspecting or sampling officer and every facility shall be afforded to the officer for ascertaining that the provisions of the Act and these rules and the safety conditions are duly observed.
- (8) If the licensing authority or a Controller² of Explosives informs in writing, the holder of the licence to execute any repairs or to make any additions or alterations to the licensed premises or machinery, tools or apparatus or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and so necessary for the safety of either on-site or off-site of the premises/persons, the holder of the license shall execute the recommendations and report compliance within the period specified by such authority.
- (9) Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority.

Signature, Designation and seal of Licensing Authority

SET - V

The following are the conditions of licence number for Site Mixed Explosives (SME) plant in Form LE-1 [Article 1(f)] granted by Chief Controller or Controller of Explosives. -

CONDITIONS

- (1) Only SME permitted in writing by the Chief Controller of Explosives shall be manufactured in the Bulk Mixing and Delivery (BMD) Vehicle.
- (2) The SME shall be manufactured in the BMD vehicle only within the mining area of _____ after obtaining necessary clearance from Director General of Mines Safety under Mines Act in force and the SME so manufactured shall not be used except under and in accordance with such conditions as may be imposed by the Director General of Mines Safety.
- (3) The SME shall be manufactured strictly in accordance with the laid down safe working procedures and related instructions.
- (4) All due precautions shall be taken in the Support-Plant to prevent any mixing of solutions or ingredients which may form explosives.

- (5) At least two fire extinguishers of suitable size and capable of fighting electrical and petroleum fires shall be provided in each vehicle in an easily accessible position. During the process of manufacture, they must be kept in a state of readiness.
- (6) The manufacture of SME shall be carried out by or under the immediate supervision of a experienced person appointed in writing for the purpose by the licensee. This supervisor and the operators shall be conversant with the operation of the vehicle and the facilities mounted thereon. The supervisor shall be familiar with the general procedure for handling emergency situations and the requirements of these rules and the conditions of this licence.
- (7) During mixing and loading, a positive grounding device and a semi-conductive hose shall be used to prevent accumulation of static electricity. The supervisor shall evaluate all system to ensure that they will adequately dissipate static electricity under potential field conditions.
- (8) The flexible hoses used to deliver explosives directly in the boreholes shall be electrically and mechanically continuous. The hoses shall be periodically tested by water at the prescribed pressure and also tested for electrical continuity periodically.
- (9) The manufacture of SME shall be carried out only between sunrise and sunset.
- (10) The SME manufactured in the vehicle shall be charged into the bore holes immediately on its manufacture and at the end of charging operation, the entire system including hose pipes should be emptied of explosives by evacuating with compressed air flushing with water. At the end of the loading operations for the day, the entire system of the vehicle including hose pipes shall be completely cleaned and thereafter the vehicle shall be parked at the support plant.
- (11) All spillages of explosives shall be collected and destroyed at a safe place and the effluents shall be discharged after proper treatment.
- (12) The licensee shall keep records and accounts of all explosives manufactured in form RE-2 and shall exhibit his books and records to any of the officers authorised under these rules whenever such officer may call upon him to do so.
- (13) All boosters, detonators and detonating fuses required in connection with the work of blasting, shall be kept in a magazine, licensed under the Explosive Rules, 2008.
- (14) All due precautions for blasting of charged holes shall be taken as per Indian Mines Act, 1952 (35 of 1952).
- (15) The licensee and the shot firer shall be responsible for preparation of charges, the charging of holes, and the firing of shots and shall take all precautions against fire and accident involving the explosives.
- (16) The licensee and the employee shall be conversant with the procedure to be taken during an emergency.
- (17) Free access to the licensed premises shall be given at all reasonable times to any inspecting or sampling officer and every facility shall be afforded to the officer for ascertaining that the provisions of the Act and these rules and the safety conditions are duly observed.
- (18) If the licensing authority or a Controller of Explosives informs in writing, the holder of the licence to execute any repairs or to make any additions or alterations to the licensed premises or machinery, tools or apparatus or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and so necessary for the safety of either on-site or off-site of the premises or persons, the holder of the licence shall execute the recommendations and report compliance within the period specified by such authority.
- (19) Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority.

Signature, Designation and seal of licensing authority

SET - VI

The following are the conditions of licence number to manufacture explosives other than fireworks, gunpowder, ANFO, Liquid Oxygen Explosives and Site Mixed Explosives in Form LE-1 [article 1(g)] granted by Chief Controller or Controller of Explosives.

CONDITIONS

- (1) The quantity of explosives on the premises or any part thereof shall not exceed at any one time the quantity for which licence has been issued.

- (2) The process and storage sheds or buildings shall maintain safety distances as specified in Schedule VIII.
- (3) Work in each building or shed shall be carried out strictly in accordance with the laid down safe working procedures and instructions.
- (4) The licensee and every person employed in or about the factory shall take all due precautions for the prevention of accidents by fire or explosion in the factory and for preventing unauthorised person from having access to the factory or to the explosives therein and shall abstain from any act whatsoever which tends to cause fire or explosion and is not reasonably necessary for the purposes of work in the factory. Due provisions shall be made, by the use of suitable working clothes, suitable shoes etc. as not to cause any danger of fire or explosion.
- (5) No additions and alterations shall be carried out in the licensed premises without a previous sanction in writing of the licensing authority. Such additions and alterations so sanctioned shall be shown in the amended plan attached to the licence.
- (6) The interior of the compartments of the building in which explosives are manufactured or handled and the machinery or fittings therein shall be thoroughly cleaned at the end of day's work. Sweepings from the compartments of the building in which explosives are manufactured or handled shall be carefully collected and disposed as per laid down procedure. The effluent shall be discharged only after proper treatment as per laid down procedure.
- (7) The licensee shall appoint a qualified and competent person to supervise the manufacture of explosives and other process and to conduct the operations in accordance with these rules.
- (8) The licensee, occupier, the safety officer and the qualified and competent persons shall undergo and also organise safety workshops and training programmes regularly for safety awareness and for knowledge for their own as well as their sub-ordinates and shall record the same.
- (9) All employees (full time, part time or contract basis) shall be conversant with the emergency response plan for disaster management of the factory.
- (10) All unsafe incidents (including the minor one) shall be recorded (preferably stating the near-misses and also critical situations) and shall be reviewed periodically by the licensee and the competent person as a learning process disseminate the lesson(s) learnt, to all the people working in the premises.
- (11) Free access to the licensed premises shall be given at all reasonable times to any inspecting or sampling officer and all facilities shall be offered to the officer for ascertaining that the provisions of the Act and these rules and the safety conditions are duly observed.
- (12) If the licensing authority or the Controller of Explosives informs in writing, the holder of the licence to execute any repairs or to make any additions or alterations to the licensed premises or machinery, tools or apparatus or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and therefore the same is necessary for the safety of either on-site or off-site of the premises or persons, the holder of the license shall execute the recommendations and report compliance within the period specified by such authority.
- (13) Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority.

Signature, Designation and seal of licensing authority

SET - VII

The following are the conditions of licence number to possess for use, for agricultural purpose or in small quarry, explosives not exceeding 25 kilogrammes of Class 1, 2 or 3; 1500 numbers detonators; and 1500 meters of Detonating Fuse or Safety Fuse at any one time in a magazine in Form LE-3 [Article 3(a)] granted by the District Magistrate.

CONDITIONS

- (1) The quantity of explosives on the premises at any one time shall not exceed the licensable capacity.
- (2) The magazine used for storage of explosives shall maintain safety distance of 45 meters from protected works.
- (3) The magazine shall be used only for keeping explosives specified in this licence and of receptacles, tools or implements for work connected with the keeping of such explosives.
- (4) The opening of packages and the weighing and packing of explosives shall not be carried in the magazine.
- (5) Two or more description or explosives which may be permitted to be kept in the magazine shall be kept only if they are separated from each other by an intervening partition of such substance or character, or by such intervening

space, as will effectually prevent explosion or fire in the one communicating with the other :

Provided that—

- (a) the various explosives of Classes 2 (nitrate-mixture), 3 (nitro-compound), safety fuses belonging to Class 6 Division 1 and detonating fuses belonging to Class 6 Division 2 as do not contain any exposed iron or steel, may be kept with each other without any intervening partition or space;
 - (b) Detonators belonging to Class 6 Division 3 shall be kept separately;
 - (c) Gunpowder belonging to Class 1 shall be kept separately.
- (6) Explosives of Class 3 (nitro-compound) shall not be kept in the magazine after the expiration of one year from the date of their manufacture except with the special sanction of licensing authority.
- (7) When an explosive owing to its being no longer of standard purity or owing to signs of liquefaction or of exuded nitro-glycerine or liquid nitro-glycerine or liquid nitro-compound is no longer fit for storage in the magazine, the licensee shall comply, at his own expense, with such directions as licensing authority may issue.
- (8) The interior of the magazine and the benches, shelves and fittings therein shall be so constructed or so lined or covered as to prevent the exposure of any iron or steel to come in contact with the explosives. Such interior, benches, shelves and fittings shall so far as is reasonably practicable, be kept free from grit and shall otherwise be clean; and in the case of any explosives liable to be dangerously affected by water, due precautions shall be taken to exclude water therefrom:
- Provided that so much of this condition as relates to precautions against the exposure of any iron or steel shall not be obligatory in a building in which no explosive other than safety fuses belonging to Class 6 Division 1 are kept.
- (9) If the lighting conductor is tested by licensing authority, the licensee shall pay the fees prescribed for test. In the event of the test proving unsatisfactory, the same fees shall be payable by the licensee for each subsequent test until the lighting conductor is passed by the testing officer as satisfactory :
- Provided that the fees payable for a single test shall be charged for all tests made on a conductor during any one day :
- Provided further that where two or more lighting conductors are attached to one and the same magazine, the fee for the testing of all such conductors shall not exceed the fee prescribed in this condition for testing a single lighting conductor.
- (10) The licensee shall keep records and accounts of all explosives in Forms RE-2 and RE-4 and exhibit the stock books and records to the officers authorised under these rules whenever such officer may call upon him to do so. The stock books in prescribed proforma shall be page numbered.
- (11) Any accident and losses, shortage of stock and thefts of explosives shall be reported without delay to the nearest police station, and the licensing authority.
- (12) Free access to the licensed premises shall be given at all times to any inspecting or sampling officer and all facilities shall be offered to the officer for ascertaining that the provisions of the Act and these rules and the conditions of this licence are duly observed.
- (13) No changes or alterations shall be carried out to the premises without prior approval of the licensing authority and the licensee shall comply with any condition that may be specified by the licensing authority in this behalf.
- (14) If the licensing authority calls upon the holder of the licence by a notice in writing to take any action which may in the opinion of such authority be necessary for the safety of the premises or the public, the holder of licence shall take such action within such period, not being less than one month from the date of receipt of the notice, as may be fixed by the notice.
- (15) Magazine shall at all times be kept in state of good repair (or maintained in good condition). The licensee shall report to licensing authority forthwith, if the magazine becomes unfit for storage of any explosives for any reason whatsoever.
- (16) The licensee of the magazine shall submit at the end of every quarter a return in Form RE-7 to the District Magistrate and District Superintendent or Commissioner of Police in whose jurisdiction the magazine is situated in the proforma prescribed from time to time so as to reach the above authorities by 10th day of the succeeding quarter.

- (17) Any encroachment of the safety distance shall be immediately communicated to the licensing authority for necessary advice and action.
- (18) The licensing authority shall be immediately informed for advice if any explosive is found deteriorated or unserviceable.
- (19) The explosive packages shall be stacked in such a way so as to allow movement of at least one person to check the condition of all packages stored and to read the manufacture particulars of each package.
- (20) The resistance of the lightning conductor to earth shall be as low as possible and in no case more than 10 ohms.
- (21) A distance of 15 metres surrounding the magazine shall be kept clear of dried grass or bush or flammable materials.
- (22) Every packet of explosive at the time of bringing inside the magazine shall be examined for its sound condition.
- (23) Not more than four persons shall be allowed inside the magazine at any one time.
- (24) Empty packages of the explosives shall be removed at the earliest and destroyed.
- (25) The explosives shall not be used for blasting purposes in the areas not coming within the purview of Mines Act, 1952 (35 of 1952) unless the licensee employs a qualified shot firer holding a shot-firer's permit granted under these rules or the person having equivalent qualifications as recognized by the Chief Controller.
- (26) The licensee and the shot firer shall be responsible for preparation of charges, the charging of holes and the firing of shots and shall take all precautions against fire and accident involving the explosives.
- (27) No smoking or any source of light or fire shall be allowed in or near the place where explosives charges are being prepared or kept.
- (28) For charging or stemming a shot hole, no person shall use an iron or steel tools, scraper, or tamping or nor shall forcibly press the explosive into a hole of insufficient size. A tamping rod made entirely of wood shall be used.
- (29) Before exploding any blasting charge, adequate measures shall be taken so as to prevent as far as possible, the projection of fragments of stone by the explosion of the blasting charge.
- (30) No person shall re-bore or temper a hole that has once been charged or attempt to withdraw a charge either before firing or after a misfire or deepen or tamper with empty holes or sockets left after blasting.
- (31) Before commencing shot firing the licensee shall give sufficient warning to the public by an efficient system of signals and by putting up red flags in the danger zone. He shall see that all persons in the vicinity have taken proper shelter and shall also take suitable steps to prevent any person approaching the shot.
- (32) The licensee shall warn the public not to approach the site of blasting operation at least within an hour after explosion or in the case of an open quarry, not to approach such quarry within half an hour after explosion.
- (33) The number of shots, which explode, shall be counted and unless it is certain that all the shots have exploded no person shall approach or be permitted to approach the place until 30 minutes after the firing of shots.
- (34) In the event of a misfire, if relieving hole is to be drilled it shall not be placed within 30 centimetres from the misfired hole. The relieving hole shall run parallel to the misfired hole.
- (35) The licensee and the employee shall be conversant with procedure to be taken during the emergency within the premises.
- (36) Free access to the licensed premises shall be given at all reasonable times to any inspecting or sampling officer and every facility shall be afforded to the officer for ascertaining that the provisions of the Act or these rules and the safety conditions are duly observed.
- (37) If the licensing authority or a Controller of Explosives informs in writing, the holder of the licence to execute any repairs or to make any additions or alterations to the licensed premises or machinery, tools or apparatus or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and so necessary for the safety of either on-site or off-site of the premises or persons, the holder of the license shall execute the recommendations and report compliance within the period specified by such authority.
- (38) Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority.

Signature, Designation and seal of licensing authority

SET-VIII

The following are the conditions of licence number to possess for sale or use, explosives of Class 1, 2, 3, 4, 5, 6 or 7 in a magazine in Form LE-3 [articles 3(b) to (c)] granted by Chief Controller of Explosives or Controller of Explosives.

CONDITIONS

- (1) The quantity of explosives on the premises at any one time shall not exceed the licensable capacity.
- (2) The magazine used for storage of explosives shall maintain safety distance specified in Schedule III and annexure to the licence.
- (3) The magazine shall be used only for keeping all explosives specified in this licence and of receptacles for, or tools or implements for work connected with the keeping of such explosives.
- (4) The opening of packages and the weighting and packing of explosives shall not be carried on in the magazine.
- (5) Two or more description or explosives which may be permitted to be kept in the magazine shall be kept only if they are separated from each other by an intervening partition of such substance or character, or by such intervening space, as will effectually prevent explosion or fire in the one communicating with the other;

Provided that—

- (d) the various explosives of Class 2 (nitrate-mixture), Class 3 (nitro-compound), safety fuses belonging to Class 6 Division 1 and detonating fuses belonging to Class 6 Division 2 as do not contain any exposed iron or steel, may be kept with each other without any intervening partition or space ;
- (e) Detonators belonging to Class 6 Division 3 shall be kept separately;
- (f) Gun powder belonging to Class 1 shall be kept separately.
- (6) Explosives of Class 3 (nitro-compound) shall not be kept in the magazine after the expiration of one year from the date of their manufacture except with the special sanction of licensing authority.
- (7) Explosives of Class 3 (nitro-compound) shall not be kept in the magazine after the expiration of one year from the date of their manufacture except with the special sanction of the Controller of Explosives.
 - (i) When such sanction has been given, a written certificate showing the period covered by the sanction shall be obtained from the Controller of Explosives at each inspection, and shall be kept by the licensee and produced on demand.
 - (ii) When an explosive owing to its being no longer of standard purity or owing to signs of liquefaction or of exuded nitro-glycerine or liquid nitro-glycerine or liquid nitro-compound is no longer fit for storage in the magazine or store house the licensee shall comply, at his own expense, with such directions as to its disposal as the Chief Controller or Controller of Explosives may issue.
- (8) The interior of the magazine and the benches, shelves and fittings therein shall be so constructed or so lined or covered as to prevent the exposure of any iron or steel to come in contact with the explosives. Such interior, benches, shelves and fittings shall, so far as is reasonably practicable, be kept free from grit and shall otherwise be clean; and in the case of any explosives liable to be dangerously affected by water, due precautions shall be taken to exclude water there from :

Provided that so much of this condition as relates to precautions against the exposure of any iron or steel shall not be obligatory in a building in which no explosive other than explosive of the 1st Division 6th (Ammunition) Class is kept.

- (9) If the lighting conductor is tested by the Controller of Explosives, the licensee shall pay the fees prescribed for test. In the event of the test proving unsatisfactory, the same fees shall be payable by the licensee for each subsequent test until the lighting conductor is passed by the testing officer as satisfactory:

Provided that the fees payable for a single test shall be charged for all tests made on a conductor during any one day :

Provided further that where two or more lighting conductors are attached to one and the same magazine, the fee for the testing of all such conductors shall not exceed the fee prescribed in this condition for testing a single lighting conductor.

- (10) Due provisions shall be made, by the use of suitable working clothes without pockets, suitable shoes and by searching or otherwise or by such means, for preventing the introduction into danger area of the factory premises of fire, Lucifer matches or any substance or article likely to cause explosion or fire, but this condition shall not

prevent the introduction of an artificial light of such construction, position or character as not to cause any danger of fire or explosion:

Provided that so much of this condition as applies to the exclusion of iron or steel, shall not be obligatory in a building in which no explosive other than an explosive of the 1st Division of the 6th (Ammunition) Class is kept.

- (11) The licensee shall keep records and accounts of all explosives in Forms RE-3 and RE-4 or RE-5, as the case may be, and exhibit the stock books and records to any of the officers authorised under the Explosives Rules, 2008 whenever such officer may call upon him to do so. The stock books in the prescribed proforma shall be page numbered.
- (12) No changes or alterations shall be carried out to the premises without prior approval of the licensing authority and the licensee shall comply with any condition that may be specified by the licensing authority in this behalf.
- (13) Magazine shall at all times be kept in state of good repair (or maintained in good condition). The licensee shall report to licensing authority forthwith, if the magazine becomes unfit for storage of any explosives for any reason whatsoever.
- (14) The licensee of the magazine shall submit quarterly return as per sub-rules (3) and (4) of rule 24 of these rules.
- (15) Any encroachment of the safety distance shall be immediately communicated to the licensing authority for necessary advice and action.
- (16) The licensing authority shall be immediately informed for advice if any explosive is found deteriorated or unserviceable.
- (17) The explosive packages shall be stocked in such a way so as to allow movement of at least one person to check the condition of all packages stored and to read the manufacture particulars of each package.
- (18) The resistance of the lightning conductor to earth shall be as low as possible and in no case be more than 10 ohms.
- (19) A distance of 15 meters surrounding the magazine or store house shall be kept clear of dried grass or bush or flammable materials.
- (20) Every package of explosive at the time of bringing inside the magazine shall be examined for its sound condition.
- (21) Not more than 4 persons shall be allowed inside the magazine or store house at any one time.
- (22) Empty packages of the explosives shall be removed at the earliest and destroyed.
- (23) The licensee and the employee shall be conversant with procedure to be taken during the emergency within the premises.
- (24) Free access to the licensed premises shall be given at all reasonable times to any inspecting or sampling officer and every facility shall be afforded to the officer for ascertaining that the provisions of the Act and these rules and the safety conditions are duly observed.
- (25) If the licensing authority or a Controller of Explosives informs in writing, the holder of the licence to execute any repairs or to make any additions or alterations to the licensed premises or machinery, tools or apparatus or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and so necessary for the safety of either on-site or off-site of the premises or persons, the holder of the license shall execute the recommendations and report compliance within the period specified by such authority.
- (26) The licensee shall purchase authorised explosives/ fireworks or safety fuse as mentioned in the list authorised explosives from a licensed factory or company for possession and sale from the magazine.
- (27) The possession and sale of fire-crackers generating noise level exceeding;
 - (a) 125 dB(AI) or 145 dB(C)/pk/at 4 meters distance from the point of bursting shall be prohibited;
 - (b) For individual fire-cracker constituting the series (joined fire-crackers), the above mentioned limit be reduced by $5 \log_{10} (N)$ dB, where N = number of crackers joined together.
- (28) Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority.

Signature, Designation and Seal of Licensing Authority

SET-IX

The following are the conditions of licence number to possess fireworks not exceeding 5,000 kilogrammes or safety fuse not exceeding 50,000 metres, in a storehouse, not for sale but for transfer to own licensed shop; in Form LE-3 [article 3(d)] granted by Controller of Explosives

CONDITIONS

- (1) The quantity of fireworks or safety fuse in the premises at any one time shall not exceed the licensed capacity.
- (2) The licensee shall purchase authorised fireworks or safety fuse as mentioned in the list authorised explosives from a licensed factory or company for possession in the store house.
- (3) No fireworks containing chlorate except paper caps or amorces or colour match or fireworks approved by Chief Controller shall be kept in the premises.
- (4) The opening of packages and the weighing and packing of fireworks or safety fuse shall not be carried out in the store house.
- (5) The store house shall be constructed as per specification given in specification 3 of Schedule VII.
- (6) A person holding licence for possession and sale of fireworks or safety fuse from a shop shall only be eligible for a licence for storehouse.
- (7) The paper caps or amorces or colour or star matches which contain chlorate, which may be permitted to be kept in the store house, shall be kept only if they are separated from each other by an intervening partition wall made of brick or stone with cement mortar to prevent explosion or fire in the one communicating to the other.
- (8) The interior of the store house and the benches, shelves and fittings therein shall be so constructed or so lined or covered as to prevent the exposure of any iron or steel to come in contact with the explosives. Such interior, benches, shelves and fittings shall so far as is reasonably practicable, be kept free from grit and otherwise clean; and in the case of any explosives liable to be dangerously affected by water, due precautions shall be taken to exclude water therefrom.
- (9) Due provisions shall be made, by the use of suitable working clothes without pockets, suitable shoes and by searching or otherwise or by such means, for preventing the introduction into danger area of the store house premises of fire, Lucifer matches or any substance or article likely to cause explosion or fire, but this condition shall not prevent the introduction of an artificial light of such construction, position or character as not to cause any danger of fire or explosion or light of dust proof approved by Chief Controller.
- (10) The licensee shall keep records and accounts of all fireworks manufactured and of all stocks in hand in Form RE-2 and RE-3 and exhibit the stock books and records to any of the officers authorised under the Explosives Rules, 2008 whenever such officer may call upon him to do so.
- (11) No changes or alterations shall be carried out to the premises without prior approval of the licensing authority and the licensee shall comply with any condition that may be specified by the licensing authority in this behalf.
- (12) Store house shall at all times be kept in state of good repair (or maintained in good condition). The licensee shall report to licensing authority forthwith, if the storehouse becomes unfit for storage of any explosives for any reason whatsoever.
- (13) Any encroachment of the safety distance required to be kept clear as shown in enclosed Form DE - 2 shall be immediately communicated to the licensing authority for necessary advice and action.
- (14) The store house shall be used only for possession and for no other purposes. However the premises may be used for other purpose, as permitted by the licensing authority, when no explosives is kept in the premises.
- (15) The licensing authority shall be immediately informed for advice if any fireworks or safety fuse is found deteriorated or unserviceable.
- (16) The fireworks or safety fuse packages shall be stacked in such a way so as to allow movement of at least one person to check the condition of all packages stored and to read the manufacture particulars of each package.
- (17) A distance of 3 metres surrounding the storehouse shall be kept clear of dried grass or bush or flammable materials.
- (18) Every package of fireworks or safety fuse at the time of bringing inside the storehouse shall be examined for its sound condition.
- (19) Not more than 4 persons shall be allowed inside the store house at any one time.

- (20) Empty packages of the fireworks or safety fuse shall be removed at the earliest and destroyed.
- (21) All tools and implements kept or used in opening or closing of packages of fireworks shall be made only of wood, copper, brass or other similar soft metal or shall be covered with some safe and suitable material.
- (22) No person shall smoke or have any Lucifer matches or any other fire producing devices in any part of the premises.
- (23) The licensee and the employee shall be conversant with procedure to be taken during the emergency within the premises.
- (24) Free access to the licensed premises shall be given at all times to any inspecting or sampling officer and all facilities shall be offered to the officer for ascertaining that the provisions of the Act or these rules and the conditions of this licence are duly observed.
- (25) If the licensing authority or a Controller of Explosives inform in writing, the holder of the licence to execute any repairs or to make any additions or alterations to the licensed premises or machinery, tools or apparatus or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and therefore the same is necessary for the safety of either on-site or off-site of the premises or persons, the holder of the license shall execute the recommendations and report compliance within the period specified by such authority.
- (26) The possession of fire-crackers generating noise level exceeding :
 - (i) 125 dB(AI) or 145 dB(C)pk at 4 metres distance from the point of bursting shall be prohibited.
 - (ii) For individual fire-cracker constituting the series (joined fire-crackers), the above-mentioned limit be reduced by $5 \log_{10} (N)$ dB, where N = number of crackers joined together.
- (27) There shall at all times be kept prominently exhibited in clearly legible writing—
 - (a) Licence No. of the premises.
 - (b) The quantity of the various fireworks authorised for storage.
 - (c) The daily opening stock of various fireworks.
- (28) Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority.

Signature, Designation and Seal of Licensing Authority

SET - X

The following are the conditions of licence number to possess and sell from a shop, at any one time, not exceeding 25 kilogrammes of small-arms nitro- compound in Form LE-5 [article 5(a)] granted by District Magistrate.

CONDITIONS

- (1) The holder of this licence is authorised to sell only small arm nitro- compound in quantities not exceeding the quantities as specified in the licence.
- (2) The small arm nitro- compound shall be kept in premises made of non-flammable material which is closed and secured so as to prevent unauthorised persons having access thereto.
- (3) No oil burning lamps, gas lamps or naked lights shall be used in the shed or within the safety distance of the sheds for the purpose of lighting. Any electrical light, if used shall be fixed to the wall or ceiling and should not be suspended by flexible wire.
- (4) The licensee shall keep records and accounts of all explosives in stock and of all sales in form below as the licensing authority may from time to time direct and shall exhibit his stock and his books and records to any of the officers authorised under these rules whenever such officer may call upon him to do so.

Date	Opening balance	Quantity of small arm nitro-compound purchased	Name and licence number of the licensee from whom purchased	Quantity of small arm nitro-compound sold	Closing balance

- (5) All sales under this licence must be made in the premises described in the licence and shall not be sold to any person under the age of 16 years.

- (6) The licensee and the employee shall be conversant with procedure to be taken during the emergency within the premises.
- (7) Free access to the licensed premises shall be given at all reasonable times to any inspecting or sampling officer and every facility shall be afforded to the officer for ascertaining that the provisions of the Act or these rules and the safety conditions are duly observed.
- (8) If the licensing authority informs in writing, the holder of the licence to execute any repairs or to make any additions or alterations to the licensed premises or machinery, tools or apparatus or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and so necessary for the safety of either on-site or off-site of the premises or persons, the holder of the license shall execute the recommendations and report compliance within the period specified by such authority.
- (9) Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licencing authority.

Signature, Designation and Seal of Licensing Authority

SET-XI

The following are the conditions of licence number to possess and sell from a shop, at any one time, not exceeding 100 kilogrammes of manufactured fireworks of Class 7 Division 2 sub-division 2; and 500 kilogrammes of Chinese crackers or sparklers in Form LE-5 [article 5(b)] granted by District Magistrate.

CONDITIONS

- (1) The fireworks shall be kept in a shed/building made of non flammable material, which is closed and secured so as to prevent unauthorised persons having access thereto.
- (2) No oil burning lamps, gas lamps or naked lights shall be used in the shed or within the safety distance of the sheds for the purpose of lighting. Any electrical light, if used shall be fixed to the wall or ceiling and should not be suspended by flexible wire. Switches should be fixed rigidly.
- (3) The licensee and the employee shall be conversant with procedure to be taken during the emergency within the premises.
- (4) Free access to the licensed premises shall be given at all reasonable times to any inspecting or sampling officer and every facility shall be afforded to the officer for ascertaining that the provisions of the Act or these rules and the safety conditions are duly observed.
- (5) If the licensing authority informs in writing, the holder of the licence to execute any repairs or to make any additions or alterations to the licensed premises or machinery, tools or apparatus or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and so necessary for the safety of either on-site or off-site of the premises or persons, the holder of the license shall execute the recommendations and report compliance within the period specified by such authority.
- (6) Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority.
- (7) The licensee shall purchase authorised fireworks as mentioned in the list of authorised explosives from a licensed factory or company for possession and sale from the shop.
- (8) Fireworks / colour /star matches containing chlorates shall be separated from other type of fireworks by intervening partition of such substance and character or by such intervening space, as well effectually prevent explosion or fire in the one communicating with other.
- (9) All sales of fireworks under this licence must be made in the premises described in the licence.
- (10) No fireworks containing chlorate except paper caps or amorces or colour match or fireworks approved by Chief Controller shall be kept in the premises.
- (11) The licensee shall keep records and accounts of all explosives in stock and of all sales in form below as the licensing authority may from time to time direct and shall exhibit his stock and his books and records to any of the officers authorised under these rules, whenever such officer may call upon him to do so.

Date	Opening balance	Quantity of fire works purchased	Name and licence number of the licensee from whom purchased	Quantity of fire works sold	Closing balance
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(12) No fireworks capable of generating noise exceeding level as under shall be stored in the premises and sale from the premises :

- (a) 125 dB(AI) or 145 dB(C)pk at 200 meters distance from the point of bursting shall be prohibited.
- (b) For individual fire-cracker constituting the series (joined fire-crackers), the above mentioned limit be reduced by $5 \log_{10} (N)$ dB, where N = number of crackers joined together.

Signature, Designation and Seal of Licensing Authority

SET - XII

The following are the conditions of licence number to possess and sell or use from a shop, at any one time, not exceeding 2000 numbers of pyrotechnic device explosives of Class 6 Division 1 in Form LE-5 [article 5 (c)] granted by the District Magistrate.

CONDITIONS

- (1) The holder of this licence is authorised to possess for sale or use only pyrotechnic device explosives in quantities not exceeding the quantity as specified in the licence.
- (2) The pyrotechnic device explosives shall be kept in premises made of non-flammable material which is closed and secured so as to prevent unauthorised persons having access thereto.
- (3) No oil burning lamps, gas lamps or naked lights shall be used in the shed or within the safety distance of the sheds for the purpose of lighting. Any electrical light, if used shall be fixed to the wall or ceiling and should not be suspended by flexible wire.
- (4) The licensee shall keep records and accounts of all explosives in stock and of all sales in form below as the licensing authority may from time to time direct and shall exhibit his stock and his books and records to any of the officers authorised under these rules, whenever such officer may call upon him to do so.

Date	Opening balance	Quantity of pyrotechnic device explosives purchased	Name and licence number of the licensee from whom purchased	Quantity of pyrotechnic device explosives sold	Closing balance
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- (5) The licensee and the employee shall be conversant with procedure to be taken during the emergency within the premises.
- (6) Free access to the licensed premises shall be given at all reasonable times to any inspecting or sampling officer and every facility shall be afforded to the officer for ascertaining that the provisions of the Act or these rules and the safety conditions are duly observed.
- (7) If the licensing authority informs in writing, the holder of the licence to execute any repairs or to make any additions or alterations to the licensed premises or machinery, tools or apparatus or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and so necessary for the safety of either on-site or off-site of the premises or persons, the holder of the license shall execute the recommendations and report compliance within the period specified by such authority.
- (8) Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority.

Signature, Designation and Seal of Licensing Authority

SET-XIII

The following are the conditions of licence number to possess for use Gunpowder not exceeding 5 kilogrammes. and safety fuse not exceeding 50 meters in the States of Bihar, West Bengal, Kerala and Tamilnadu in Form LE-5 [article 5(d)] granted by District Magistrate.

CONDITIONS

- (1) The maximum quantity of gunpowder, which may be kept at one time on the licensed premises, shall not exceed 5 Kilograms.
- (2) Gunpowder shall be kept in a secured substantial receptacle.
- (3) The interior of every receptacle used for keeping gunpowder shall be so constructed or so lined and covered as to prevent the exposure of any iron or steel or the detaching of any grit, iron, steel or similar substance in such manner as to come into contact with the gunpowder.
- (4) The receptacle in which gunpowder is kept must be kept locked and used only for the keeping of such gunpowder and for no other purpose whatsoever.
- (5) Gunpowder exceeding 0.5 kilogramme in amount must be kept in a substantial bag, canister or case made and closed so as to prevent any gunpowder from escaping and shall be otherwise packed and marked in accordance with the requirements of rule 14 and 15 of Explosives Rules, 2008.
- (6) No oils, paints, matches, lights or any article of a highly inflammable or explosive nature or liable to cause fire or explosion or any acids or similar substances shall be brought or kept on the licensed premises.
- (7) The licensee shall at the time of purchasing have the following particulars endorsed upon his licence and signed by the person delivering the gun powder :

Name and address and licence number of the person delivering gun powder	Signature	The quantities of gun powder purchased	Name and address of the person who takes delivery	The date of purchase
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- (8) The licensee shall keep register of all receipts and issues in such form shall exhibit his stock and register to any of the officers authorised under rule 128 of these rules, whenever such officer may call upon him to do so.
- (9) The licensee and the employee shall be conversant with procedure to be taken during the emergency within the premises.
- (10) Free access to the licensed premises shall be given at all reasonable times to any inspecting or sampling officer and every facility shall be afforded to the officer for ascertaining that the provisions of the Act or these rules and the safety conditions are duly observed.
- (11) If the licensing authority informs in writing, the holder of the licence to execute any repairs or to make any additions or alterations to the licensed premises or machinery, tools or apparatus or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and so necessary for the safety of either on-site or off-site of the premises or persons, the holder of the license shall execute the recommendations and report compliance within the period specified by such authority.
- (12) Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority.

Signature, Designation and Seal of Licensing Authority

SET-XIV

The following are the conditions of licence number to possess for use of small-arms nitro-compound not exceeding 5 kilogrammes in the State of Kerala in Form LE 5 [article 5(e)] granted by District Magistrate.

CONDITIONS

- (1) The maximum quantity of small-arms nitro-compound, which may be kept at one time on the licensed premises, shall not exceed 5 kilogrammes.
- (2) Small-arms nitro-compound exceeding 0.5 kilogramme shall be kept in a substantial bag, canister or case made and closed so as to prevent any small-arms nitro-compound from escaping and shall be otherwise packed and marked in accordance with the requirements of rules 14 and 15 of these rules.
- (3) The interior of every receptacle used for keeping small-arms nitro-compound shall be so constructed or so lined and covered as to prevent the exposure of any iron or steel or the detaching of any grit, iron, steel or similar substance in such manner as to come into contact with the small-arms nitro-compound.
- (4) The receptacle in which small-arms nitro-compound is kept must be kept locked and used only for the keeping of such small-arms nitro-compound and for no other purpose whatsoever.
- (5) No oils, paints, matches, lights or any article of a highly inflammable or explosive nature or liable to cause fire or explosion or any acids or similar substances shall be brought or kept on the licensed premises.
- (6) The licensee shall at the time of purchasing have the following particulars endorsed upon his licence and signed by the person delivering the small-arms nitro-compound.

Name and address and licence Number of the person delivering small-arms nitro-compound	Signature	The quantities of small-arms nitro-compound purchased	Name and address of the person who takes delivery	The date of purchase
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- (7) The licensee shall keep register of all receipts and issues in above form and shall exhibit his stock and register to any of the officers authorised under rule 128 of the Explosives Rules, whenever such officer may call upon him so to do.
- (8) The licensee and the employee shall be conversant with procedure to be taken during the emergency within the premises.
- (9) Free access to the licensed premises shall be given at all reasonable times to any inspecting or sampling officer and every facility shall be afforded to the officer for ascertaining that the provisions of the Act and these rules and the safety conditions are duly observed.
- (10) If the licensing authority informs in writing, the holder of the licence to execute any repairs or to make any additions or alterations to the licensed premises or machinery, tools or apparatus or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and so necessary for the safety of either on-site or off-site of the premises or persons, the holder of the license shall execute the recommendations and report compliance within the period specified by such authority.
- (11) Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority.

Signature, Designation and seal of licensing authority

SET-XV

The following are the conditions of licence number to possess and sell from a shop manufactured fireworks of Class 7 Division 2 sub-division 2 exceeding 100 kilogrammes but not exceeding 300 kilogrammes, and Chinese Crackers or Sparklers (manufactured fireworks of Class 7, Division 2, sub-division 1) exceeding 500 kilogrammes but not exceeding 1200 kilogrammes in Form LE 5 [article 5(f)] granted by Controller of Explosives

CONDITIONS

- (1) The fireworks shall be kept in a shed/building made of non flammable material, which is closed and secured so as to prevent unauthorised persons having access thereto.

- (2) No oil burning lamps, gas lamps or naked lights shall be used in the shed or within the safety distance of the sheds for the purpose of lighting. Any electrical light, if used shall be fixed to the wall or ceiling and should not be suspended by flexible wire. Switches should be fixed rigidly.
- (3) The licensee and the employee shall be conversant with procedure to be taken during the emergency within the premises.
- (4) Free access to the licensed premises shall be given at all reasonable times to any inspecting or sampling officer and every facility shall be afforded to the officer for ascertaining that the provisions of the Act or these rules and the safety conditions are duly observed.
- (5) If the licensing authority informs in writing, the holder of the licence to execute any repairs or to make any additions or alterations to the licensed premises or machinery, tools or apparatus or carry out recommendations, which are in the opinion of such authority may pose unacceptable risk and so necessary for the safety of either on-site or off-site of the premises or persons, the holder of the license shall execute the recommendations and report compliance within the period specified by such authority.
- (6) Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority.
- (7) No fireworks containing chlorate except paper caps or amerces or colour match or fireworks approved by Chief Controller shall be kept in the premises.
- (8) The licensee shall purchase authorised fireworks as mentioned in the list of authorised explosives from a licensed factory or company for possession and sale from the shop.
- (9) Fireworks /colour/star matches containing chlorates shall be separated from other type of fireworks by intervening partition of such substance and character or by such intervening space, as well that effectually prevent explosion or fire in the one communicating with other.
- (10) All sales of fireworks under this licence must be effected on the premises described on the face of the licence.
- (11) The licensee shall keep records and accounts of all explosives in stock and of all sales in form below as the licensing authority may from time to time direct and shall exhibit his stock and his books and records to any of the officers authorised under these rules, whenever such officer may call upon him to do so.

Date	Opening balance	Quantity of fire works purchased	Name and licence number of the licensee from whom purchased	Quantity of fire works sold	Closing balance
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- (12) No fireworks capable of generating noise exceeding level as under shall be stored in the premises and sold from the premises :
 - (a) 125 dB(AI) or 145 dB(C)pk at 4 meters distance from the point of bursting shall be prohibited
 - (b) For individual fire-cracker constituting the series (joined fire-crackers), the above mentioned limit be reduced by $5 \log_{10} (N)$ dB, where N = number of crackers joined together.

2Signature, Designation and seal of licensing authority

SET-XVI

Permission to manufacture, possess and sell colour or star matches under sub-rule (2) of rule 9 of the Explosives Rules, 2008

Number

Permission is hereby granted to.....(name and address) valid only to manufacture, possess and sell colour and /or star matches at any one time at the premises described below subject to the conditions given below :

This permission is liable to be suspended or revoked for any violation of the Act or these rules or the conditions of this permission or if the premises are not found conforming to the description shown in the attached plans and annexure.

Description of the premises

The permitted premises shown in plan number attached hereto are situated at District.....State.....and consist of

Dated the20....

[Chief Controller of Explosives]

CONDITIONS

- (1) The manufacture of colour or star matches shall be done in a factory approved by the Chief Controller of Explosives.
- (2)(a) The colour or star matches shall be manufactured in one or more lightly constructed single storied buildings(s) which may be divided into rooms. The quantity of colour and / or star matches or its ingredients in the manufacturing rooms and bonded storage room shall not exceed the following quantity:

Serial Number	Room	Quantity for manufacture of 100 kilogrammes at a time	Quantity for manufacture of 200 kilogrammes at a time	Quantity for manufacture of 500 kilogrammes at a time
1.	Mixing	20	40	100
2.	Drying dipped splints	20	40	100
3.	Dipping	20	40	100
4.	Box filling	10	20	50
5.	Painting/side painting	10	20	50
6.	Band rolling	10	20	50
7.	Packing	10	20	50
8.	Bonded storage	200	500	2000

- (b) Not more than four persons shall be allowed at any time in any of the manufacturing rooms namely Mixing, Drying and Dipping rooms.
- (c) Doors of all the rooms shall open outwards.
- (d) A clear space of 6 metres, 9 metres or 15 metres for the manufacturing capacity of 100 Kilogrammes, 200 Kilogrammes or 500 Kilogrammes, respectively, shall be maintained all round the factory building. Barbed wire fencing or wall of 2 metres high and adequate strength shall be provided along the perimeter of the safety zone.
- (e) The manufacturing and storage rooms shall have adequate space to accommodate comfortably the prescribed quantity of explosives and the number of persons.
- (3) (a) The explosive mixture on each stick shall not exceed 0.8 gramme in the case of colour match and 1.0 gramme in the case of star match.
- (b) The side painting on each box shall have a clearance of at least 2 millimetres from the edges.
- (4) (a) Ingredients shall be kept adequately separated until mixing. Potassium Chlorate shall be kept in a separate room away from the other ingredients storage.
- (b) Mixing of the ingredients shall be done under solvent or water. Any electrical grinder used for mixing shall have flameproof / dust tight motor and accessories as the case may be.
- (c) The dipped splinter frames shall be dried in racks not exceeding 1.8 metres in height and the number of such racks in the drying room shall not exceed 10 in number. Each rack shall hold a maximum of 10 frames placed in the alternate groves.
- (d) The matches shall not be accumulated unpacked and shall be packed as soon as they are dried.
- (e) The manufacture shall be done only between sunrise and sunset.

- (f) No loose explosives composition shall be left in the factory at the end of the working day. All such material shall be carefully collected and destroyed at the end of the day as per the procedure laid down.
- (5) (a) The interior of the manufacturing rooms and the fittings therein, other than machinery, shall be so constructed, lined or covered as to prevent exposure of any iron or steel or detaching of any grit, iron or similar substance in such manner as to come in contact with any explosives. The interior including the floor of the rooms shall be kept clean and free from grit.
- (b) No tools, implements, balance, weights, receptacles etc. made of iron or steel shall be brought or kept at any time in the licensed premises.
- (c) No stone implements such as mortars, pestles, grinders etc. shall be used for grinding, mixing or pounding of match composition.
- (6) (a) All due precautions shall be taken during drying of the match sticks and in handling dried matches. No smoking, fire or naked light shall be allowed in the premises.
- (b) Adequate provisions of water shall be made in the premises for purpose of fire fighting.
- (7) (a) If Controller of Explosives calls upon the manufacturer of colour and/ or star matches by notice in writing to execute any repairs or to make any alterations to the factory premises which are in the opinion of such authority necessary for the safety of the premises or of the persons working in the factory, the manufacturer shall execute the repairs, alterations within the period specified in the notice.
- (b) No change in the manufacturing process and no addition/alteration in the premises shall be carried out without permission from the Chief Controller of Explosives.
- (8) (a) No persons shall commit or attempt to commit any act which may tend to cause fire or explosion in or about any place where colour and /or star matches are manufactured, stored, handled or transported.
- Provided that nothing in this connection shall apply to any act which is reasonably necessary for the purpose of manufacture, storage or handling during transport of any such matches or of any article present therewith.
- (b) Every person in charge of or engaged in the manufacture, sale, transport or handling of colour or star matches shall at all times :
- (i) observe all the precautions for the prevention of accidents by fire or explosion;
- (ii) prevent unauthorised persons from having access to the body composition and head composition;
- (iii) prevent any other person from committing any such act as is prohibited under sub-condition (a) above.
- (9) The manufacture of colour or star matches shall be done under the supervision of qualified and competent person.
- (10) Free access to the factory premises shall be given at all times to any authorised inspecting or sampling officer and all facilities shall be offered to such officer for ascertaining that the provisions of the Act, these rules or the conditions of this permission are duly observed.
- (11) Accidents by fire or explosion and losses, shortage or theft of explosives shall be immediately reported to the nearest police station and the licensing authority and local office of the licensing authority.
- (12) If the factory is used for manufacture of safety matches as well, such manufacture shall be completely discontinued and the premises and its ingredients shall be freed of safety match before taking up manufacture of colour or star matches. The Controller of Explosives in whose jurisdiction the factory is situated shall be intimated before commencing manufacture of colour or star matches and on its completion. After completion of manufacture and before resuming manufacture of safety match, the premises shall be made free of all compositions used in the manufacture of colour or star match.
- (13) No person under 18 years of age and no person who is in a state of intoxication or of unsound mind shall be employed in or allowed to enter the factory.
- (14) The colour or star matches shall not be stored, handled or transported along with other items of fireworks, safety matches, flammable or hazardous materials.
- (15) No person shall import, export, transport, manufacture, possess, use or sell any colour/star matches which is not approved by Chief Controller of Explosives

[Chief Controller of Explosives]

Part - 5

Forms of Accounts and Returns of Explosives

FORMRE - 1

(See rule 112 of the Explosives Rules, 2008)

Application for Renewal or revalidation of licence or certificate

(See also note below before filling up the form)

Form : _____

To, _____

Dear Sir,

1. I,..... on behalf of apply for renewal of licence or certificate number..... inform.....for the period from.....to.....and furnish the following information :

During the last five years—

(i) I was/we were—

(a) not convicted/convicted and sentenced for.....for following offences.....

(b) not ordered/ordered to execute under Chapter VIII of Code of Criminal Procedure, 1973, a bond for keeping peace or for good behaviour.

(c) Not issued any direction from the Court in connection with the above said licence or certificate.

(Give details if answer in affirmative)

(ii) Licence or certificate No.....in Form.....granted under the Act and these rules to me/us were cancelled/not renewed by the licensing authority.

2. I/We also enclose the following documents:

(i) Licence or certificate No.....in Form.....together with approved plans and schedules.

(ii) Renewal fee of Rs.....by bank draft of.....(name of issuing bank) bearing numberdatepayable in favour of.....

3. I/We confirm that I/we shall inform you about the court's order or direction, interim or otherwise, if any issued in connection to the licence for which renewal is being applied, failing which I/we shall commit a punishable offence.

4. I/We hereby certify that

(i) the above particulars given by me/us are correct.

(ii) I am/we are aware that if explosives are illegally transferred by me/us to any unauthorised person(s), I/we shall commit a punishable offence.

(iii) I am/we are aware that if I/we conceal any material information relevant to this application, I/we shall commit a punishable offence and in addition, any administrative action can be taken against me/us.

Signature of Licensee or certificate holder.....

(Authorised person in case of company)

Place.....

Date of application.....

Notes.— (1) The complete renewal or revalidation application should reach the renewal authority before the expiry date of licence or certificate, to avoid payment of late fees.

(2) Strike out the inapplicable portion.

FORM RE - 2**(See rule 24 of the Explosives Rules, 2008)****Form of account to be maintained by a licensee****Accounts of explosives manufactured (other than fireworks)**

Note.—This record should be kept up to-date.

Licence number..... in Form of Explosives Rules, 2008

Date and shift number	Brand name of explosives	Class and Division	Dimensions of finished products	Batch number
1	2	3	4	5

Quantity manufactured	Date of test	No. of packages	Magazine or storehouse licence number to which the explosives sent	Remarks	Signature of person in-charge or licensee
6	7	8	9	10	11

FORMRE-3**(See rule 24 of the Explosives Rules, 2008)****Form of account to be maintained by a licensee****Accounts of receipt of explosives (other than fireworks)**

Note- This record should be kept up to-date. Entries should be made daily and as and when explosives are received.

Licence number..... in Form of Explosives Rules, 2008

Date	Description of explosives			Opening balance	Explosives received by licensee	Quantity
	Name	Class	Division			
1	2	3	4	5	6	7

Batch No.	Name, address and licence number of supplier	Mode of transport and road van licence number if transported by road	Pass No.	Closing balance	Remarks	Signature of licensee or person in charge
8	9	10	11	12	13	14

FORM RE - 4

(See rule 24 of the Explosives Rules, 2008)

Form of account to be maintained by a licensee

Accounts of sale of explosives (other than fireworks)

Note - This record should be kept up to date. Entries should be made daily and as and when explosives are sold.

Licence number..... in Form of Explosives Rules, 2008

Date	Description of explosives		
	Name	Class	Division
1	2	3	4

Opening Balance	Explosives sold by licensee		
	Name	Class	Division
5	6	7	8

Quantity	Batch number and Date	Name, address and licence number of person to whom explosives are sold	Mode of transport and road van licence number if transported by road
9	10	11	12

Pass number	Closing balance	Remarks	Signature of licensee or person in charge
13	14	15	16

FORMRE - 5

(See rule 24 of the Explosives Rules, 2008)

Form of account to be maintained by a licensee

Accounts of explosives used by licensee (other than fireworks)

Note - This record should be kept up to date. The entries should be made daily and as soon as explosives are issued for use or unused explosives are returned.

Licence number..... in Form of Explosives Rules, 2008

Date	Shot Firers name and permit number.	Description of explosives		
		Name	Class	Division
1	2	3	4	5

Quantity issued	Number of holes fired	Description of explosives		
		Name	Class	Division
6	7	8	9	10

Quantity used	Description of explosives		
	Name	Class	Division
11	12	13	14

Quantity returned	Signature of shot firer of magazine in charge	Remarks
15	16	17

FORMRE - 6

(See rule 61(2) of the Explosives Rules, 2008)

Form of records to be maintained by a licensee**Records of explosives transported by road van**

Note - This record should be kept up to date.

Licence number..... in Form of Explosives Rules, 2008

Date	Name, address and licence number of the consignor	Place of loading
1	2	3

Description of explosives			Batch number and date of manufacture	Quantity transported
Name	Class	Division		
4	5	6	7	8

Pass number	Signature of the consignor	Name, address and licence number of the consignee	Place of unloading
9	10	11	12

Date of unloading of explosives	Signature of consignee	Remarks
13	14	15

FORMRE - 7

(See rule 24 of the Explosives Rules, 2008)

Return of explosives

Received, used, sold, destroyed and stolen during the month of.....
 in respect of the explosives magazine or store house of
 situated at.....District.....State.....

 Name of Explosives, Class and Division Quantity

1. Licence number in Form of Explosives Rules, 2008
2. Opening balance on the 1st day of the quarter:
3. Account of explosives:

Date	Name of explosives	Class and Division	Quantity
1	2	3	4
1.			
2.			
3.			
4.			

Particulars of explosives received

Name of explosive	Class and Division	Quantity	Name, address and licence number of suppliers from whom explosives were received	Pass no.	Road van licence number
5	6	7	8	9	10

Date	Particulars of explosives used or sold		
	Name of explosive	Class and Division	Quantity
11	12	13	14

Sold

Name of explosive	Class and Division	Quantity	Name, address and licence number of person to whom explosives were sold	Pass no.	Road van licence number
15	16	17	18	19	20

4. Total quantity of each kind of explosives used or sold during the quarter

Used		
Name of explosives	Class and Division	Quantity
1	2	3
1.		
2.		
3.		
4.		

Sold		
Name of explosives	Class and Division	Quantity
4	5	6
1.		
2.		
3.		
4.		

5. Particulars of explosives destroyed during the quarter

Date	Name of explosives	Class and Division
1	2	3
1.		
2.		
3.		
4.		

Quantity	Reasons for destruction	Authority under which destruction was done
4	5	6

6. Particulars of explosives stolen or short received

Date	Name of explosives	Class and Division
1	2	3
1.		
2.		
3.		
4.		

Quantity	Whether theft or loss reported to police and Department of Explosives, if so, give reference	Remarks
4	5	6

1.		
2.		
3.		
4.		

FORMRE-8

[See rule 45(1)(a) of the Explosives Rules, 2008]

Declaration to be submitted to the Chief Controller by an importer on despatch of explosives from the place or port of loading

Name and address of the importer	Import licence number granted by Central Government and kinds and quantities of explosives permitted to be imported and date of expiry of licence	Import licence number granted by Chief Controller and date of expiry of the licence.	Name and address manufacturer of explosives
----------------------------------	---	--	---

Kind and quantities of explosives on the ship or aircraft

Name and Description	Class and Division	Date of manufacture
----------------------	--------------------	---------------------

Name and address of consignor	Place or port of despatch	Name of ship or airlines and date of sailing or air lift	Place or port of import	Likely date of arrival
-------------------------------	---------------------------	--	-------------------------	------------------------

Batch number	Quantity	Number of packages
--------------	----------	--------------------

Signature of Importer

Date :

Place:

(Authorised person in case of a Company)

Name in full.....

Address.....

.....

FORMRE-9

[See rule 45(1)(b) of the Explosives Rules, 2008]

Importer's despatch Schedule

This declaration should be filled up and forwarded in triplicate to Chief Controller as soon as any consignment of explosives is cleared from the place or port of import.

Name and address of importer	Import licence number granted by Chief Controller under Explosives Rules and date of expiry of licence	Description of explosives	Name and address of the manufacturer of explosives
------------------------------	--	---------------------------	--

Particulars of despatch from place or port of import.

Name and address of licensee to whom explosives were despatched	Licence number and Form	Quantity of explosives despatched			
		Name and description	Class and Division	Quantity	Number of packages

Name and address of consignor	Quantity of explosives imported	Place or port from which explosives were forwarded	Name of ship or airlines	Date of arrival and place or port of import
-------------------------------	---------------------------------	--	--------------------------	---

Batch number and date	Date of despatch	Mode of despatch	Road van licence number if despatched by road
-----------------------	------------------	------------------	---

Date:.....

Signature of importer.....
 (Authorised agent in case of company)
 Name in full
 Address

FORM RE - 10

(See rule 46 of the Explosives Rules, 2008)

Declaration to be submitted to the Chief Controller by an exporter on despatch of explosives from the place or port of loading

Name and address of exporter	Exporter's licence number granted by Chief Controller under Explosives Rules and date of expiry of licence	Description of explosives exported	Name and address of the manufacturer of explosives
------------------------------	--	------------------------------------	--

Particulars of despatch from place or port of export.

Name, address and authority of person to whom explosives were despatched	Kinds and quantity of explosives exported			
	Name and description	Class and Division	Quantity	Number of packages

Place or port from which explosives were exported	Name of ship or air lines	Date of despatch
---	---------------------------	------------------

Batch No. and date	Mode of despatch	Road van licence number if despatched by road
Date		Signature of exporter..... (Authorised agent in case of company) Name in full Address

FORM RE -11

(See rules 50 and 77 of the Explosives Rules, 2008)

Form of indent for explosives

Place.....
Date.....

To,
.....
.....
.....

Dear Sir,

Kindly supply the following quantities of explosives to me/us:—

Sl. No.	Name	Class and Divmision	Quantity
1.			
2.			
3.			
4.			
5.			

I/We hold a licence number.....in Form.....of Explosives Rules, 2008 for possession for sale or use of following quantities of explosives:

Sl. No.	Name	Class and Division	Quantity
1.			
2.			
3.			
4.			
5.			

The abovementioned licence is valid till.....

*The licence is sent herewith for necessary endorsement as required under rule.... of Explosives Rules, 2008. The licence may please be returned after the endorsement.

I/We solemnly declare that

- (a) the receipt of explosives indented will not result in the licensed quantity being exceeded; and
- (b) no identical indent has been placed with any other supplier

*The explosives may please be handed over to my/our-authorized representative whose signatures are attested below :

Attested

Signature of Licensee.

Yours faithfully,

Licensee

Designation

Copy forwarded to the Controller of Explosives.....

*Strike out whichever is not applicable.

FORM RE-12

(See rules 47 and 50 of the Explosives Rules, 2008)

Pass issued by the consignor for transport of a consignment of explosives.

1. No.
2. This pass covers.....packages containing following explosives :

Name and description	Class	Division if any	Quantity	Number of packages	Batch number and date
(i)					
(ii)					
(iii)					
(iv)					
(v)					

While in transit fromto

3. The explosives are being transported by rail or road van numberhaving licence number till or lorry number other on mechanically propelled vehicle.
4. Name and address of consignee
5. Number and Form of Consignee's licence
6. Consignee's order number and date and quantity of each explosives ordered
7. Consignee's letter number and date intimating readiness to receive explosives.....
8. Date of despatch of consignment
9. Approximate date on which consignment should reach in destination.

Signature of the consignor

Licence number.....

Licence form

Part-6**Certificates, Declaration and Distance Forms****Form CE - 1****(See rules 45 and 48 of the Explosives Rules, 2008)**

TEST CERTIFICATE FOR EXPLOSIVES

Certified that samples of the explosives of the description given below have been tested and have passed the tests set forth in Schedule III as applicable to such explosive and in the case of explosives of the 1st Division of class 3 (Nitro-compounds) or class 4 (Chlorate Mixture), that there are no signs of liquefaction or of exuded nitro-glycerine or liquid nitro-compound.

Name and address of importer* /consignor	Description of explosives	Number of packages	Date of manufacture and batch number	Actual time taken in Heat Test for tint to appear	Remarks
--	---------------------------	--------------------	--------------------------------------	---	---------

This certificate is valid for twelve months only that is to say it expires on the Day of20 provided that, in case of nitro-glycerine compounds which are not used as propellants, it shall expire on the 31st day of July following.

Date :

Signature of Testing Officer

Place:

Designation

*Name of importer in case of import, and consignor in case of transport.

Form CE - 2**(See Rule 45 of the Explosives Rules, 2008)**

Declaration to be made by the master of a ship carrying explosives before entering a port or by the ship's agent.

1. Name of ship.....
2. Date of Arrival at.....Port.....

Description of explosives	Date of manufacture, batch number and other distinguishing marks cases	Total quantity carried Kilogramme/Cases	Quantity to be landed at port Kilogramme/Cases	Remarks
---------------------------	--	--	---	---------

Date :

Signature of Master/Agent of Ship

Form CE - 3

(See rule 103 of the Explosives Rules, 2008)

FORM OF INDEMNITY BOND

To

The President of India,

I/wecarrying on business as manufacturer(s) of fireworks and/or gunpowder and having a factory or shop at.....and I/we of sureties on his or their behalf hereby jointly and severally agree and undertake that we shall pay to the President of India, his successors and assigns on demand a sum of Rs..... for which payment to be well and truly made we bind ourselves, our respective heirs, executors, administrators and assigns. I/We agree that the dependents of such workers as may die as a result of accidents occurring in the factory or shop above mentioned and that such compensation amounts shall be a first charge on the immovable properties mentioned in the Schedule hereunder and that the above undertaking shall remain in force until all compensation payable hereunder have been fully paid and shall be binding upon us, our respective heirs, executors, administrators and assigns.

We, our heirs, executors, administrators and assigns jointly and severally undertake to keep the President of India indemnified against all claims that may be made on behalf of workers dying as a result of accidents. In case the compensation awarded is paid to the dependants by us or by our heirs, executors, administrators and assigns the above written bond shall be void but otherwise it shall remain in full force and virtue.

It is hereby agreed that the liability of the sureties hereunder shall not be discharged by reason of time being granted or any other indulgence shown to the Principal(s) nor shall it be necessary for the President of India to sue the Principal(s) before suing the sureties for the amounts due hereunder.

SCHEDULE ABOVE REFERRED TO

(Here full description of the immovable properties should be given)

.....
.....
.....

In witness whereof these presents have been duly executed on theday of20.....

Full signature of licensee.....

Father's name in full

Age.....

Profession.....

Residence.....

Full Signature of Surety.....

Father's name in full.....

Age.....

Profession.....

Residence.....

Station.....

Date.....

Executed in my presence

District Magistrate

.....

Form DE - 1**(See rule 113 of the Explosives Rules, 2008)**

Distance form to be submitted by the applicant indicating the clear distances available around proposed storage magazine for explosives or fire works or proposed explosives factory

Proposed kinds and quantity of explosives

Type of structure(s)	Safety distance required as per Explosives Rules, 2008 metres	Distance actually observed metres
----------------------	---	-----------------------------------

Inside Safety Distance (ISD)

1. Room or works used in connection with the magazine
2. Any other explosives magazine
3. Magazine office for this magazine

Middle Safety Distance (MSD)

4. Dwelling house of the security guard of the magazine
5. Railway including private Railway
6. Canal (in active use) or other navigable water
7. Dock or Pier or Jetty
8. Public highway or Public roads
9. Private road which is a principal means of access to a temple, mosque, church, gurudwara or other places of worships, hospital, college, school or factory
10. River embankment or sea embankment or Public well
11. Reservoir or bounded tank or rope way
12. Wind mill or solar panel for power generation

Outside Safety Distance(OSD)

13. Dwelling house
14. Government and Public building
15. Temple, mosque, gurudwara, church or other place of worship
16. Shops, market place, public, recreation and sports ground, College, School, hospital, theatre, cinema or other buildings, where the public are accustomed to assemble
17. Factory
18. Buildings or works used for the storage in bulk of petroleum spirit, gas or other inflammable or hazardous substance
19. Building or works used for the manufacture of explosives or of articles which contain explosives
20. Aerodrome
21. Furnace, Kiln or chimney
22. Quarry or mine pit head
23. Power house or electric sub-station
24. Wireless Station
25. Warehouse or other storage buildings
26. Any other protected works

Over head Electric lines

27. Electric Powerover head Transmission lines above 440 V
28. Electric Powerover head Transmission lines up to 440 V

Date

Signature of applicant.....

(Authorised person in case of company)

Name in full.....

Address.....

Form DE - 2**(See rule 113 of the Explosives Rules, 2008)**

(Distance Form to be attached to the licence)

Safety distances required to be kept clear around magazine for high explosives or fire works or factory licence number.....in formgranted to.....

Type of structure(s)	Safety distance metres
Inside Safety Distance (ISD)	
1. Room or works used in connection with the magazine	
2. Any other explosives magazine.	
3. Magazine office for this magazine	
Middle Safety Distance (MSD)	
4. Dwelling house of the security guard of the magazine	
5. Railway including private Railway	
6. Canal (in active use) or other navigable water	
7. Dock or Pier or Jetty	
8. Public highway or Public roads	
9. Private road which is a principal means of access to a temple, mosque, church, gurudwara or other places of worships, hospital, college, school or factory	
10. River embankment or sea embankment or Public well	
11. Reservoir or bounded tank or rope way	
12. Wind mill or solar panel for power generation	
Outside Safety Distance(OSD)	
13. Dwelling house	
14. Government and Public building	
15. Temple, mosque, gurudwara, church or other place of worship	
16. Shops, market place, public, recreation and sports ground, College, School, hospital, theatre, cinema or other buildings, where the public are accustomed to assemble	
17. Factory	
18. Buildings or works used for the storage in bulk of petroleum spirit, gas or other inflammable or hazardous substance	
19. Building or works used for the manufacture of explosives or of articles which contain explosives	
20. Aerodrome	
21. Furnace, Kiln or chimney	
22. Quarry or mine pit head	
23. Power house or electric sub-station	
24. Wireless Station	
25. Warehouse or other storage buildings	
26. Any other protected works	
Overhead Electric lines	
27. Electric Power overhead Transmission lines above 440 V	
28. Electric Power overhead Transmission lines up to 440 V	

[Controller of Explosives/Chief Controller of Explosives]

Schedule - VI**Part 1****Safety provisions for manufacture of explosives****I. Process:**

The sensitive operations and processes including cleaning, disposal of waste, shall have control mechanism (remote control, temperature control, heating medium, etc) to the satisfaction of the Chief Controller of Explosives

II. Machineries and equipments:

Vessels and machineries for making and processing explosives, electrical equipments, protection against static charge, maintenance of electrical equipments, personnel protection etc should be suitable for safe operation of the process.

Part 2**Safety provisions for Bulk Mixing Delivery (BMD) Vehicles**

- (1) No welding or cutting shall be performed on a bulk mixing delivery vehicle until the vehicle has been washed down and all explosive material, ingredients, oxidizer have been removed. Before welding or cutting on a hollow shaft, the shaft shall be thoroughly cleaned inside and outside and vented with sufficient ventilation.
- (2) Plastic tubes shall not be used as hole liners if the hole contains an electric detonator.
- (3) All spills or leaks shall be cleaned up immediately.
- (4) No welding or open flames shall be used in or around any part of the delivery equipment unless it has been completely washed down and all oxidizer materials removed.
- (5) Before welding or repairs to hollow loading shafts, the shaft shall be thoroughly cleaned inside and outside and vented.
- (6) The entire loading and mixing equipment shall be cleaned to prevent hazardous accumulations of ingredients and before open flame work is performed on the unit.
- (7) Mixing of blasting agents shall not be performed during transit.
- (8) The location chosen for water gel or ingredient transfer from a support vehicle into the borehole loading vehicle shall be away from the blast hole site when the bore holes are loaded or in the process of being loaded.
- (9) No person shall smoke, carry matches or any flame-producing device, or carry any fire arms while in or about bulk vehicles effecting the mixing transfer or down-the-hole loading of blasting agents at or near the blasting site.
- (10) BMD vehicle shall only be driven by a capable and competent driver familiar with regulations applicable to explosive materials, and the requirements of these rules.
- (11) The BMD vehicle operator shall be trained in the safe operation of the vehicle, as well as with its mixing, conveying, and related equipments. The operator shall be familiar with the general procedure for handling emergency situations.
- (12) Caution shall be exercised in moving the vehicle in the blasting area to avoid driving the vehicle over or dragging hoses over firing lines, cap wires, or explosive materials. The driver shall obtain the assistance of a second person to guide the driver's movements when moving the vehicle in the charging area.
- (13) Material shall not be mixed while vehicle is in motion.
- (14) Pneumatic loading from bulk mixing delivery vehicles into blast holes primed with electric blasting caps or other systems sensitive to static-electricity shall be provided with semi conductive discharge hose and suitable earthing device to prevent the accumulation of static charges.
- (15) When electric power is applied by a self-contained motor-generator located on the vehicle, the generator shall be separated from the discharge point of the explosives. The generator or the battery shall be provided with a cut-off switch in a readily accessible position.
- (16) Wiring shall be so fixed and protected so as to minimize accidental damage or undue wear.
- (17) The BMD vehicle body and equipment shall be electrically continuous with the vehicle chassis. The frame of the mixer and all other equipment that may be used shall be electrically bonded. Bonding points and bonding cables for effective grounding shall be provided.

Part-3**Safety provisions for transport of explosives by water**

- (1) Notice of loading on or unloading from ships or vessel. —No explosive shall be loaded on or unloaded from a ship or vessel within the limits of a port unless 48 hours' notice in writing of the intended time and place of such operation has been given to the Conservator of the port.
- (2) Steamer fires and lights.—No explosives shall be loaded on or unloaded from any ship or vessel —
 - (a) unless the engine room fires have been previously carefully banked up, and all other fires and lights extinguished;
 - (b) while the ship or vessel is attached to or alongside of any steam vessel or steam tug unless the engine room fires of such steam vessel or steam tug, have previously been carefully banked up and all other fires and lights have been previously extinguished:

Provided that nothing in this rule shall prevent the employment of an artificial light or ship's signal lights of a type approved in writing by the Chief Controller in areas outside the port limits and by the Conservator of the port within the port limits:

Provided further that a steam tug may be employed at the port of Chennai to place boats alongside a ship carrying explosives or to remove them but no loading or unloading operations shall be carried on so long as a tug is within a distance of 50 metres from the ship.

- (3) Storage.—No explosives shall be stowed in a ship except in accordance with regulations contained in the Merchant Shipping Carriage of Dangerous Goods Rules, 1978.
- (4) Conveyance of explosives on special trade passenger ships.—Any authorised explosives satisfying the requirements of these provisions may be transported in a properly constructed magazine on a trade passenger ship to which Part VIII of the Merchant Shipping Act, 1958 (44 of 1958-Annexure II) applies being a home trade ship as defined in clause (16) of section 3 of the said Act:

Provided that—

- (a) the consignor satisfies the certifying officer referred to in section 243 of the Merchant Shipping Act, 1958 (44 of 1958-AnnexureII) that no other means of conveying the explosives are available;
 - (b) the magazine complies in all respects with the specifications for magazines in ships laid down by the Board of Trade and is approved by the Surveyors of the Mercantile Marine Department;
 - (c) the explosives are packed and marked in accordance with these rules;
 - (d) detonators are not carried in the same hold as other explosives; and
 - (e) the hold containing the magazine does not contain any other hazardous or flammable goods at any time during which the magazine is in use for the carriage of explosives.
- (5) Conveyance of explosives on passenger vessels.—
 - (1) The following explosives may be carried in a passenger vessels, namely:
 - (a) any explosives not exceeding 2.5 kilogrammes in weight other than a fulminate (Class 5), ammunition containing its own means of ignition (Class 6, Division 3) or fireworks (Class 7); and
 - (b) detonators not exceeding 200 in number and certified in writing by the licensee not to contain in the aggregate more than 225 grammes of explosives:

Provided that—

- (i) previous notice is given to the person in charge of the vessel in which the explosive is intended to be conveyed;
 - (ii) all the precautions are taken to prevent accidents by fire or explosion;
 - (iii) Detonators are not carried in the same compartment as other explosives.
- (2) Nothing in these provisions shall apply to explosives carried in a passenger vessel under (1).
- (6) Anchorage of vessels carrying explosives.—
 - (1) Every vessel having explosives on board and entering a port shall be anchored at such anchorage as the conservator of the port shall appoint in this behalf and shall not leave such anchorage without the general or special order of the Conservator of the port and subject to such conditions as may be specified in the order.

- (2) Such anchorage shall in no case be the same as that for vessels laden with petroleum and shall be at such distance from the anchorage for vessels laden with petroleum as to render it impossible for a fire originating at the former anchorage to affect vessel anchored at the later.
- (7) Red flag or warning light to be exhibited.—Every vessels having explosives on board exceeding 50 kilogrammes in weight shall while approaching or leaving a port and during the time that it remains within the limits of the port or on any inland water exhibit conspicuously—
- between sunrise and sunset a red flag not less than 1 metre square, and
 - between sunset and sunrise a single red light visible all round the horizon.
- (8) Vessels to lie singly.—Every vessel wholly or partly laden with explosive shall lie singly and be kept at a distance of at least 50 meters from any other vessel except during the actual transhipment of explosives, when one boat may lie alongside on each side of a ship, boat or floating magazine and two ships may lie alongside each other.
- (9) Vessels not to lie alongside magazine, jetties, etc.—No vessel having any explosive on board shall lie alongside any vessel, floating magazine, quay wharf, jetty and land or landing stage except for the purposes of loading or unloading and then only during the time necessary for the actual loading or unloading of such vessel and shall proceed on its voyage without delay except such delay as may be unavoidable in consequence of tide or weather.
- (10) Loading and unloading prohibited while a vessel is underway.—No explosives exceeding 450 kilogrammes in weight and no detonators shall be loaded or unloaded while a vessel is underway.
- Explanation.—A vessel is 'underway' when she is not at anchor or moored or made fast to the shore or a ground.
- (11) Place of loading and unloading within a port area.—Explosives shall within the limits of a port, be loaded from, landed at, brought into or deposited upon, only such quay or other place as the Conservator of the Port may by general or special order direct.
- (12) Cushion to be used.—A cushion properly stuffed with oakum and covered with leather, or one of such other kind as the Conservator of the port may from time to time approve, shall be used in shipping an explosive in any vessel or in landing it upon any wharf or other landing place within the limits of a port.
- (13) Ships to handle explosives with despatch.—
- Ships arriving in a port with explosives intended to be landed at the port shall discharge them with all reasonable despatch, and ships taking explosives on board shall proceed to sea with all reasonable despatch.
 - No ship or boat shall retain on board any cargo of explosives and remain in the port for a period longer than three days :
- Provided that the conservator of the port in consultation with Chief Controller may extend such period under such conditions as deemed fit if he is satisfied that such extension of period is considered necessary.
- (14) Boats to be licensed.—
- No boats shall be used for the transport of explosives exceeding 1,000 kilogrammes in weight except under and in accordance with the conditions of the licence granted—
 - by the Conservator of the port in the case of a boat plying within the limits of a port, or
 - by an officer appointed by the Central Government in the case of a boat plying in areas outside port limits.
 - The licence shall specify the maximum quantity of explosives the boat is authorised to carry which quantity shall be fixed in consultation with the Chief Controller.
 - Every licence granted under these provisions shall remain valid for a period of—
 - four months in the case of a boat plying within the limits of a port; and
 - one year in the case of a boat plying in areas outside port limits.
 - The licence referred to (1) shall be granted or renewed in such form and on payment of such fees as may be specified by the Central Government.
 - A copy of every licence granted in (1) shall be forwarded to the Chief Controller.

- (6) Every person in charge of any boat licensed under (1) shall, when required so to do by an officer mentioned in Explosives Rule 2008 produce the licence of such boat for inspection.
- (15) Buoy to be carried.—
- (1) Every boat carrying explosives within the limits of a port shall carry on deck a buoy with a rope 27 metres in length and 7.50 centimetres in diameter, one end of the rope being attached to the buoy and the other end to the boat. The rope shall be attached to such part of the boat as is most clear of spars gear or other obstruction and at such point as is approved by the licensing authority.
- (2) The buoy shall be a drum painted red measuring not less than 55 centimetres in length and 35 centimetres in diameter, properly strapped with an iron band in the middle and having a ring attached for securing the rope.
- (16) Smoking, fire, dangerous articles and other cargo prohibited.—The following shall not be permitted on board any boat which has explosives on board—
- (a) fire or light of any description other than the warning lights;
- (b) smoking;
- (c) any substance of an inflammable nature or liable to spontaneous ignition;
- (d) any substance liable to cause or communicate fire or explosion;
- (e) any other cargo, unless the carrying of such other cargo, has been specially authorised in writing by the Conservator of the port within port limits or by Chief Controller in areas outside port limits:
- Provided that nothing in this rule shall apply to the transport of explosives in a mechanically propelled boat subject such conditions as may be specified by the Chief Controller.

Part-4

Safety provisions for transport of explosives by rail

- (1) **Rail vans to be approved.**—No explosives other than safety fuse and fireworks shall be transported by rail except in a van specially constructed for the carriage of explosives and of a type approved by the Chief Controller and the Railway Board.
- (2) **Making of railway carriage.**—
- (1) On each side of every railway carriage containing any explosive there shall be affixed in conspicuous characters by means of a securely attached label or otherwise the word "Explosives".
- (2) Nothing in (1) shall apply in a carriage containing explosives transported in accordance with the provisions of Explosives Rule 2008.
- (3) **Transport of explosives with ordinary goods.**—Notwithstanding anything contained in earlier provision, the following explosives may be transported by any train other than a passenger or mixed train in a carriage not carrying any article or substance liable to cause or communicate fire or explosion:
- (a) any quantity of safety fuse for blasting;
- (b) any other explosive approved by the Chief Controller for the purpose of this rule provided such explosive is packed in metallic cases or cylinders which fulfil all the requirements of these rules and are of a pattern approved by the Indian Railways and the Chief Controller.
- (4) **Position of railway carriages.**—Every railway carriage containing explosive shall be placed as far away as practicable from the engine and shall be close-coupled to the adjoining carriages not loaded with explosives or other articles or substances of flammable or hazardous nature, provided that—
- (a) on the Darjeeling-Himalayan Railway carriages containing explosives need not be close-coupled;
- (b) on the Nilgiri and Karaikal-Peralam Railways, only one carriage need intervene between the engine and carriages containing explosives;
- (c) on the electrified section of Railways when trains are hauled by electric locomotives, no carriages need intervene between the engine and the carriage containing explosives.

- (5) **Maximum quantity of explosives to be transported by rail.**—Not more than 5 carriages containing explosives shall at any one time be loaded or unloaded at or on any railway station or wharf and not more than 10 carriages containing explosives shall be attached to or transported by any one train.
- (6) **Prohibition on passenger or mixed trains.**—No explosive shall be transported by any passenger or mixed train.
- (7) **Despatch of explosive vans by mixed train**—Notwithstanding anything contained in these rules, any explosive may be transported by a mixed train in vans specially approved on any line or section on which goods trains are not running subject to the following conditions, namely:-
- not more than three such vans containing explosives shall be hauled at any one time.
 - there shall be not less than three carriages between the vans containing explosives and the engine and between such vans and the passenger carriages.
 - the vans containing explosives shall be close-coupled to the adjoining carriages and to each other.
 - immediately on entering on any section upon which goods trains are running, the vans containing explosives shall be detached from the mixed train.
- (8) **Conveyance of explosives by passenger or mixed train**—Notwithstanding anything contained in these rules, the following explosives may be transported by passenger or mixed trains:
- safety fuses for blasting.
 - explosives of the Class 3 (Nitro-compound) other than propellants, in the form of cartridges not exceeding in the aggregate 2.5 kilogrammes in weight, provided no detonators are carried in the same compartment.
 - detonators to the number of 200 if the amount of explosives in the package or package containing detonators does not exceed in the aggregate 225 grammes provided—
 - a certificate to such effect is tendered by the consignor; and
 - no other explosive is carried in the same compartment.
 - sporting powders and propellants packed in double packages prescribed in Schedule II, provided—
 - the explosive is contained in tin canisters containing not more than 5 kilogrammes each packed in a stout wooden case with a completely park-proof outer cover of tin or zinc or in a metal case or cylinder of a pattern approved by the Chief Controller;
 - no outer case contains more than 12.5 kilogrammes of explosives; and
 - the total consignment by one train does not exceed in the aggregate 37.5 kilogrammes.
- (9) **Receipt of consignment of explosives by railways.**—Consignments of explosives intended to be transported by rail shall be received only—
- by a servant authorised by the Indian Railways concerned to receive dangerous goods; and
 - at such times between sunrise and sunset and at such places within railway premises as the Indian Railways may specify in this behalf.
- (10) **Shunting.** — No shunting of carriages containing explosives shall be carried out on any railway save under the superintendence of duly authorised officer who shall be responsible that—
- when the train is being marshalled carriages loaded with explosives shall not be shunted by a locomotive unless they are separated from any engine by not less than three carriages containing no explosive or easily inflammable substance;
 - during the shunting of carriage containing explosive, the speed of all movements shall not exceed 8 kilometers an hour; and
 - no loose shunting take place.
- (11) **Delivery to and from railway premises.** — (1) Packages containing any explosive shall be removed by the consignee from the station, wharf or depot of the railway to which they have been transported as soon as practicable and with all due diligence after arrival.

- (2) If the packages are not removed within the twelve hours of daylight following their arrival the packages and contents may be forthwith returned to the consignor at his risk and expense.
- (3) Every package containing an explosive shall until removed, returned or despatched be kept in a safe place under the special direction of the Station Master at a safe distance from the station buildings under the police guard if necessary and shall be completely covered with tarpaulins or other suitable material.
- (12) **Power of Indian Railways.**—(1) Where Indian Railways suspects that an explosive or carriage or package containing an explosive does not comply with any of these rules, it may-
- (a) prevent the entry of such explosive, carriage or package upon their premises or refuse to receive or transport them; or
- (b) at any time open or require such carriage or package to be opened to ascertain the facts.
- (2) If any explosive or any carriage or package containing explosives is found not to comply with any of these rules, the Indian Railways may return such explosives carriage or package to the consignor at his risk and expense.
- (3) Where any explosive or any carriage or package containing explosive not complying with these rules cannot in the opinion of the Indian Railways be returned to the consignor under (2) without undue risk, it may in consultation with the Chief Controller and in such manner as he may specify, destroy at the consignor's risk and expense the explosives or the contents of the carriage or package.
- (13) **Explosives not to be carried across railway bridges**—No explosives shall be carried otherwise than by rail across any railway bridge which reasonable facilities for the transport thereof by rail are afforded by the Indian Railways:
- Provided that nothing in this rule shall apply to—
- (a) safety fuses for blasting in any quantity; or
- (b) gunpowder or nitro-compound not exceeding 5 kilogrammes or any quantity of ammunition, Class 6, Divisions 2 and 3.

Schedule VII

Specifications

The specifications laid down in this Schedule are for general guidance only. Approval of the Chief Controller shall be obtained separately for each case.

Specification 1: Specification of Explosives manufacturing factories other than that of fireworks

1. Site, layout, construction and safety distance

A. Concept of safety distance:

The location, construction and traversing of process buildings should be such that an explosion in one building does not initiate explosion in another through blast, shock, or missiles and it should cause no or little damage to personnel or property in such other buildings. Therefore the safety distances for different quantities of the different categories of explosives (X, Y and ZZ) under Explosives Rules, are classified in three types viz. Inter Process Distance (IPD) between process buildings, Middle Safety Distance (MSD) from process buildings to facilities like highways, railways, navigable waterways, dams or reservoirs etc. and Outside Safety Distance (OSD) from process buildings to outside property, which may be built-up or inhabited, have been prescribed in the Tables 1, 2 and 3 in Schedule VIII annexed to these rules.

B. Layout of facilities:

The layout of different buildings should be made observing at least the minimum safety distances prescribed and taking the maximum advantage of the natural topography. Hill slopes and dense forests serve as natural protection. The difference in the ground level in a hilly area can be utilized with advantage in placing sensitive explosives buildings concealed or protected with very little additional traversing being necessary. Explosive buildings on a flat ground or on a plateau with built up area downhill are not at all desirable for the same reason.

C. Construction:

- (a) **Roof and Walls**—Process buildings are constructed of strong but light walls and strong roof. Cement brick walls 22.5 centimetres thick and 15 centimetres RCC roofs are recommended. The light wall, in case of an explosion, creates light missiles, which can be contained by the vertical inner face traverse provided all-round. In some cases when the force of explosion can be safely and easily let off through one side, one of the four walls may be very weak. Examples are nitration buildings with the weak side facing an hill slope or forest and detonator press cubicles with back side open. The strong roof intercepts missiles from another exploding building, which

- may otherwise be falling through the roof initiating an explosion. The RCC slab roof also can come down and smother the effects of explosion when the same takes place dislodging and breaking the walls.
- (b) **Doors**—Process buildings should have easily accessible doors opening outwards except in case of non-manned remote controlled rooms. Each process building shall have adequate number (minimum 2) of exits for quick escape of personnel in the event of a mishap. The doors should be of wood painted with a suitable fire resistant paint.
- (c) **Windows**—ventilators: Number and size of windows and ventilators shall be decided on the basis of actual requirements. Frames may be of steel or wood. No exposed iron or steel is allowed. It should be either galvanized or adequately covered with paint. Iron frames is not preferred where acid fumes are likely to corrode or explosive dust may accumulate in cracks and crevices. The glass panes for the windows and ventilators should be wired glass type.
- (d) **Surface and finishing**—The floor, wall and ceiling should be finished smooth and free from cracks and crevices. Depending on the nature of chemicals handled, special protection on floor and lower wall may be necessary. Mastic floor or antistatic rubber matting on floor is essential in some cases. In chemical plants the drains for taking out liquor and washing shall have chemical resistant plastic or mastic lining.

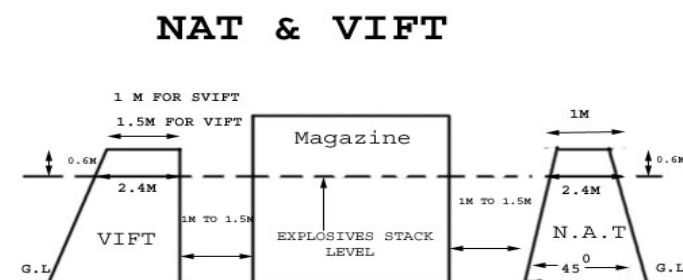
2. Traverses

A Types of traverses:

The most commonly used traverses are natural angle traverse (NAT) of earthen mounds for storage buildings and vertical inner face traverse (VIFT) for process buildings. The traverses should be at least 2.4 metres wide at the explosives stack level. The minimum width at the top is 1.5 metres for VIFT and 1 metre for NAT, the top being at least 0.6m above the explosives stack level. The tow of the traverse should not be more than 1 to 1.5 metres away from the building to be protected. If more clearance becomes essential, the height of the traverse is to be increased proportionately maintaining the same angle of protection. The inner face of the VIFT is a vertical masonry wall, strong enough to bear the load of the earth filling at the back.

A semi VIF traverse is similar to VIFT except that above the stack level, the inside surface is inclined and not vertical reducing the top thickness to 1 metre.

B. Sectional view showing types of traverses :



The construction of the buildings and traverses are required to be strictly as per the specifications. There is no scope for any compromise in the material and dimensions. RCC roof or wall with reinforcement only for namesake, a traverse located at 5m or farther from the building or a VIFT with little earth behind the vertical wall serve no purpose.

C. Internal Wall as Traverse:

Buildings handling small quantity of explosives can be effectively traversed by its own walls of adequate construction. The following table shows the recommended wall thickness for different quantities of explosives.

Weight of explosives kilogrammes	RCC wall (preferred thickness) millimetres	Brick wall thickness millimetres
5	225	340
7	225	450
12	225	570
18	300	700
35	450	Not permitted
50	600	Not permitted

D. Partition Walls :

A processed building having several rooms or compartments can have partition walls of adequate dimensions and constructions. Such walls can delay substantial transmission of explosion from one side to the other side of the wall, thus preventing simultaneous detonation. The wall thickness for different quantities of explosives are given in the table below:—

Weight of explosives in kilograms	Wall thickness in centimetres for preventing of reinforcement by volume*		
	0.20%	0.5%	0.7%
0 - 75	10	10	10
>75-100	15	15	10
>100-150	20	20	15
>150-200	25	25	20
>200-250	30	25	25
>250-300	30	30	25
>300-350	35	35	30

* The wall if made of brick should be twice the thickness of RCC wall with 0.2% reinforcement.

The safety distance of such a process building having rooms or compartments separated by partition walls as above can be based on the explosive content of any of the compartment, which is the largest.

3. Explosive Limit—Person Limit:

Limiting the quantity of explosives handled in a building and the number of persons employed therein are obviously to reduce the adverse effects of an explosion. It is desirable that the minimum quantity of explosives and the minimum number of persons absolutely necessary for an operation or process should only be allowed in the relevant building from the point of view of safety.

The recommended limit on quantity of explosives and number of persons shall also depend on the sensitivities and properties of explosives handled. In case of sensitive initiating explosives the limits should be as low as possible. For keeping the reasonably low, it may be necessary to divide an operation into several sub-operations in different buildings.

Specification—2: Specifications of magazines other than that of fireworks**1. General :**

The basic considerations in the construction of magazines are security to ensure that the contents are kept out of the hands of unauthorised persons, to maintain them in good conditions and to reduce the risk of accidental explosion. This calls for a construction, which will resist illegal entry as much as possible and is well ventilated. In choosing a site for a magazine, consideration should be given to protection of life and property offered by natural features of the ground in the event of a fire and/or an explosion. The suitability of a site and the amount of explosives that may be stored are determined by its distance from public thoroughfares; residential or industrial areas, railways etc. as specified in the table of safety distance in Schedule VIII. Naturally a site obscured from public view either by natural or artificial means is preferred.

Apart from the rules and regulations concerning the storage of explosives, certain conditions should be observed from the point of view of care for the materials concerned for example, improper storage may lead directly to misfires later on. In all cases, places of storage should be dry, well ventilated and protected from extremes of temperature as much as possible. Stocks should be drawn upon in strict rotation. Any surplus from the day's work being returned to the magazine should be kept separately for use on the following day.

Safety Fuse and detonators should be kept in perfect condition for obtaining good results. Therefore, at all times during transport, handling and storage, they should be protected from moisture and contact with oil, grease, kerosene or other liquids. Detonators shall not be stored with other explosives.

2. Materials of construction of magazine :

Magazines may be of heavy construction, i.e. steel, reinforced concrete, brick, stone or preformed concrete blocks. Maximum security is attainable only with steel or reinforced concrete structures. The internal dimensions of the magazine shall be such that there is ready access to all explosives.

3. Construction of the magazine :

A magazine shall be well and substantially and shall be made and close so as to prevent unauthorised persons from having access thereto and to secure it from danger. Magazines can be of the following types:

*Type 'A' magazine:

Type 'A' magazine shall be of a type approved by the Chief Controller and shall primarily have the following -

- (a) Walls of reinforced concrete at least 225 millimetres thick or brick or stone at least 450 millimetres thick set in cement mortar. Concrete shall have a minimum compressive strength of 2,500 lb/sq.inch at 28 days (the required strength will be reached by a mixture consisting of 1 part cement, 1-½ parts sand, 3 parts of aggregate by volume). Reinforcement should consist of square mesh, hard-drawn steel wire fabric, providing a cross-section area in each direction of not less than 0.21 sq. inch of 2 ft. of wall. The reinforcement shall be covered by not less than 50 millimetres of concrete on either side. The bricks and concrete blocks shall conform to relevant Indian Standard Specifications. Commercial grade steel is satisfactory for use in construction. The cement mortar shall consist of not less than one part of cement and three parts of clean sand.
- (b) Interior, and the benches, shelves and fittings therein shall be so constructed or so lined or covered as to prevent the exposure of any iron or steel and the detaching of grit, iron, steel or similar substances in such manner as to come into contact with explosives. Such interior benches shelves and fittings shall be kept free from grit and otherwise clean; and in the case of any explosive that is liable to be dangerously affected by water, due precautions shall be taken to exclude it therefrom.
- (c) Roof shall be of reinforced concrete at least 150 millimetres thick.
- (d) One ventilator at the top and bottom in each opposite side wall of the magazine shall be provided where the weight of explosive stored is up to and including 500 kilogrammes and minimum two in the top and bottom of each wall shall be provided where the weight of explosive stored exceeds 500 kilogrammes. Number of the ventilators may be increased as desired by the licensing authority. The ventilators shall be 22.5 centimetres x 11.25 centimetres. Z type fitted with frame of iron bars set firmly in the wall on the outer face, the bars to be of 2.35 square centimetres, (3/8" sq.) iron set angle-wise with the frame. The inner opening to be protected with brass wire gauge of 3 meshes per centimetre.
- (e) External doors —
 - (i) that opens outwards and when closed fit tightly;
 - (ii) to be constructed of steel plate at least 5 millimetres, thick with or without internal lining of wood.
- (f) Every internal door —
 - (i) made of wood;
 - (ii) locks and fittings of non-ferrous metal.
- (g) External door-locks should be of "dead lock" type.
- (h) A separate room for storage of detonators or other explosives of Class 6 Division 3 if stored within the magazine. Such room shall have independent entrance and a minimum air-gap of 1 metre from any other room in the magazine and the thickness of the wall of the detonator storage room facing any other room in the magazine shall be minimum 60 centimetres.
- (i) Wooden trestles or raised cement platform for storage of explosive packages.
- (j) A porch if necessary shall be
 - (i) of the same construction as the remainder of the magazine; and
 - (ii) used only for keeping all tools or implements used in connection with the magazine or the changing of clothe and shoes.
- (k) 25 x 50 mm furring strips fastened to the wall, vertically on 300 millimetres centres starting 130 millimetre from floor and continuous to the stacking line, around the usable portions of the walls to provide air circulation and to prevent cases of explosives being stacked directly against the walls.
- (l) A minimum 12 millimetre red line painted on the interior walls of the magazine at a height of 2.5 metres from the floor level. This line indicates the maximum height to which explosives may be stacked. The licensing authority may specify lower stacking height if deemed necessary.
- (m) An internal volume not less than 0.4 cubic metre for each 100 kilogrammes of explosives. In addition sufficient space shall be provided for passage between stocks of packages if required by licensing authority.

- (n) Sufficient number of windows for proper lighting inside the magazine. The windows shall open outside and constructed of steel plate at least 5 millimetre thick with or without internal lining of wood.

•Type 'B' magazine (portable magazine):

Type 'B' magazine shall be of a type approved by Chief Controller and shall primarily have the following —

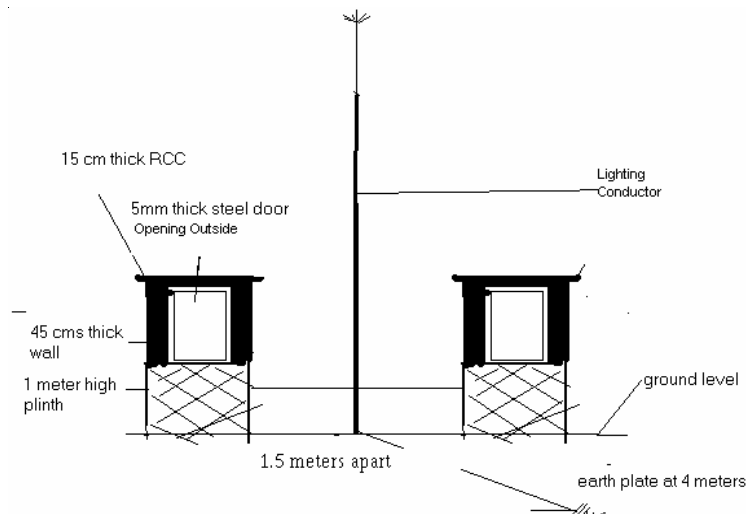
- Walls of steel plate at least 5 millimetres thick;
- A roof of steel plate at least 5 millimetres thick;
- Interior lining at least 10 millimetres thick on walls, doors and ceiling and 25 mm thick on door and consisting of closed fittings boards or wood joined together by tongue and groove joints in such a way that no iron or steel is exposed on the interior sides, ceiling, floor or doors;
- An internal volume not less than 0.4 cubic metre for each 100 kilogrammes of explosives. The maximum internal volume shall not be more than 2 cubic metres.
- Ventilation by means of vents which shall be adequately protected;
- External hinges of steel welded to the door and to the frame of the magazine;
- A lock of "dead lock" type for external door.

•Type 'C' magazine (small brick cement magazine for storage of explosives up to 100 kilogrammes and one box of detonators):

Small brick cement magazine shall primarily have the following:

(a) The magazine shall be constructed of brick masonry or cement concrete on plinth 1 metre above ground level with 45 centimetres thick walls and 15 centimetres thick RCC roof.

(b) The detonator room and high explosives room shall be at 1.5 metres separation distance as per the sketch.



(c) The magazine rooms shall be fitted with steel doors of thickness not less than 5 millimetres, opening outside with efficient locking arrangements.

(d) The rooms shall have one Z type ventilator fitted with frame of iron bars set firmly in the wall on the outer face, the bars to be of 2.35 square centimetres, (3/8 square inch) iron set angle wise with the frame. The inner opening should be protected with brass wire gauge of 3 meshes per centimetre.

(e) The magazine shall be fitted with lightning conductor as per IS 2309.

Specification 3: Specification of fireworks manufacturing factory and store house and magazine for fireworks or safety fuse

1. Manufacturing factory for fireworks:

A. Mixing / Filling building:

The basic consideration in construction of a mixing/filling building is to ensure safe handling, good maintenance and upkeep, to reduce the risk of fire, friction or impact and to minimize the loss of lives in case of accidents. The building shall be provided with adequate number of doors. The place of mixing/filling shall be dry.

The mixing/filling building should have walls built of brick, stone or concrete. The bricks and concrete shall conform to relevant Indian Standard Specifications. The cement mortar shall consist of not less than one part of cement and three parts of clean sand. The interior of the mixing/filling building shall be kept clean and shall as far as practicable be kept free from grit.

Mixing/filling building shall have :

- (a) wall constructed of brick and cement to a thickness of 34 centimetres and the roof to a thickness of 15 centimetres of RCC .
- (b) blast wall of 34 centimetres thick constructed of brick and cement or 23 centimetres of RCC in front of doors at a distance of 1 to 2 metres. The blast wall shall be 0.5 metre wider than the door opening on both sides and shall have a height of 2 metres.
- (c) an explosives limit of 5 kilogrammes for white powder rooms and 12.5 kilogrammes for black powder rooms and the man limit shall be 2 numbers.
- (d) three or four doors in two walls.
- (e) doors made of wood or wooden frame lined with aluminium sheet of suitable thickness and shall be fitted with non-ferrous hinges.
- (f) doors that open outwards.
- (g) its locking system provided from outside only.
- (h) floor covered with non-sparking and non-conducting rubber sheet.
- (i) lightning conductor provided as per IS 2309 of 1969 if mixing / filling is done by electrically operated machine.

B. Manufacturing / Process Sheds:

- a. The manufacturing/process shed shall be situated at ground level, with walls built of brick or stone with cement, or of concrete. The bricks and concrete shall conform to relevant Indian Standard Specifications.
- b. The walls shall be of 23 centimetres thick with cement and brick or of 15 centimetres thick RCC.
- c. The roof shall be of G.I. sheets or 10 centimetres thick RCC.
- d. Four doors shall be provided.
- e. The doors shall be made of wood or of wooden frame covered by G.I. sheet, fitted with non-ferrous hinges or with ferrous hinges so lined or painted as to prevent the exposure of any iron or steel.
- f. The doors of different process buildings shall not face each other.
- g. If doors of adjacent sheds face each other, a screen wall of brick and cement to a thickness of 23 centimetres shall be provided at a distance of 1 to 2 metres from the door.
- h. All the doors shall open outwards.
- i. The shed shall have a floor area of minimum nine square metres.
- j. The shed shall have a floor of smooth finish.

C. Blast wall:

The blast wall shall be built of bricks, stone or concrete. The bricks and concrete shall conform to relevant Indian Standard specifications. The cement mortar shall consist of not less than one part of cement and three parts of clean sand. The blast wall shall be constructed at a distance of one to two metres from the door or from the boundary wall of the building. The height of the blast wall shall be 2 metres and the width shall be 0.5 metre wider than the door opening on both sides. The blast wall shall be provided around mixing and filling sheds which have the approved explosive limit of 5 kilogrammes and approved man limit of 2. The licensing authority may specify higher height of blast wall if deemed necessary. The thickness of the blast wall shall be decided in accordance with the licensed limit of the building and the materials used in its construction, as specified in the table appended below :

Quantity of explosives in kilogrammes not exceeding	Thickness of wall in centimetres	
	RCC	Brick
2.5	23	34
5	23	34
7	23	45
12	23	57
18	30	60
35	45	70
50	60	75

D. Drying Platform:

The basic considerations in the construction of drying platform are to ensure that the fireworks items are dried securely by keeping them out of reach of persons engaged in other activities and to prevent any grit, dust or moisture from coming into contact with the fireworks. The drying platform shall always be kept dry.

The drying platform shall have a platform of bricks, stone or concrete with a floor area of minimum 9 square metres to a maximum of 15 square metres. The height of platform shall be 1 to 1.5 metres. The bricks and concrete shall conform to relevant Indian Standard Specifications. The cement mortar shall consist of not less than one part of cement and three parts of clean sand. However, drying platform used for drying of sparklers may have a floor area on the ground filled with sand and lined with bricks or a floor area spread on the ground with stone jelly and cement.

Where any platform is located directly in the line of the door of any process building, a blast wall in front of such door of the said building shall be provided as per specification 6 attached to this schedule. In case where drying platforms lie adjacent to each other, a blast wall shall be constructed in the intervening space at 1 to 2 metres away from any one of such platforms lying adjacent to each other.

In the case of a fuse cutting-cum-drying platform, such platform may be built at a distance of 18 metres from process buildings and shall observe an outer safety distance of 45 metres. Such drying platform shall have a screen/blast wall at a distance of 1 to 2 metres from the platform, with a height equal to half of the length of the side perpendicular to the screen wall/blast wall. The construction of the screen/blast wall shall be as per specification 6 attached to this schedule. A temporary roof may be provided by erecting 4 pillars or poles if necessary for protection from direct sunlight.

E. Transit building :

The basic considerations in construction of a transit building are to ensure that the contents are kept out of the hands of unauthorised persons, to maintain them in good condition and to reduce risk of fire. This calls for a construction which will resist illegal entry as much as possible and be well ventilated. The place of a storage should be dry and it should be possible to draw stocks in strict rotation.

The transit building should have walls built of brick, stone or concrete. The bricks and concrete shall conform to relevant Indian Standard Specifications. The cement mortar shall consist of not less than one part of cement and three parts of clean sands. The interior of the transit building shall be kept clean and all benches, shelves and fittings shall be so constructed or so lined or covered as to prevent the exposure of any iron or steel and the detachment of any grit, iron, steel or substances shall be in such manner as not to come in contact with the materials stored and such interior, benches, shelves and fittings shall as far as practicable be kept clean and free from grit.

- (a) It should have a cement brick wall of 45 centimetres thick and RCC roof of 15centimetres thick.
- (b) The transit building shall have adequate number of ventilators as desired by the licensing authority. The ventilators shall be provided at the top and the bottom of the walls as suggested by the licensing authority. The ventilators shall be 22.5 centimetres x 11.25 centimetres fitted with suitable frames firmly set in the walls on the outer face. The bars shall be of minimum 2.35 square centimetres set angle-wise with the frame. The inner opening shall be protected with wire gauge of minimum 3 mesh per centimetre.
- (c) Only one door shall be provided.
- (d) The door shall be made of wood fitted with non-ferrous hinges.
- (e) The door shall open outwards.
- (f) If the door faces the drying platform or the door of any other process building, a blast wall (34 centimetres brick cement or 23 centimetres RCC) in front of doors at a distance of 1 to 2 metres. The blast wall shall be 0.5 metre wider than the door opening on both sides and shall have a height of 2 metres.
- (g) That transit building may not be provided with lightning conductor unless otherwise specified by the licensing authority.

2. Magazine for storage of fireworks or safety fuse:

The basic considerations in construction of a magazine are to ensure that the contents are kept out of the hands of unauthorised persons, to maintain them in good condition and to reduce risk of fire. This calls for a construction which will resist illegal entry as much as possible and is well ventilated. The place of a storage should be dry and it should be possible to draw stocks in strict rotation.

The magazine should have walls built of brick, stone or concrete. The bricks and concrete shall conform to relevant Indian Standard Specifications. The cement mortar shall consist of not less than one part of cement and three parts

of clean sands. The interior of the storehouse shall be kept clean and all benches, shelves and fittings shall be so constructed or so lined or covered as to prevent the exposure of any iron or steel and the detachment of any grit, iron, steel or substances in such manner as not to come in contact with the materials stored and such interior, benches, shelves and fittings shall as far as practicable be kept clean and free from grit.

- a. The magazine shall have adequate number of ventilators as desired by the licensing authority. The ventilators shall be provided at the top and the bottom of the walls as suggested by the licensing authority. The ventilators shall be 22.5 centimetres x 11.25 centimetres fitted with suitable frames firmly set in the walls on the outer face. The bars shall be of minimum 2.35 square centimetres set angle-wise with the frame. The inner opening shall be protected with wire gauge of minimum 3 mesh per centimetres.
- b. The magazine shall have a minimum 12 mm red line painted on the interior walls at a height 3 metres from the floor level. This line indicates maximum height to which explosives may be stacked. The gang way space of minimum 30 centimetres shall be provided around the usable portion of the walls to provide air circulation. In addition sufficient space shall be provided for passage between the stacks of packages if required by the licensing authority. The licensing authority may specify lower stacking height if deemed necessary.
- c. The magazine shall have sufficient number of wooden windows for proper lighting inside. The windows shall open outwards.
- d. The magazine shall have external doors that opens outwards and when closed fit tightly to be constructed of wood with or without lining of steel plate.
- e. The magazine shall have smooth, stone or cement flooring.
- f. The roof of the magazine may be made of G. I. sheet or A.C. sheet.
- g. The magazine shall have a floor area of 2 square metres per tonne of fireworks or 10,000 metres of safety fuse.
- h. The magazine shall have a floor area of 16 square metres per tonne of paper caps or amerces.
- i. The magazine shall have a floor area of 8 square metres per tonne of serpent egg.
- j. The paper caps or amerces or colour matches which contain chlorate may be kept under this store house shall be separated by an intervening partition wall made of brick, stone or concrete to prevent explosion or fire in the one communicating with the other.
- k. The magazine shall be fitted with lightning conductor as per IS 2309.

3. Store House for fireworks :

- (1) The storehouse shall be single storied building with 23 centimetres thick walls built of brick or stone mortar, or concrete and roof of 15 centimetres thick RCC.
- (2) The storehouse shall maintain open safety distance of 3 metres on all sides, which shall be protected by 1.8 metres high boundary wall or fencing.
- (3) The storehouse shall have a floor area of not less than 12 square metres and not more than 40 square metres for storage of fireworks.
- (4) The door of storehouse shall be made of wood or other suitable materials and open outwards. If shutter door is provided, there shall be hinges provided at the top of the shutter door to lock the shutter leaf in open position.

Specification 4: Specification for a road van for carriage of explosives.

Part - I (General) :

- (1) Air space between body and cab. - A clear space of at least fifteen centimetres shall be left between the body and cab.
- (2) Driver's cab.—The cab shall be fitted and covered externally with 0.914 millimetres aluminium sheeting. The wood if used shall be treated as to render it non-flammable.
- (3) Cab-doors shall be fitted having windows of non-splinter type glass.
- (4) Wind screen.—A substantially framed wind-screen shall be fitted with the portion in front of the driver's seat pivoted on strong brass quadrants for opening.

- (5) Fuel tank.—The fuel tank (petrol) shall be in front of the fire screen described under item (11) below. It should be so located as to minimise the possibility of its being damaged should the vehicle be involved in an accident. Steel guards should be provided if required by approving authority.
- (6) Fuel cut-off.—A quick acting cut off (for petrol lines) shall be fitted on the feed pipe in an easily accessible position and shall be capable of being operated without the necessity of lifting the bonnet and shall be so located as not to be involved in a fire in the engine.
- (7) Exhaust pipe and Spark Arrestor.—The whole of the Spark Arrestor and exhaust piping shall be in the front of the fire-screen described in item 11.
- (8) Fire extinguisher.—Two chemical fire extinguishers of minimum 2 Kilogrammes shall be provided. The fire extinguisher should be capable of dealing with petroleum fire.
- (9) Self Starter.—A self starter shall be provided.
- (10) Lighting.—Electric head, side and tail lamps shall be provided and shall be operated from the dash board. All electric wirings and battery cables shall be fully enclosed and maintained in good operating condition.
- (11) Fire Screen.—Shall consist of only ply asbestos and 18 gauge steel sheets fitted to the whole of the driver's cab and extending to within 300 mm of the ground. The part extending from bottom of the cab to within 390 mm of the ground shall be carried on an iron angle frame of light construction.
- (12) Body.—A body conforming to the second part of this specification shall be fitted.
- (13) Spare Wheels.—One spare wheel inclusive of outer cover and inner tube shall be carried for each size of wheel on the chassis.
- (14) Painting and Marking.—Body and cab shall be painted and marked and lined with a colour approved by the licensing authority. The van should be painted with aluminium or white paint. The letter 'E' should be written prominently on the sides and rear of the van. The name and address of the licensee and the licence number should be written in small letters on one side. Vehicles holding inter-state or national permits shall be painted as per directions of Road Transport Authority. However, another circle of 60 centimetres diameter in red colour should be painted on one of the flaps of rear door of van with letter 'E' inscribed in the circle.
- (15) Total maximum load.—The total maximum load for a vehicle shall be equal to or exceed gross vehicle weight rating.
- (16) Inspection.—The whole of the work shall be to the satisfaction of the licensing authority who shall have free access at any time to the workshop fabricating the body and who may reject any material or workmanship which does not comply with this specification.

Part - II :

- (1) The body framing is to be constructed of best selected, teak thoroughly seasoned and free from all defects. All joints are to be morticed and tenoned or half checked, depending upon their position in the structure, and securely fixed with screws. The joints are to be coated with white lead before assembly. All parts of the framing, which will be in contact with the outer metal panelling, are also to be thoroughly coated with which lead before panelling is fixed thereto. Iron plates, knees, etc., may be used for stiffening the framing where they are considered necessary, but no such iron work must be exposed in the interior of the completed van body.
- (2) Flooring.—This is to be constructed of teak boarding tongued and grooved 22.2 millimetres, thick and about 152.4 millimetres or 177.8 millimetres in width. It is to be recessed into the soleplate of the van body and below it is to be fixed a sheet of 0.914 millimetres (20 S.W.D.) aluminium sheet. The flooring is to be supported by bearers about 28.6 millimetres thick by 50.8 millimetres wide, fitted between the soleplate and screwed on the top of the cross-members of the chassis frame.
The sill of the doorway has to have a fall outwards of 6.4 millimetres and it should be covered with a brass plate full width of the doorway, 63.5 millimetres wide inside, and having its outer edge turned downwards, and secured in position with brass screws.
- (3) Body panelling and lining.—The roof, floor, sides, ends and doors of the van are to be covered externally with .014 millimetres (20 S.W.G.) aluminium sheeting and inner lining may be of asbestos or wood so treated as to be rendered non-flammable or with such other material as may be approved in writing by the licensing authority. This must have a smooth surface, free from distortion or any dents, and it is to be fitted to the framing in sections of convenient size. The roof beading is of aluminium 19 millimetres × 4 millimetres and ends to a distance of 25.4 millimetres the end turnover, being relieved at intervals of 152.4 millimetres to allow

the sheeting to lie flat on the framing. At all places where sheeting is fixed to the body framework, it has to be covered by a beading. The roof beading is of aluminium 19 millimetres x 4 millimetres whilst a wooden weather beading is run round the sides and ends where the joint with roof sheeting takes place. At other places aluminium leading 19 millimetres x 4 millimetres has to be used, excepting only the bottom joint of the sides which is covered by a wooden rail 25.4 millimetres wide 38.1 millimetres deep, and the central cover joint of the doors, which is formed with flat mild steel strap 38.1 millimetres wide.

The interior of the van body has to be lined with 20 S.W.G. aluminium sheeting throughout, sides end, roof and doors, the lining has to be fitted in as few sections, as possible and in all cases brass screws must be used for securing same.

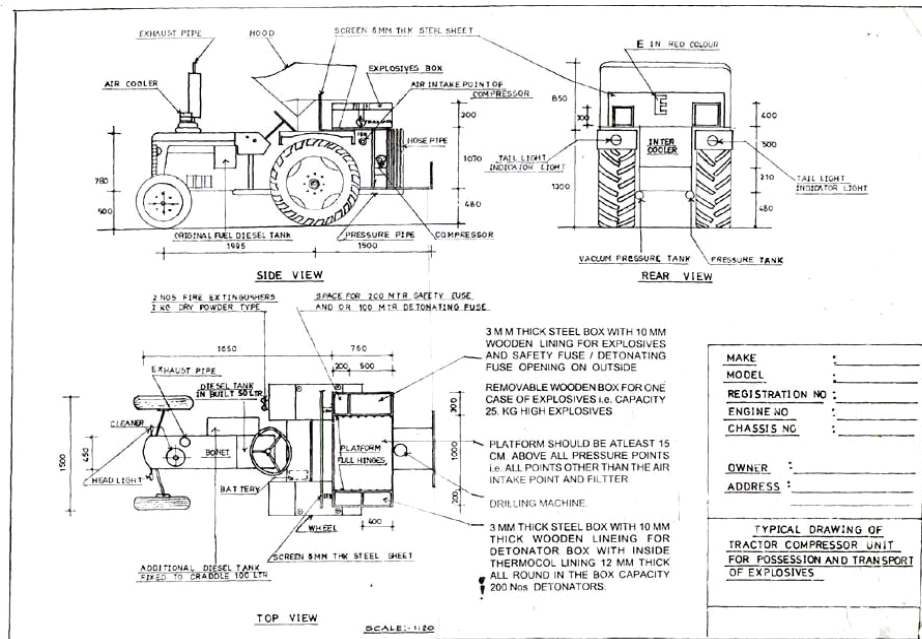
- (4) Doors.—Double doors are to be fitted at the rear ends of the body and they are to be a close fit all round the framing, panelling and lining of same being similar in all respects to the body works. They are to be levelled along the bottom to make a watertight joint with the brass covered still of the doorway, and the central joint of doors must also bevelled and covered with stapping as previously mentioned. The doors are to be hung on strong mild steel crook and bank hinges. The band section being 29.7 x 8 millimetres and these in turn are to be securely fixed to hinge and angle plates of section 44.4 x 8.0 millimetres on the rear frame posts of the van body. The hinges are to be so constructed and set that the doors will swing right round against the van body side, and facilities are to be provided for fixing the doors in this position.

A slot is cut in the clip and for the reception of a brass H. & T.V. padlock on the left-hand side of the doors. There shall be no opening in the body of the vehicle except through the doors at the back. No holes shall be drilled in the chassis, unless allowed by the maker for the purpose of securing the van body.

- (5) Body dimensions.—The inside dimensions of the body shall be suitable for the quantity of explosives proposed to be carried. The body shall be of such dimensions and fitted in such a manner as to keep the vehicle stable during transport of explosives.

Specification 5: Type A - Specification for compressor mounted motor truck or tractor for possession and transport of explosives

- (1) A Compressor mounted tractor intended for possession and transport of explosives for well sinking shall have the compressor securely fixed with the tractor chassis.
- (2) The fuel tank, additional fuel tank and exhaust shall be placed in front of the driver's seat.
- (3) At the back of the driver's seat and on the top of the compressor unit, a securely fixed platform for housing the boxes of explosives shall be provided. The platform shall maintain a minimum clearance of 15 centimetres from the driver's seat horizontally, and from all pressure parts of the compressor vertically. Provision for placing air intake tube and filter below the platform may be made.
- (4) Two separate wooden boxes with locking arrangements for keeping high explosives and detonators shall be provided. The box for high explosives shall be of adequate dimensions to accommodate 25 kilograms package of explosives and 100 meters detonating fuse. The box for detonators shall be of adequate dimensions to accommodate 200 numbers ordinary or electric detonators and shall have internal thermocole lining. Empty space in the detonator box shall be packed with pieces of thermocole to prevent movement of detonators during transport.
- (5) Two separate steel boxes of the type approved by the Chief Controller of Explosives for keeping the above wooden boxes containing high explosives and detonators shall be securely fixed on the platform with a minimum clearance of 1 meter between the boxes. These boxes shall be made of at least 3 millimetres thick steel sheet. The steel box for keeping wooden box containing high explosives shall have a small compartment for keeping safety fuse. Both these fixed steel boxes shall have side doors fixed with hinges covering full length of the box and shall be provided with locking arrangement.
- (6) A vertical screen wall made of at least 6 millimetres thick steel sheet shall be securely fixed to platform behind the driver's seat covering the length of the platform and height of the steel boxes.
- (7) The drilling rods and other tools shall be kept in fixtures or boxes fitted in any place in front of the vertical screen wall behind the driver's seat.
- (8) One dry chemical fire extinguisher of minimum 2 kilograms capacity shall be provided.
- (9) Two separate steel boxes of the type approved by the Chief Controller of Explosives for keeping the above wooden boxes containing high explosives and detonators shall be securely fixed on the platform with a minimum clearance of 1 metre between the boxes. These boxes shall be made of at least 3 millimetres thick steel sheet. The steel box for keeping wooden box containing high explosives shall have a small compartment for keeping safety fuse. Both these fixed steel boxes shall have side doors fixed with hinges covering full length of the box and shall be provided with locking arrangement.



Type B - Specification for a motor truck for carriage of explosives together with compressor unit.

- (1) A clear air space of at least fifteen centimetres shall be left between the body and the cab.
- (2) The driver's cab shall be fitted and covered externally with .914 metre (20 S.W.G.) aluminium sheeting.
- (3) The cab doors shall be fitted having windows of non-splinter type glass.
- (4) A substantially framed windscreen shall be fitted with the portion in front of driver's seat pivoted on strong brass quadrants for opening.
- (5) The fuel tank shall be below the floor level and at least 0.5 metres from the boxes carrying explosives. It should be so located as to minimise the possibility of its being damaged should the vehicle be involved in an accident.
- (6) A quick acting cut off (for petrol lines) shall be fitted on the feed pipe in an easily accessible position and shall be capable of being operated without the necessity of lifting the bonnet and shall be so located as not to be involved in a fire in the engine.
- (7) The Spark arrestor and exhaust piping shall be below the cab and shall not be below the body.
- (8) A chemical fire extinguisher of minimum 2 kilogrammes shall be provided. The fire extinguisher should be capable of dealing with petroleum fires.
- (9) A self-starter shall be provided for the engine.
- (10) Electric head, side and tail lamps shall be provided and shall be operated from the dashboard. Electric troches (dry cell type) may be carried for use for lighting during emergency.
- (11) One spare wheel inclusive of outer cover and inner tube shall be carried for each size of wheel on the chassis.
- (12) No holes shall be drilled in the chassis unless allowed by the maker for the purpose of securing body.
- (13) The flooring is to be constructed of teak boarding tongued and grooved at least 21 millimetres thick and about 150 millimetres or 175 millimetres in width.
- (14) Base of the compressor should be minimum 150 millimetres high from the floor or the truck body.
- (15) A mild steel tray shall be provided underneath the compressor and shall be of such size and placed in such a way that all the oil dripping from the compressor shall fall in the tray.
- (16) The exhaust pipe of the compressor shall face away from the boxes carrying explosives and shall be fitted with an efficient spark arrestor.
- (17) Only approved type of boxes will be used for carrying explosives and such boxes shall be firmly fixed to the body in such a way that there is no movement of the boxes when the truck is in motion. The empty space in the detonator box shall be filled with thermocole pad, foam pad or other similar suitable material to protect movement of detonators during transport.
- (18) Not more than two boxes for carrying explosives shall be fitted to any truck. One of the boxes shall be used for carrying high explosives and the other for detonators. The boxes shall be fixed in such a way that their doors do not open face to face.

- (19) The distance between the explosives boxes shall be minimum 1,000 millimetres. The distance between the compressor and the explosives boxes shall be minimum 1500 millimetres.
- (20) A suitable fire screen shall be provided between the cab and the boxes carrying explosives.
- (21) A suitable asbestos or G.I. sheet screen shall be provided between the explosives boxes and the compressor leaving adequate space for movement of operator for removing explosives from boxes.
- (22) The space between the fire screen under clause 20 and the asbestos screen under clause 21 above shall be suitably covered so as to protect from weather.
- (23) Not more than 25 kilogrammes of high explosives, 200 numbers of detonators and 200 metres of safety fuse shall be carried in the truck.
- (24) The detonator box shall be fixed away from the battery side and the battery shall be carried in the cab below driver's seat.

Specification 6: Specification of metal cases for conveyance of explosives

Type A—

General :

The body to be of wrought iron, mild steel, hard rolled brass, muntz metal, or zinc, riveted or welded, fitted at both ends with a substantial flange of same materials or of gunmetal for the attachment of lid and bottom; if of iron or steel to be thoroughly galvanised after making up or to be effectively painted. Thickness shall not be less than 1.257 millimetres (18 BG - .0495 inches) or, if of zinc, not less than 9.5 millimetres.

The bottom to be of same materials as body or of gunmetal; if of iron or steel, to be thoroughly galvanised, securely riveted to flange of body or forming part of such flange. Thickness not less than 3.2 millimetres or of zinc not less than 9.5 millimetres.

Alternatively the bottom may be made of mild steel of 4.8 millimetres thick, thoroughly galvanised and dished so that fits tightly over the body made of mild steel as above but without a bottom flange. The body to project at least 25.4 millimetres into the dished bottom and the edges of the dished end and of the body to be welded continuously to the body and to the bottom of the dished end respectively.

The lid to be of same materials as body or of gunmetal; if of iron or steel, to be thoroughly galvanised. Thickness not less than 1.6 millimetres at centre, and not less than 3.2 at rim, or if of zinc, not less than 9.5 millimetres throughout.

The lid to be secured by not less than four good screws, bolts or swing bolts, with or without a substantial hinge, which may take the place of one of the four screws, bolts, or swing bolts.

A washer of leather, India rubber or other suitable material to be between the lid and the flange, unless the lid is fitted with a projecting ring into a depression in the flange.

All rivet heads to be well finished, and the inside of the package to be free from rough edges or burrs.

The whole to be of good material and workmanship and to be maintained in a efficient condition.

Type B—

Duralumin Containers :

Dimensions of container inside to be 902 millimetre. Deep by 308 millimetre wide by 267 broad.

The body of container to be of 1.626 millimetre (No.16 S.W.G.) sheet in one piece riveted with 8.00 millimetre (5/6ths inch) diameter rivets 25.4 millimetre pitch at seam. 50.8 millimetres pitch at other three corners, having 31.8 m. by 31.8 by 4.8 millimetre angle riveted on top and round bottom with 8 millimetre diameter rivets 25.4 pitch.

Bottom of containers to be of 3.25 millimetres (No. 10 S.W.G.) sheet fitted with 31.8 millimetre by 31.8 millimetre by 4.8 angle all round and riveted with 8 millimetre diameter rivets. Corner pieces 2.642 millimetres (No. 12 S.W.G.) sheet to be riveted to angle and to bottom plate with 8 millimetres diameter rivets.

Cover of container to be of 2.032 millimetres (No. 14 S.W.G.) sheet fitted with 37.6 millimetre by 25.4 millimetre by 4.8 millimetre angle all round and riveted with 8.0 millimetre diameter rivets. Corner pieces 2.042 millimetre (No. 12 S.W.G.) sheet to be riveted to angle and cover plate with 8.00 millimetre diameter rivets.

Cover to be fastened to container by four 12.7 millimetre with worth set pins with washer.

Rubber joint 31.8 millimetre by 3.2 millimetre thick to be riveted to underside of cover plate by twelve 6.3 millimetre diameter rivets, 15.9 millimetre diameter holes to be bored in cover and joint to suit 12.7 millimetre set pins.

Two Duralumin drop down handles to be riveted to body of container.

Type C-

The body to be of wrought iron or mild steel, thoroughly galvanised, thickness not less than 18 B.G. (0.495 inch) fitted at the top with a flange 12.7 millimetre thick made of the Aluminium Alloy (12.5 percent to 14.5 percent zinc; 2.5 percent to 3 percent copper; remainder Aluminium).

The bottom to be of the Aluminium Alloy, not less than 12.7 millimetre thick at the rim, and not less than 4.8 millimetre thick at the centre, and provided with a protection 25.4 millimetre high and at least 6.3 millimetre thick, so made as to be a close fit inside the body, to which it shall be riveted with rivets 6.3 millimetre diameter.

The lid to be of the Aluminium Alloy, not less than 12.7 millimetre thick at the rim and not less than 6.3 millimetre thick at the centre and secured by eight screwed studs to the flange.

A washer of leather India rubber, or other suitable material shall be between the lid and the flange unless the lid is fitted with a projecting ring fitting into a depression in the flange.

All rivet heads to be well finished and the inside of the package to be free from rough edges or burrs.

Specification 7 : Specification of BMD vehicle

The Bulk Mixed Delivery Vehicle normally called as BMD vehicle is specially designed for carrying non-explosive matrix along with other ingredients like Ammonium Nitrate, gassing agent etc. in separate containers mounted on a vehicle chassis to the blasting site. The vehicle also has a water tank, control panel, hydraulic oil tank, radiator, hose reel with pump, hydraulic pump, product pump, air receiver, gassing agent pump, water pump and a drivers cabin mounted on the chassis. The mounting of various containers on the chassis is done in such a way that the vehicle is stable during movement both in empty and laden condition.

BMD vehicle shall meet the following requirements:—

- (1) The vehicle must be in good mechanical condition and all the tanks and other equipments mounted there on shall be properly secured to the vehicle to avoid any damage during movement of the vehicle.
- (2) The vehicle must be strong enough to carry a load without difficulty and be constructed of non-combustible materials, compatible to the ingredients and /or premix, to be contained or transported .
- (3) There shall be separate compartment for each ingredient or premix, each provided with separate means of filling and discharge so as to eliminate possibility of accidental mixing of ingredients during transit or otherwise. The compartment containing liquid shall be provided with shut-off valve.
- (4) No parts of the equipments and fittings shall be projected outside the vehicle.
- (5) The vehicle shall be provided with means and mechanisms for controlling and monitoring various essential parameters like temperature, flow , density and the control panel displaying the status of above parameters and control switches shall be located in a conspicuous position visible and accessible to the operator.
- (6) The cabin of the vehicle shall be provided with non-splinter type glass.
- (7) The vehicle shall be provided with essential tools secured in a box.
- (8) All moving parts of the mixing system must be designed to prevent heat build up.
- (9) Shafts or axles which contact the product must have outboard bearings with a minimum of one-inch clearance between the bearings and the outside of the product container. Special attention must be given to the clearances on all moving parts.
- (10) When electrical power is supplied by a self-contained motor-generator located on the vehicle, the generator shall be separated from the discharge point of the explosives. The generator or the battery shall be provided with a cut-off switch in a readily accessible position.
- (11) Wiring shall be so fixed and protected so as to minimise accidental damage or undue wear.
- (12) The BMD vehicle body and equipment shall be electrically continuous with the vehicle chassis. The frame of the mixer and all other equipments that may be used shall be electrically bonded. Bonding points and bonding cables for effective grounding shall be provided.
- (13) During mixing or loading, a positive grounding device and a semi-conductive hose shall be used to prevent accumulation of static electricity. The supervisor shall evaluate all system to ensure that they will adequately dissipate static electricity under potential field conditions.
- (14) The flexible hoses used to deliver explosives directly in the boreholes shall be electrically and mechanically continuous.

- (15) The exhaust of the vehicle shall be fitted with spark arrestor approved by the Chief Controller.
- (16) At least two multipurpose fire extinguishers of suitable size and capable of fighting electrical and petroleum fires shall be provided on each vehicle in an easily accessible position.
- (17) The BMD vehicle shall be marked with the words " BMD vehicle attached to the SMS support plant licence number".
- (18) The name and address of the licensee along with phone number shall also be marked at a conspicuous place legibly for contact in the event of emergency.
- (19) Fuel cut-off system located in the driver's cabin shall be provided.
- (20) The ratio of the height of centre of gravity of the vehicle in laden condition to the distances between centres of outer rear tyres shall not exceed 0.9.

Typical Sketch of BMD Vehicle

Schedule VIII

Tables of safety distances

The following safety distances shall be observed in the factories licensed for manufacture of explosives or from the magazines licensed for storage of high explosives. If the quantity of explosives to be stored is in between any two stages shown in the table, the safety distance required for higher stage should be observed.

Notes : (1) When two or more storage magazines are located on the same property, each magazine must comply with the minimum distances specified from inhabited buildings, railways, and highways, and, in addition, they should be separated from each other by not less than the distances shown for "Separation of Magazines," except that the quantity of explosives contained in cap magazines shall govern in regard to the spacing of said cap magazines from magazines containing other explosives. If any two or more magazines are separated from each other by less than the specified "Separation of Magazines" distances, then such two or more magazines, as a group, must be considered as one magazine, and the total quantity of explosives stored in such group must be treated as if stored in a single magazine located on the site of any magazine of the group, and must comply with the minimum of distances specified from other magazines, in habited building, railways, and highways.

(2) This Table applies only to the manufacture and permanent storage of commercial explosives. It is not applicable to transportation of explosives or any handling or temporary storage necessary or incident thereto. It is not intended to apply to bombs, projectiles, or other heavily encased explosives.

Table - 1
Table of safety distances (in metres) for manufacturing factory, magazine of category "ZZ"

Quantity in kilogrammes	To and between magazine or magazine office etc.		To and between process buildings	To Railway, Road etc.	To Dwelling Houses offices, factories etc.
	M	UM			
50	10	14	18	21	45
100	11	17	21	33	45
150	13	19	24	40	45
200	14	21	26	45	52
300	16	24	30	45	68
400	18	27	34	45	82
500	19	29	37	48	95
600	21	31	42	54	107
700	22	32	45	60	119
800	23	34	49	65	129
1000	24	36	56	74	148
1250	26	39	64	86	171
1500	28	42	72	96	192
1750	29	44	79	106	211
2000	31	46	85	113	226
2500	33	49	97	129	257
3000	35	52	106	142	283
3500	37	55	114	152	304
4000	38	57	122	163	325
4500	40	60	129	172	343
5000	41		135	180	359
6000	44		145	194	387
7000	46		155	206	412
8000	48		163	217	434
10000	52		177	236	471
12500	56		192	255	510
15000	60		206	280	560
17500	63		216	290	580
20000	65		226	303	605
25000	71		244	325	650
30000	75		259	345	690
35000	79		273	365	730
40000	82		285	380	760
45000	86		296	395	790
50000	89		307	410	820
60000	94		327	435	870
70000	99		343	458	915
80000	104		359	480	960
90000	108		373	498	995
100000	112		387	515	1030
112500	116		402	540	1075
125000	120		417	555	1110
136000	124		428	575	1145
150000	128		446	590	1180
175000	135		466	625	1245
200000	141		487	650	1300

Table - 2

Table of safety distances (in metres) for manufacturing factory, magazine of category "Y"

Quantity in kilograms	To and between magazines or magazine office etc	To and between process buildings	To railway, Road etc	To Dwelling Houses offices, factories etc.
50	10	12	12	45
100	10	15	15	45
150	10	17	17	45
200	10	19	18	45
300	10	22	21	45
400	10	24	23	45
500	10	26	25	45
600	10	27	26	45
700	10	29	27	45
800	10	30	28	45
1000	10	32	32	46
1250	10	35	33	52
1500	10	37	36	57
1750	10	39	38	61
2000	10	41	40	65
2500	12	44	43	73
3000	13	46	46	80
3500	14	49	48	86
4000	15	51	50	92
4500	16	53	52	98
5000	16	55	54	110
6000	18	58	57	117
7000	19	62	61	123
8000	21	64	63	128
10000	23	69	69	138
12500	26	75	72	149
15000	28	79	78	158
17500	30	83	82	167
20000	32	87	86	174
25000	36	94	93	187
30000	40	100	98	199
35000	43	105	104	210
40000	46	110	108	219
45000	48	114	113	228
50000	51	118	118	236
60000	56	126	128	251
70000	60	132	138	264
80000	64	138	148	276
90000	68	144	158	287
100000	72	149	168	297
112500	76	155	180	309
125000	80	160	192	320
136000	84	165	203	329
150000	88	170	217	340
175000	95	179	242	358
200000	101	195	265	375

Table - 3
Table of safety distances (in metres) for, magazine of category "X"(fireworks)

Quantity in kilogrammes	To and between magazines or magazine office etc	To and between process buildings	To railway, Road etc	To Dwelling Houses offices, factories etc.
1	2	3	4	5
50	10	10	8	45
100	10	10	9	45
150	10	10	10	45
200	10	10	11	45
300	10	10	13	45
400	10	10	14	45
500	10	10	15	45
600	10	10	16	45
700	10	10	17	45
800	10	10	17	45
1000	10	10	18	45
1250	12	12	19	45
1500	12	12	19	45
1750	12	12	19	45
2000	13	13	20	45
2500	14	14	21	45
3000	16	16	21	45
3500	16	16	22	45
4000	17	17	22	46
4500	17	17	23	47
5000	20	20	23	49
6000	20	20	24	50
7000	22	22	24	50
8000	22	22	25	53
10000	24	24	26	53
12500	24	24	26	55
15000	25	25	27	55
17500	25	25	27	57
20000	26	26	28	58
25000	27	27	29	60
30000	28	28	29	60
35000	30	30	30	61
40000	30	30	30	61

1	2	3	4	5
45000	30	30	30	64
50000	30	30	30	64
60000	30	30	30	66
70000	30	30	30	66
80000	30	30	30	66
90000	30	30	30	67
100000	30	30	30	67
112500	30	30	30	69
125000	30	30	30	69
136000	30	30	30	70
150000	30	30	30	70
175000	30	30	30	71
200000	30	30	30	71

Table - 4

Safety distances (in metres) to be observed in a factory for manufacture of sparklers only

From	Capacity in kilogrammes of the shed	Man Limit	To Mixing shed	To Dipping shed	To Drying platform	To Packing shed	To Transit shed	To Raw material or empty frames shed	To Dwelling house, protected works
Mixing shed	50	2	6	6	9	9	9	15	15
Dipping shed	200	8	6	6	3	9	9	15	15
Drying Platform	200	8	9	3	3	9	9	15	15
Packing shed	200	4	9	9	9	9	9	15	15
Transit shed	200	2	9	9	9	9	9	15	15
Raw material/empty frames shed	-		15	15	15	15	15	-	-

Table - 5

Safety distance (in metres) to be observed in a magazine for storage of sparklers only.

From the magazine of storage capacity in kilogrammes	To and between the magazine, own sparklers manufacturing shed or magazine office	To railway, public road	To dwelling house, protected works
50 to 35000	15	15	30
35001 to 70,000	15	15	35
70,001 to 200000	15	15	40

Table-6
Safety distance (in metres) to be observed by various process and storage sheds of fireworks manufacturing factory

From	Explosives Limit of the shed in killogrammes	Man of the Limit	To mixing/filling shed	To dipping shed	To drying platform	To manu-facturing shed	To fuse wrapping shed	To transit shed (fireworks) of capacity in killogrammes			To transit shed (quick match/micro cord/fuse) of capacity in killogrammes	To transit shed (pellet) of capacity in killogrammes	To raw material shed	To dwelling house, protected works or out side safety distances		
								300	400	500						
Mixing/filling shed	5	2	18	18	18	18	18	30	34	37	21	24	26	18	45	45
Dipping shed	5	2	18	12	18	12	12	30	34	37	21	24	26	18	45	45
Drying platform	25	4	18	12	12	12	12	30	34	37	21	24	26	18	45	45
Manufacturing shed	25	4	18	12	12	12	12	30	34	37	21	24	26	18	45	45
Fuse wrapping shed	10	2	18	12	12	12	12	30	34	37	21	24	26	18	45	45
Transit shed (fireworks)	300 400 500	2 2 2	30 34 37	30 34 37	30 34 37	30 34 37	30 34 37	30 34 37	34 34 37	37 37 37	30 34 37	30 34 37	30 34 37	30 34 37	45 45 45	45 45 45
Transit shed (quick match/micro cord /fuse)	100 150 200	2 2 2	21 24 26	21 24 26	21 24 26	21 24 26	21 24 26	21 24 34	21 24 34	21 24 34	21 24 26	24 26 28	26 28 30	21 24 26	45 45 45	45 45 45
Transit shed (pellet)	50	2	18	18	18	18	18	18	18	18	37	18	18	18	45	45
Raw material shed	X		45	45	45	45	45	45	45	45	45	45	45	45	X	X

Note:—The Transit building for semi-finished fireworks will have two compartments each of size 2.5 metres x 2.0 metres - one each for the storage of non-explodable items like wheel, flowerpots etc. and another for storage of explodable items like crackers, atom bombs etc.

Table-7

Safety distance (in metres) to be observed in transit building for storage of micro fuse and/or quick match

Capacity in kilogrammes	Safety distance from process and drying platform	Safety distance form protected works or fencing
100 kilogrammes	21	45
150 kilogrammes	24	45
200 kilogrammes	26	45

[F.No. 2(5)/2003-Expl]

SANJAY. K. THADE, Director

THE MINES RESCUE RULES, 1985

G.S.R. 325 (E) the 29th March, 1985.- Whereas the draft of the Mines Rescue Rules, 1984 was published as required by sub-section (1) of section 59 of the Mines Act, 1952 (35 of 1952), in the Gazette of India Extraordinary Part II Section 3- Sub-section (I) dated the 3rd July 1984 under the notification of the Government of India in the then Ministry of Labour and Rehabilitation (Department of Labour) No. G.S.R. 492(E) dated the 3rd July, 1984, inviting objections or suggestions from all persons likely to be affected thereby, till the expiry of a period of three months from the date of publication of the said notification in the Official Gazette;

And whereas the said Gazette was made available to the public on the 3rd July, 1984;

And whereas; the objections and suggestions received from the public on the said draft have been considered by the Central Government.

Now, therefore, in exercise of the powers conferred by clauses (a) to (1) and clauses (v) and (w) of section 58 of the said Act, the Central Government, after referring the said draft to the Mining Boards constituted under the said Act and after giving such Board a reasonable opportunity of reporting as to the expediency of making the said rules and as to the suitability thereof as required by sub-section (4) of section 59 of the said Act hereby makes the following rules, namely:-

CHAPTER I

Preliminary

1. Short title, application; and commencement:- (1) These Rules may be called the Mines Rescue Rules, 1985.
 - (2) They shall apply to below ground mines.
 - (3) They shall come into force on the 2nd April, 1985.
2. Definitions:- In these rules, unless there is any thing repugnant to the subject or context:-
 - (a) "Act" means the Mines Act, 1952;
 - (b) "below ground mine" means any excavation which extends below superjacent ground;
 - (c) "Board of Mining Examination" means the Board of Mining Examinations constituted under the Coal Mines Regulations, 1957 or the Metalliferous Mines Regulation, 1961 as the case may be;
 - (d) "Chief Inspector" means the Chief Inspector of Mines appointed under section 5 of the Act;

- (e) "Foreman's Certificate" means the foreman's certificate granted by the Board of Mining Examination;
- (f) "Inspector" means an Inspector of Mines appointed under the Act, and includes a district magistrate when exercising any power or performing any duty of an; Inspector which he is empowered by the Act to exercise or perform;
- (g) "Instructor" means a person appointed as such under sub-rule (2) of rule 3.
- (h) "Manager" means a person appointed under section 17 of the act;
- (i) "Manager's Certificate" means the manager's certificate granted by the Board of Mining Examination ;
- (j) "Ordinarily employed" with reference to any mine or part thereof means the average number of persons employed per day in the mine or part of mine during the preceding calendar year (obtained by dividing the number of man-days worked by the number of working days excluding rest days and other non-working days);
- (k) "Overman's Certificate" means the overman's certificate granted by the Board of Mining Examinations;
- (l) "Owner" means a person; who is the immediate proprietor or lessees /or occupier of the mine or of any part thereof and in the case of amine the business where of is being carried on by a liquidator or receiver, such liquidator or receiver buy does not include a person who merely receives a royalty, rent or fine from the mine, or is merely the proprietor of the mine, subject to any lease; grant or licence for working thereof, or is merely the owner of the soil and ;not interested in the minerals of the mine ; but any contractor or sub-lessee for the working of a mine or part thereof shall be subject to the Act in like manner as if he was an owner, but not so as to exempt the owner from any liability;
- (m)"Principal Official" means the senior – most mine official in mining discipline on duty in the mine;
- (n) "Qualified medical practitioner " means a medical practitioner who possess any recognised medical qualification as defined in clause (h) of section 2 of the Indian Medical Council Act, 1956 and who is enrolled on a State Medical register as defined in clause (k) of that section;
- (o) "rescue room" means a rescue room as established and maintained, under rules;
- (p) "rescue station" means a rescue station established and maintained under rule 3;
- (q) "rescue trained person" means a person certified by the Superintendent to be rescue trained person under sub –rule (1) of rule 21;
- (r) "Schedule" means a Schedule appended to these rules;
- (s) "Superintendent" means a superintendent of rescue station appointed under sub-rule (2) of rule3.

CHAPTER II

RESCUE STATIONS AND RESCUE ROOMS

3. Establishment and location of rescue station;- (1) The Chief Inspector may permit or require; the owner of a below ground mine or a group of below ground mines to establish and maintain rescue station, stations with such designs and specifications and at; such place/ places as may be considered necessary in consultation with the owner:

Provided that where there are below ground mines belonging to more than one owner, the Chief Inspector may permit or require two or more owners to jointly establish a common rescue station:

Provided further that all the existing rescue stations as on the date of ;coming into force of these rule, shall continue to function for a period of three years from that date.

(2) At every rescue station there shall be appointed one Superintendent and at least two instructions and also, there shall be maintained a rescue brigade of not less tan eighteen rescue trained persons.

(3) In case where the absence of the Superintendent at a rescue station exceeds 60 days, the owner shall appoint another Superintendent.

(4)The owner shall, within seven days from the date of assumption or relinquishment of charge by the Superintendent , inform the Chief Inspector and ;the Inspector in-charge of the region where the mine is situated (hereinafter referred to as Regional Inspector) in Form I.

4. Functions of rescue stations:- The functions of rescue station shall include:-

- (i) imparting initial training in rescue and recovery work;
- (ii) imparting refresher training to rescue trained persons;
- (iii) providing support by its own rescue teams and equipment in case of major accidents or long-lasting rescue and recovery operations; and
- (iv) carrying out the functions of rescue room in respect of these below ground mines where there is no rescue room.

5.Establishment and location of rescue rooms:- (1) At every below ground mine where, more than 100 persons are ordinarily employed below ground and there is no rescue station within its radius of 35 kms. The owner, shall establish and ;maintain on surface close to mine entrance a rescue room:

Provided that it may be sufficient to provide one rescue room for a number of mines belonging to the same owner where:-

- (a) the total number of persons ordinarily employed in below ground workings of all such mines does not exceed 5000; and

(b) The mines are situated radius of 35 kms. From and connected by road with the rescue room :

Provided further that the Chief Inspector may permit the owner of a group of mines having the total number of persons ordinarily employed below ground in excess of 5000, to use the rescue room as a rescue station excepting the functions of imparting initial training in rescue work, if such rescue room is :-

- (a) equipped with requisite additional rescue apparatus including at least 15 extra sets of two hour self- contained breathing apparatus; and
- (b) placed under the charge of a person holding the qualifications prescribed under rule 8 and a minimum of five rescue trained persons of whom at least one shall hold the qualifications prescribed under rule 10, are posted thereat.

(2) Notwithstanding anything contained in sub-rule (1) in the case of below ground coal mines having a fiery seam or gassy seam of second or third degree, the Chief Inspector may, for reasons to be recorded in writing require the owner to establish and maintain a rescue room irrespective of the number of persons ordinarily employed below ground therein.

(3) At each rescue room, there shall be appointed such number of rescue trained persons as may be necessary and one of them possessing the qualifications specified in rule 10 shall be made incharge of the rescue room. At least one rescue trained person shall always be in attendance at the rescue room.

6. Functions of rescue room:- A rescue room shall provide facilities for the storage, assembly, testing and adjustments of breathing apparatus and other rescue equipment and apparatus and for their speedy transport to mines.

7. Qualifications, experience etc. of Superintendent:- After coming into force of these rules, no person shall be appointed as Superintendent unless he:-

- (j) is a rescue trained person ;
- (ii) has 5 years practical experience of below ground work in mines; and
- (iii) holds a First Class Manager's Certificate of a type not restricted to open cast workings.

8. Qualifications, experience etc., of Instructors:- After; the coming into force of these rules no person shall be appointed as Instructor unless he:-

- (i) is a rescue trained person;
- (ii) has 3 years practical experience of blow ground work in mines; and
- (iii) holds a Manager's certificate of a type not restricted to open cast workings.

9. Selection of rescue trained persons for posting at rescue stations:- (1) After coming into force of these rules the rescue trained persons for posting at a rescue station shall be selected, from amongst the rescue trained persons employed in mines served by the rescue station, by the Superintendent in consultation with the managers of such mines.

(2) A person selected under sub-rule (1) shall be posted for not less than one year and not more than five years at a rescue station at any one time.

10. Qualifications, experience etc. of rescue room incharge:- No person shall be appointed as rescue room incharge unless he:-

- (i) is a rescue trained person;
- (ii) has 3 years practical experience of below ground work in mines ; and
- (iii) holds a Manager's , Overman's or Foreman's Certificate of a type not restricted to open cast workings.

11. Equipments:- (1) At every rescue station there shall be provided and maintained for immediate use, apparatus and equipment as specified in Schedule I.

(2) At every rescue room there shall be provided and maintained for immediate use, apparatus and equipment as specified in Schedule II.

(3) At a below ground mine, where no rescue room is located, apparatus and equipment as specified in Schedule III, shall be maintained at the entrance of such mine.

(4) Self- contained breathing apparatus provided at a rescue station and that at rescue rooms under it shall be of the same type and make.

(5) The following apparatus and equipments provided in pursuance of sub-rules (1), (2) and (3), shall be of a type or standard approved by the Chief Inspector, namely:-

- (a) breathing apparatus;
- (b) smoke helmets and apparatus serving the same purpose;
- (c) reviving apparatus;
- (d) electric safety lamps and flame safety lamps;
- (e) gas detector; and
- (f) self rescuers.

(6) All breathing apparatus and every flow meter shall be adjusted; and tested and the purity of oxygen for use in breathing apparatus shall be tested in such manners as are laid down in Schedule IV.

(7) In case of an accident in a below ground mine arising out of the use of any rescue apparatus, a written report thereof shall be sent, within 24 hours of such accident, by the manager of the mine to the Chief Inspector and Regional Inspector in Form II appended to mines rules.

(8) In case of an accident in a rescue station or rescue room arising out of the use of any rescue apparatus a written report thereof shall be sent, within 24 hours of such accident, by the Superintendent to the Chief Inspector and Regional Inspector in Form II aforesaid.

(9) No absorbent charges, chemicals, self-rescuer and gas detector tubes shall be kept at a rescue station, rescue room or below ground mine for use beyond the expiry date, which shall be legibly marked on the boxes thereof.

CHAPTER III

Duties and responsibilities of superintendents etc.

12. Duties and responsibilities of Superintendent.- (1) The Superintendent shall be in overall control of the rescue station and the rescue rooms served by such rescue station.

(2) The Superintendent shall ensure that all the rescue equipment and apparatus kept at the rescue station, rescue rooms and at the entrance of the below ground mines under his control are-

- (a) maintained in perfect working order;
- (b) inspected by Instructors at specified intervals; and
- (c) tests are conducted and adjustments are made.

(3) The Superintendent shall ensure that adequate stock of spare parts and supplies are kept for maintaining rescue equipment and apparatus in perfect working order.

(4) The Superintendent shall countersign the records maintained under sub-rule (1) of rule 13.

(5) The Superintendent shall ensure that persons selected for initial training and those undergoing refresher training receive the prescribed course of instructions and practices and are issued the credit certificates for the same.

(6) The Superintendent shall make periodical inspection rescue rooms and the apparatus and equipment under his control.

(7) In the event of an emergency at a below ground mine, Superintendent shall perform such rescue and recovery work as may be assigned to him by the manager or in his absence by the principal official present at the surface. He shall within three days of completion of the rescue or recovery work send a report thereof to the Regional Inspector or the Chief Inspector.

(8) The Superintendent shall maintain in a bound paged book a diary and shall record therein the results of each of his inspections and also the action taken by him to rectify the defects observed during inspection.

(9)The Superintendent shall submit to the Chief Inspector and to the Regional Inspector detailed report on the functioning of the rescue station and rescue rooks under his control in the preceding year on or before the 20th day of February of the succeeding year with particular reference to :-

- (a) type and number of equipment and apparatus provided and maintained;
- (b) Superintendent, instructors, rescue room Incharge and rescue brigades in position, as on the 31st December;
- (c) Number of rescue trained persons at each below ground mine served by the rescue station and number of such persons given refresher practices and medically examined, with results thereof;
- (d) Particulars of emergencies attended;
- (e) Any other relevant matter.

13.Duties of Instructors:- (1) Under the direction of Superintendent the Instructor shall-

- (a) impart course of instructions and practices to persons selected for training in rescue and recovery work as well as to rescue trained persons and maintain a record thereof; and
- (b) make inspection, test and adjustment of rescue equipment and apparatus and maintain a record thereof.

(2)In the event an emergency at a below ground mine, Instructors shall perform such rescue and recovery work as may be assigned to him by the manager or in his absence by the principal official present at the surface.

(3)Instructor shall not leave the rescue station without prior permission of the Superintendent.

(4)In the absence of the Superintendent, the Instructor shall be incharge of the rescue station.

14.Duties and responsibilities of rescue room incharge:- Every rescue room incharge shall-

- (a) display prominently a list of mines served by his rescue room;
- (b) maintain the equipment and apparatus kept at the rescue room in perfect order;
- (c) maintain a proper record of all rescue equipment and apparatus kept at the rescue room and inspection thereof; and
- (d) not allow any unauthorised person; to enter into, or permit any unauthorised person to take out any apparatus or equipment from the rescue room.

15.Duties of rescue trained persons posted at rescue station:- The rescue trained person shall-

- (a) obey order of the Superintendent and Instructor and assist them in discharge of their functions;
- (b) attend to messages, telephone calls and wireless and maintain record thereof;
- (c) maintain the rescue station in neat and tidy condition;
- (d) maintain the equipment and apparatus kept at the rescue station in perfect order;
- (e) perform rescue and recovery work in mines; and
- (f) not leave rescue station without obtaining permission from the Superintendent.

16.Duties of rescue room attendant :- Every rescue room attendant shall-

- (a) not leave the rescue room until relieved by a substitute;
- (b) not allow any unauthorised person to enter in or to take out any apparatus or equipment from the rescue room;
- (c) attend to telephone calls and maintain a record thereof;

- (d) maintain the rescue room in neat and tidy condition; and
- (e) obey orders of the rescue room incharge and assist him in discharge of his functions.

CHAPTER IV

Organisation and equipment in mines

17.Telephone Communication – Every mine shall be connected telephonically with the rescue room and rescue station serving the mine. Wherever practicable wireless communication shall also be provided:

Provided that where there is no telephonic communication system, the Chief Inspector may by an order in writing and subject to such conditions as he may specify therein, approve any other means of communication.

18.Rescue tracings:- There shall be kept at a below ground mine, more than three legible tracings of the working of the mine upto a date not before three preceding months. The tracing shall show the system of ventilation in the mine, and in particulars, the general direction of air current, every point where the quantity of air is measured, every air-crossing, ventilation-door stopping, booster fan and any other principal device for regulation and distribution of air, fire-dams, preparatory stoppings , every fire-fighting equipment, every water-dam with dimensions and other particulars of construction, every pumping, telephone and ambulance station, every room used for storing inflammable material, reserve stations and every haulage and travelling roadway.

19.Appointment of rescue trained persons in mines, their disposition and accommodation:- (1) The manager of a below ground mine, where more than 100 persons are ordinarily employed below ground, shall ensure that at least 5 rescue trained persons are readily available at surface at any time.

(2)The manager of a below ground mine, where more than 500 persons are ordinarily employed below ground , shall also ensure that persons on a scale of one man for every 100 persons or part thereof are rescue trained persons.

(3)It shall be the responsibility of the owner to provide suitable accommodation:-

- (i) close to the rescue station to the Superintendent, Instructors and members of rescue brigade;
- (ii) close to rescue room to rescue room incharge rescue trained persons and attendants attached to it; and
- (iii) close to below ground mine entrance to rescue trained persons other than those specified in (i) and (ii).

(4)There shall be provided at a below ground mine effective bell or other arrangements, as may be approved by the Regional Inspector , for immediate summoning of rescue trained persons.

20.Selection of persons for training in rescue work:- No person shall be selected for training in rescue work, unless:-

- (i) he is between 21 and 30 years of age and holds a valid First-aid certificate of the standard of the St. John Ambulance Association (India);
- (ii) he is certified by the Manager that he has sufficient underground experience for the purpose of rescue work;

(iii) he is certified by a qualified medical practitioner, as may be designated by the Manager after examination in accordance with Schedule VI, to be free from any organic disease or weakness and to be fit for undertaking rescue work; and

(iv) he is considered by the Superintendent of Rescue Station, after such examination and interview as he considers necessary, to be suitable for rescue work with breathing apparatus.

21. Instructions and practices etc.-(1) Every person selected for training in rescue work shall undergo the course of instructions and practices as set out in Part I of Schedule VII until he has passed and has; been certified as efficient by the Superintendent .

(2) Rescue trained person shall undergo practices and receive instructions as set out in Part II of Schedule VII.

(3) A record shall be kept at every rescue station of all persons undergoing practices and receiving instructions. Such record shall contain:-

- (i) the date and the character of each practice:
- (ii) the condition of each person after the practice, and if anything abnormal was observed in his condition, whether it was due to a defect of the apparatus or to that person ;and
- (iii) any other relevant information.

22. Medical examination etc. of rescue trained person:- Every rescue trained person shall be re-examined once at least in every twelve months by a qualified medical practitioner as may be designated by the manager in accordance with Schedule VI, and in case he is declared medically unfit, he shall cease to be a rescue trained person with effect from the date he has been so declared.

23. Suspension of rescue trained persons:- If in the opinion of the owner, agent, manager or an Inspector a rescue trained person is incompetent or is guilty of negligence or misconduct in the performance of his duties, the owner, agent, manager or Inspector as the case may be, may after giving such person an opportunity to give a written explanation, suspend him from or debar him for, undertaking any rescue and recovery work.

CHAPTER V

Conduct of rescue work

24. Duties of Manager etc. in emergency:- (1) On receiving information of any emergency likely to require the services of a rescue team, the manager, or in his absence the Principal Official present at the surface, shall immediately:-

- (a) inform the rescue room or the rescue stations serving the mine for necessary assistance;
- (b) summon rescue trained person employed in the mine;
- (c) inform the owner, agent or manager of nearby mines to make available the services of rescue trained persons employed therein: if so required;
- (d) inform the rescue station about the nature of the occurrence; stating whether assistance would be needed from the rescue station;
- (e) summon medical assistance; and
- (f) send information of the occurrence to the Regional Inspector.

(2) All rescue and recovery work at a below ground mine shall be conducted under the control, direction and supervision of the manager of the mine or in his absence the principal official present at the surface.

Provided that in the event of a major emergency, such as ignition, explosion, big underground fire or an accident involving a number of persons, the manager or the principal official shall, in taking decisions regarding rescue and recovery operations, take guidance from a group consisting of a Senior Official of the management a representative each from the Director General of Mines Safety, concerned rescue station and the recognised Union of the Workers, so however that he must take necessary decisions and direct the operations as the situation warrants, without waiting for the constitution or deliberations of the said group.

25. Accommodation at the below ground mine for persons engaged in rescue work:- Whenever rescue trained persons are engaged in rescue or recovery work at a below ground mine, they shall be provided at such mine suitable accommodation for storage and charging of apparatus required for that work. Such accommodation shall be situated at a convenient place near the entrance in use, and shall be properly ventilated and lighted. Adequate quantity of cool and wholesome drinking water shall be provided at such accommodation; and proper canteen facilities shall also be provided for the rescue workers.

26. Entry into below ground mines for rescue or recovery work:- (1) No person shall be allowed to enter a below ground mine or part thereof which is unsafe for the purpose of engaging in rescue or recovery work, unless authorised by the manager or in his absence by the principal official of the mine present at the surface. Only rescue trained persons shall be permitted to enter the mine for the purpose of using self-contained breathing apparatus.

(2) During the course of rescue or recovery work, person or persons shall be stationed at the entrance to the below ground mine and shall keep a written record of all persons entering and leaving such mine, and the time thereof.

27. Fresh air bases:- (1) As soon as possible, base or bases shall be established in fresh air, as near to the irrespirable zone or zones as safety permits, Every such base shall, if possible be connected by telephone:

- (i) if the base is below ground to the surface ; or
- (ii) if the base is on the surface, to the shaft bottom.

(2) Except in cases where the delay involved may result in danger to life, rescue trained persons shall not proceed beyond any place where a base is to be established until there have been provided at such base:-

- (a) two persons, of whom one shall be a qualified medical practitioner if practicable, and other shall be a rescue trained person;
- (b) a spare team; with rescue apparatus, ready for immediate service;
- (c) one or more reviving apparatus, oxygen revivers etc,
- (d) first aid box and stretcher,
- (e) means of testing for carbon monoxide;
- (f) a hygrometer; and
- (g) two flame safety lamp.

(3)Whenever men are already at work beyond the fresh air base, there shall be provided at the base as soon as possible the persons, apparatus and equipments specified sub –rule (2)

28.Leader:- Every rescue team engaged in work with breathing apparatus in a mine shall be under a leader who shall be appointed by the Superintendent.

29.Instructions to leader:- Prior to sending a rescue team underground, the Superintendent or a person authorised by him shall give clear instructions to the leader of the team as to where it shall go and what it shall attempt.

30.Test of apparatus:- Before proceeding below ground the leader shall test or witness the testing of self-contained breathing apparatus of the team for leakage. No such apparatus shall be used unless it is found safe. He shall check the equipment of his party, and immediately before entering irrespirable atmosphere shall make sure that all breathing apparatus are working properly.

31.Duties of leader below ground : (1) The leader shall not engage in manual work. He shall give his attention solely to directing the team and to maintaining its safety. He shall examine the roof and supports during the journey, and if there is any likelihood of fall at any place along the roadway, shall not proceed further until the team has made the place secure.

(2)The leader shall keep the team together and shall not allow any member of the team to stray.

(3).If the atmosphere is clear, the leader shall, when passing the junction of two or more roadways, clearly indicate the route by means of arrow marks in chalk. If the atmosphere is obscure, the leader shall see that a life line is laid in from the fresh air base, and shall not allow any member of the team to move out of reach of that line; or, if that course is impracticable, he shall not proceed until every roadway branching off from the route is fenced across the whole opening.

(4).When using rescue apparatus, the leader shall carry a watch, shall record the pressure of the compressed oxygen at intervals of 20 minutes or so, and shall commence the return journey in ample time. During travelling he shall adopt the pace of slowest member, if any member of the team is in distress, shall immediately return to the fresh air base with the whole team.

(5).The leader shall not permit any member of the team using breathing apparatus in a mine to remain at work at any one time for a period longer than one and half hours or such other period as may be specified by the Chief Inspector in respect of the breathing apparatus being used.

32.Rescue team members and their duties:- (1) The number of persons in any rescue team using breathing apparatus in a mine shall not be less than five nor more than six, including the leader.

(2).In case there is no provision in any of the breathing apparatus carried by the rescue team for an extension for supply of oxygen to another person in an emergency, the team shall carry a self rescuer.

(3).Members of rescue team shall in general, use the signals prescribed in Schedule VIII in communicating to one another.

(4).In travelling with rescue apparatus on, every member of the team shall keep the place given to him when numbering off. If the pace is too quick or if distress is felt, the member shall at once call attention to the fact.

(5).Every member of a rescue team engaged in work with breathing apparatus in amine shall obey the order of the leader of the team.

33.Restriction of second spell of works:- No person shall commence a second or ;subsequent spell of work in irrespirable atmosphere without being examined and found fit by a qualified medical practitioner.

CHAPTER VI

Miscellaneous

34.Obligation of owner, agent and manager in certain situations:- Whenever emergency arises at a below ground mine, whether served by a rescue room or rescue station or not, the owner, agent or manager may seek assistance or additional assistance as the case may be from the nearest rescue room or rescue station and in such an event:-

- (a) all possible assistance shall be promptly rendered by the rescue room or rescue station; and
- (b) the owner of the mine shall pay to the owner of the rescue station or rescue room, rendering such assistance, the full cost of rescue services and facilities borrowed.

35.General management:- It shall be the responsibility of the owner to establish, maintain and ensure proper functioning of rescue room or rescue station as required under these rules, to appoint Superintendent, instructors, rescue room incharge, rescue trained persons, and to provide necessary rescue equipment and apparatus as may be necessary for compliance with the provisions of these rules.

36.Inspections:- (1) The Chief Inspector or other Inspector, authorised by him in his behalf or the Regional Inspector may enter, inspect and examine any rescue station and rescue room and make such examination or inquiry as he thinks fit in order to ascertain whether the provisions of these rules and of any orders made thereunder are being complied with.

(2).When the below ground mines served by a rescue station or rescue room fall under the jurisdiction of two or more Regional Inspectors, the Chief Inspector may authorise any one of them for enforcement of these rules.

37.Power to relax:- Where in the opinion of the Chief Inspector, the conditions pertaining to a mine or rescue station or rescue room are such as to render compliance with any provisions contained in these rules, unnecessary or impracticable, he may by an order in writing and subject to such conditions as he may specify therein grant exemption from the said provisions.

38.Repeal and saving :- (1) The Coal Mines Rescue Rules, 1959 are hereby repealed.

(2).Not withstanding such repeal anything done or any action taken under the said rules shall be deemed to have been done or taken under the corresponding provisions of these rules.

FORM I

[See rule 3(4)]

Intimation of appointment etc. of Superintendent.

From

To

1. The Chief Inspector of Mines,
Dhanbad-826001.
2. The Regional Inspector of Mines,

Sir,

I have to furnish the following particulars in respect of appointment/termination of appointment of Superintendent atrescue station of.....(Owner)

- 1.Name of Superintendent.....
- 2.Qualifications (a) First Class Manager's (Coal/Metalliferous*) Certificate No.....
(b)Number of Certificate of Competency in undertake Rescue and Recovery work.....
(c)First-aid Certificate No.....
- 3.Date of assumption/relinquishment of charge.....
- 4.Address of Superintendent

Yours faithfully,

Place.....
Date.....

Signature
Owner

-
- Delete whatever is not applicable.

FORM II

[See rule 11 (7)]

Notice of accident

From.....

To

- 1.The Chief Inspector of Mines,
Dhanbad –826001.
- 2.The Regional Inspector of Mines,

Sir,

I have to furnish the following particulars of an accident at.....mines/rescue station/rescue room of(owner).

1.Situation of mines/rescue station/rescue room	Name and postal address of owner	Village Station District State	Post Office Sub-Division	Police (Taluqa)
---	----------------------------------	--------------------------------	--------------------------	-----------------

2.Date and hour of accident	Place of location of accident in mine/rescue station/ rescue room*	Number of persons	
		Killed	Seriously Injured

3.Cause and description of accident

4.Name of persons killed/injured	Nature of employment	Age	Sex	Nature of injury/ cause of death.
----------------------------------	----------------------	-----	-----	-----------------------------------

Yours faithfully,

Signature
Designation-Manager/Superintendent

Place.....
Date.....

*Delete whatever is not applicable.

SCHEDULE I

[See rule 11(1)]

Equipment to be kept at a Rescue Station

	Nos.
A. BREATHING APPARATUS	
1. Two-hours self –contained breathing apparatus	54
2. Short duration self-contained breathing apparatus	6
3. Absorbent charges	2,000
B. RESUSCITATING APPARATUS	
1. Resuscitating Apparatus	12
2. Spare cylinders	8
C. TUBE APPARATUS	
(a) Pressure type with belows	2
(b) Spare helmets	2
(c) Pressure type with fan	1
D. ANCILLARY EQUIPMENT	
1. Oxygen cylinders	12
2.(a) Oxygen pump (hand driven)	4
(b) Oxygen pump (power driven)	2
3. Bobin meter	3
4. Flow meter	2
5. Universal tester	2
6. Pressure gauge testing device	2
7. Oxygen testing apparatus	1
8. Apparatus testing tool kit	8
E. LAMPS ETC. AND GAS TESTING DEVICE	
1. Flame safety lamps with maintenance kit	8
2. Electric safety lamps	

MINES AND MINERALS (DEVELOPMENT AND REGULATION) ACT, 1957

ARRANGEMENT OF SECTIONS

CHAPTER I
PRELIMINARY

SECTIONS

1. Short title, extent and commencement.
2. Declaration as to expediency of Union Control.
3. Definitions.

CHAPTER II

GENERAL RESTRICTIONS ON UNDERTAKING PROSPECTING AND MINING OPERATIONS

4. Prospecting or mining operations to be under licence or lease.
- 4A. Termination of prospecting licences or mining leases.
5. Restrictions on the grant of prospecting licences or mining leases.
6. Maximum area for which a prospecting licence or mining lease may be granted.
7. Periods for which prospecting licences may be granted or renewed.
8. Periods for which mining leases may be granted or renewed.
- 8A. Period of grant of a mining lease for minerals other than coal, lignite and atomic minerals.
9. Royalties in respect of mining leases.
- 9A. Dead rent to be paid by the lessee.
- 9B. District Mineral Foundation.
- 9C. National Mineral Exploration Trust.

CHAPTER III

PROCEDURE FOR OBTAINING, PROSPECTING LICENCES OR MINING LEASES IN RESPECT
OF LAND IN WHICH THE MINERALS VEST IN THE GOVERNMENT

10. Application for prospecting licences or mining leases.
- 10A. Rights of existing concession holders and applicants.
- 10B. Grant of mining lease in respect of notified minerals through auction.
- 10C. Grant of non-exclusive reconnaissance permits.
11. Grant of prospecting licence-cum-mining lease through auction in respect of minerals other than notified minerals.
- 11A. Procedure in respect of coal or lignite.
- 11B. Power of Central Government to make rules for regulating atomic minerals specified under Part B of First Schedule.
- 11C. Power of Central Government to amend First Schedule and Fourth Schedule.
12. Registers of prospecting licences and mining leases.
- 12A. Transfer of mineral concessions.

CHAPTER IV
RULES FOR REGULATING THE GRANT OF PROSPECTING LICENCES AND MINING LEASES

SECTIONS

13. Power of Central Government to make rules in respect of minerals.
- 13A. Power of Central Government to make rules for grant of prospecting licences or mining leases in respect of territorial waters or continental shelf of India.
14. [Sections 5 to 13] not to apply to minor minerals.
15. Power of State Governments to make rules in respect of minor minerals.
- 15A. Power of State Government to collect funds for District Mineral Foundation in case of minor minerals.
16. Power to modify mining leases granted before 25th October, 1949.

CHAPTER V
SPECIAL POWERS OF CENTRAL GOVERNMENT TO UNDERTAKE PROSPECTING OR
MINING OPERATIONS IN CERTAIN CASES

17. Special powers of Central Government to undertake prospecting or mining operations in certain lands.
- 17A. Reservation of areas for purposes of conservation.

CHAPTER VI
DEVELOPMENT OF MINERALS

18. Mineral development.
- 18A. Power to authorise Geological Survey of India, etc., to make investigation.

CHAPTER VII
MISCELLANEOUS

19. Prospecting licences and mining leases to be void if in contravention of Act.
20. Act and rules to apply to all renewals of prospecting licences and mining leases.
- 20A. Power of Central Government to issue directions.
21. Penalties.
22. Cognizance of offences.
23. Offences by companies.
- 23A. Compounding of offences.
- 23B. Power to search.
- 23C. Power of State Government to make rules for preventing illegal mining, transportation and storage of minerals.
24. Power of entry and inspection.
- 24A. Rights and liabilities of a holder of prospecting licence or mining lease.
25. Recovery of certain sums as arrears of land revenue.
26. Delegation of powers.
27. Protection of action taken in good faith.
28. Rules and notifications to be laid before Parliament and certain rules to be approved by Parliament.
29. Existing rules to continue.
30. Power of revision by Central Government.
- 30A. Special provisions relating to mining leases for coal granted before 25th October, 1949.

SECTIONS

- 30B. Constitution of Special Courts.
- 30C. Special Courts to have powers of Court of Session.
- 31. Relaxation of rules in special cases.
- 32. [*Repealed*].
- 33. Validation of certain acts and indemnity.

THE FIRST SCHEDULE.

THE SECOND SCHEDULE.

THE THIRD SCHEDULE.

THE FOURTH SCHEDULE.

THE MINES AND MINERALS (DEVELOPMENT AND REGULATION) ACT, 1957

ACT NO. 67 OF 1957

[28th December, 1957.]

An Act to provide for the ¹[development and regulation of mines and minerals] under the control of the Union.

BE it enacted by Parliament in the Eighth Year of the Republic of India as follows:—

CHAPTER I

PRELIMINARY

1. Short title, extent and commencement.—(1) This Act may be called the Mines and Minerals ²[(Development and Regulation)] Act, 1957.

(2) It extends to the whole of India.

(3) It shall come into force on such date³ as the Central Government may, by notification in the Official Gazette, appoint.

2. Declaration as to expediency of Union Control.—It is hereby declared that it is expedient in the public interest that the Union should take under its control the regulation of mines and the development of minerals to the extent hereinafter provided.

3. Definitions.—In this Act, unless the context otherwise requires,—

⁴[(a) “leased area” means the area specified in the mining lease within which mining operations can be undertaken and includes the non-mineralised area required and approved for the activities falling under the definition of mine as referred to in clause (i);

(aa) “minerals” includes all minerals except mineral oils;]

(b) “mineral oils” includes natural gas and petroleum;

(c) “mining lease” means a lease granted for the purpose of undertaking mining operations, and includes a sub-lease granted for such purpose;

(d) “mining operations” means any operations undertaken for the purpose of winning any mineral;

(e) “minor minerals” means building stones, gravel, ordinary clay, ordinary sand other than sand used for prescribed purposes, and any other mineral which the Central Government may, by notification in the Official Gazette, declare to be a minor mineral;

⁵[(ea) “notified minerals” means any mineral specified in the Fourth Schedule;]

(f) “prescribed” means prescribed by rules made under this Act;

(g) “prospecting licence” means a licence granted for the purpose of undertaking prospecting operations;

⁴[(ga) “prospecting licence-cum-mining lease” means a two stage concession granted for the purpose of undertaking prospecting operations followed by mining operations;]

(h) “prospecting operations” means any operations undertaken for the purpose of exploring, locating or proving mineral deposit ; ⁶***

1. Subs. by Act 38 of 1999, s. 2, for “regulation of mines and the development of minerals” (w.e.f. 18-12-1999).

2. Subs. by s. 3, *ibid.*, for “(Regulation and Development)” (w.e.f. 18-12-1999).

3. 1st June, 1958, *vide* notification No. G.S.R. 432, dated 29th May, 1958, *see* Gazette of India, Extraordinary, Part II, sec. 3(i).

4. Subs. by Act 25 of 2016, s. 2, for clause (a) (w.e.f. 6-5-2016).

5. Ins. by Act 10 of 2015, s. 2 (w.e.f. 12-1-2015).

6. The word “and” omitted by Act 38 of 1999, s. 4 (w.e.f. 18-12-1999).

¹[(*ha*) “reconnaissance operations” means any operations undertaken for preliminary prospecting of a mineral through regional, aerial, geophysical or geochemical surveys and geological mapping, but does not include pitting, trenching, drilling (except drilling of boreholes on a grid specified from time to time by the Central Government) or sub-surface excavation;

(*hb*) “reconnaissance permit” means a permit granted for the purpose of undertaking reconnaissance operations; ²***]

³[(*hc*) “Special Court” means a Court of Session designated as Special Court under sub-section (1) of section 30B; and]

(*i*) the expressions, “mine” and “owner”, have the meaning assigned to them in the Mines Act, 1952 (35 of 1952).

CHAPTER II

GENERAL RESTRICTIONS ON UNDERTAKING PROSPECTING AND MINING OPERATIONS

4. Prospecting or mining operations to be under licence or lease.—(1) ⁴[No person shall undertake any reconnaissance, prospecting or mining operations in any area, except under and in accordance with the terms and conditions of a reconnaissance permit or of a prospecting licence or, as the case may be, of a mining lease, granted under this Act and the rules made thereunder]:

Provided that nothing in this sub-section shall affect any prospecting or mining operations undertaken in any area in accordance with terms and conditions of a prospecting licence or mining lease granted before the commencement of this Act which is in force at such commencement:

⁵[Provided further that nothing in this sub-section shall apply to any prospecting operations undertaken by the Geological Survey of India, the Indian Bureau of Mines, ⁶[the Atomic Minerals Directorate for Exploration and Research] of the Department of Atomic Energy of the Central Government, the Directorates of Mining and Geology of any State Government (by whatever name called), and the Mineral Exploration Corporation Limited., a Government company within the meaning of ⁷[clause (45) of section 2 of the Companies Act, 2013 (18 of 2013), and any such entity that may be notified for this purpose by the Central Government]:]

⁸[Provided also that nothing in this sub-section shall apply to any mining lease (whether called mining lease mining concession or by any other name) in force immediately before the commencement of this Act in the Union territory of Goa, Daman and Diu.]

⁹[(1A) No person shall transport or store or cause to be transported or stored any mineral otherwise than in accordance with the provisions of this Act and the rules made thereunder.]

(2) ¹⁰[No reconnaissance permit, prospecting licence or mining lease] shall be granted otherwise than in accordance with the provisions of this Act and the rules made thereunder.

⁵[(3) Any State Government may, after prior consultation with the Central Government and in accordance with the rule made under section 18, ¹¹[undertake reconnaissance, prospecting or mining operations with respect to any mineral specified in the First Schedule in any area within that State which is not already held under any reconnaissance permit, prospecting licence or mining lease].]

1. Ins. by Act 38 of 1999, s. 4 (w.e.f. 18-12-1999).

2. The word “and” omitted by Act 10 of 2015, s. 2 (w.e.f. 12-1-2015).

3. Ins. by s. 2, *ibid.* (w.e.f. 12-1-2015).

4. Subs. by Act 38 of 1999, s. 5, for certain words (w.e.f. 18-12-1999).

5. Ins. by Act 37 of 1986, s. 2 (w.e.f. 10-2-1987).

6. Subs. by Act 38 of 1999, s. 5, for “the Atomic Minerals Division” (w.e.f. 18-12-1999).

7. Subs. by Act 10 of 2015, s. 3, for “section 617 of the Companies Act, 1956 (1 of 1956)” (w.e.f. 12-1-2015).

8. Ins. by Act 16 of 1987, s. 14 (w.e.f. 1-10-1963).

9. Ins. by Act 38 of 1999, s. 5 (w.e.f. 18-12-1999).

10. Subs. by s. 5, *ibid.*, for “No prospecting licence or mining lease” (w.e.f. 18-12-1999).

11. Subs. by s. 5, *ibid.*, for certain words (w.e.f. 18-12-1999).

¹**[4A. Termination of prospecting licences or mining leases.—**(1) Where the Central Government, after consultation with the State Government, is of opinion that it is expedient in the interest of regulation of mines and mineral development, preservation of natural environment, control of floods, prevention of pollution, or to avoid danger to public health or communications or to ensure safety of buildings, monuments or other structures or for conservation of mineral resources or for maintaining safety in the mines or for such other purposes, as the Central Government may deem fit, it may request the State Government to make a premature termination of a prospecting licence or mining lease in respect of any mineral other than a minor mineral in any area or part thereof, and, on receipt of such request, the State Government shall make an order making a premature termination of such prospecting licence or mining lease with respect to the area or any part thereof.

(2) Where the State Government ²*** is of opinion that it is expedient in the interest of regulation of mines and mineral development, preservation of natural environment, control of floods, prevention of pollution or to avoid danger to public health or communications or to ensure safety of buildings, monuments or other structures or for such other purposes, as the State Government may deem fit, it may, by an order, in respect of any minor mineral, make premature termination of prospecting licence or mining lease with respect to the area or any part thereof covered by such licence or lease.

³[* * * * *]

(3) No order making a premature termination of a prospecting licence or mining lease shall be, made except after giving the holder of the licence or lease a reasonable opportunity of being heard.

(4) Where the holder of a mining lease fails to undertake mining operations for a period of ⁴[two years] after the date of execution of the lease or having commenced mining operations, has discontinued the same for a period of ⁴[two years], the lease shall lapse on the expiry of the period of ⁴[two years] from the date of execution of the lease or, as the case may be, discontinuance of the mining operations:

⁵[Provided that the State Government may, on an application made by the holder of such lease before it lapses and on being satisfied that it will not be possible for the holder of the lease to undertake mining operations or to continue such operations for reasons beyond his control, make an order, within a period of three months from the date of receiving of such application, subject to such conditions as may be prescribed, to the effect that such lease shall not lapse:

Provided further that such lease shall lapse on failure to undertake mining operations or inability to continue the same before the end of a period of six months from the date of the order of the State Government:

Provided also that the State Government may, on an application made by the holder of a lease submitted within a period of six months from the date of its lapse and on being satisfied that such non-commencement or discontinuance was due to reasons beyond the control of the holder of the lease, revive the lease within a period of three months from the date of receiving the application from such prospective or retrospective date as it thinks fit but not earlier than the date of lapse of the lease:

Provided also that no lease shall be revived under the third proviso for more than twice during the entire period of the lease.]]

⁶**[5. Restrictions on the grant of prospecting licences or mining leases.—**⁷[(1) A State Government shall not grant a ⁸[reconnaissance permit, prospecting licence or mining lease] to any person unless such person—

1. Subs. by Act 37 of 1986, s. 3, for section 4A (w.e.f. 10-2-1987).

2. The words “, after consultation with the Central Government,” omitted by Act 25 of 1994, s. 2 (w.e.f. 25-1-1994).

3. The proviso omitted by Act 38 of 1999, s. 6 (w.e.f. 18-12-1999).

4. Subs. by Act 25 of 1994, s. 2, for “one year” (w.e.f. 25-1-1994).

5. Subs. by Act 10 of 2015, s. 4, for the provisos (w.e.f. 12-1-2015).

6. Subs. by Act 37 of 1986, s. 4, for section 5 (w.e.f. 10-2-1987).

7. Subs. by Act 25 of 1994, s. 3, for sub-section (1) (w.e.f. 25-1-1994).

8. Subs. by Act 38 of 1999, s. 7, for “prospecting licence or mining lease” (w.e.f. 18-12-1999).

(a) is an Indian national, or company as defined in ¹[clause (20) of section 2 of the Companies Act, 2013 (18 of 2013)]; and

(b) satisfies such conditions as may be prescribed:

²[Provided that in respect of any mineral specified in Part A and Part B of the First Schedule, no reconnaissance permit, prospecting licence or mining lease shall be granted except with the previous approval of the Central Government.]

Explanation.—For the purposes of this sub-section, a person shall be deemed to be an Indian national,—

(a) in the case of a firm or other association of individuals, only if all the members of the firm or members of the association are citizens of India; and

(b) in the case of an individual, only if he is a citizen of India.]

(2) No mining lease shall be granted by the State Government unless it is satisfied that—

³[(a) there is evidence to show the existence of mineral contents in the area for which the application for a mining lease has been made in accordance with such parameters as may be prescribed for this purpose by the Central Government;]

(b) there is a mining plan duly approved by the Central Government, or by the State Government, in respect of such category of mines as may be specified by the Central Government, for the development of mineral deposits in the area concerned:]

⁴[Provided that a mining lease may be granted upon the filing of a mining plan in accordance with a system established by the State Government for preparation, certification, and monitoring of such plan, with the approval of the Central Government.]

6. Maximum area for which a prospecting licence or mining lease may be granted.—⁵[(1) No person shall acquire ⁶*** in respect of any mineral or prescribed group of associated minerals ⁷[in a State]—

(a) one or more prospecting licences covering a total area of more than twenty-five square kilometres; or

⁷[(aa) one or more reconnaissance permit covering a total area of ten thousand square kilometres:

Provided that the area granted under a single reconnaissance permit shall not exceed five thousand square kilometers; or]

(b) one or more mining leases covering a total area of more than ten square kilometres:

⁸[Provided that if the Central Government is of the opinion that in the interest of the development of any mineral or industry, it is necessary so to do, it may, for reasons to be recorded in writing, increase the aforesaid area limits in respect of prospecting licence or mining lease, in so far as it pertains to any particular mineral, or to any specified category of deposits of such mineral, or to any particular mineral located in any particular area.]]

1. Subs. by Act 10 of 2015, s. 5, for “sub-section (1) of section 3 of the Companies Act, 1956 (1 of 1956)” (w.e.f. 12-1-2015).

2. Subs. by s. 5, *ibid.*, for the proviso (w.e.f. 12-1-2015).

3. Subs. by s. 5, *ibid.*, for clause (a) (w.e.f. 12-1-2015).

4. Ins. by s. 5, *ibid.* (w.e.f. 12-1-2015).

5. Subs. by Act 56 of 1972, s. 3, for sub-section (1) (w.e.f. 12-9-1972).

6. The words “in any one State” omitted by Act 37 of 1986, s. 5 (w.e.f. 10-2-1987).

7. Ins. by Act 38 of 1999, s. 8 (w.e.f. 18-12-1999).

8. Subs. by Act 10 of 2015, s. 6, for the proviso (w.e.f. 12-1-2015).

¹[(c) any reconnaissance permit, mining lease or prospecting licence in respect of any area which is not compact or contiguous:

Provided that if the State Government is of opinion that in the interests of the development of any mineral, it is necessary so to do, it may, for reasons to be recorded in writing, permit any person to acquire a reconnaissance permit, prospecting licence or mining lease in relation to any area which is not compact or contiguous.]

(2) For the purposes of this section, a person acquiring by, or in the name of, another person a ²[reconnaissance permit, prospecting licence or mining lease] which is intended for himself shall be deemed to be acquiring it himself.

³[(3) For the purposes of determining the total area referred to in sub-section (1), the area held under a ²[reconnaissance permit, prospecting licence or mining lease] by a person as a member of a co-operative society, company or other corporation or a Hindu undivided family or a partner of a firm, shall be deducted from the area referred to in sub-section (1) so that the sum total of the area held by such person, under a ²[reconnaissance permit, prospecting licence or mining lease], whether as such member or partner, or individually, may not, in any case, exceed the total area specified in sub-section (1).]

⁴**[7. Periods for which prospecting licences may be granted or renewed.]—(1)** The period for which ⁵[a reconnaissance permit or prospecting licence] may be granted shall not exceed three years.

(2) A prospecting licence shall, if the State Government is satisfied that a longer period is required to enable the licensee to complete prospecting operations be renewed for such period or periods as that Government may specify:

Provided that the total period for which a prospecting licence is granted does not exceed five years:

Provided further that no prospecting licence granted in respect of ⁶[a mineral included in Part A and Part B to] the First Schedule shall be renewed except with the previous approval of the Central Government.]

⁷**[8. Periods for which mining leases may be granted or renewed.]—(1)** The provisions of this section shall apply to minerals specified in Part A of the First Schedule.

(2) The maximum period for which a mining lease may be granted shall not exceed thirty years:

Provided that the minimum period for which any such mining lease may be granted shall not be less than twenty years.

(3) A mining lease may be renewed for a period not exceeding twenty years with the previous approval of the Central Government.]

⁸**[8A. Period of grant of a mining lease for minerals other than coal, lignite and atomic minerals.]—(1)** The provisions of this section shall apply to minerals other than those specified in Part A and Part B of the First Schedule.

(2) On and from the date of the commencement of the Mines and Minerals (Development and Regulation) Amendment Act, 2015 (10 of 2015), all mining leases shall be granted for the period of fifty years.

(3) All mining leases granted before the commencement of the Mines and Minerals (Development and Regulation) Amendment Act, 2015 (10 of 2015) shall be deemed to have been granted for a period of fifty years.

1. Subs. by Act 38 of 1999, s. 8, for clause (c) (w.e.f. 18-12-1999).

2. Subs. by s. 8, *ibid.*, for “prospecting licence or mining lease” (w.e.f. 18-12-1999).

3. Ins. by Act 56 of 1972, s. 3 (w.e.f. 12-9-1972).

4. Subs. by Act 25 of 1994, s. 4, for section 7 (w.e.f. 25-1-1994).

5. Subs. by Act 38 of 1999, s. 9, for “a prospecting licence” (w.e.f. 18-12-1999).

6. Subs. by s. 9, *ibid.*, for “a mineral included in” (w.e.f. 18-12-1999).

7. Subs. by Act 10 of 2015, s. 7, for section 8 (w.e.f. 12-1-2015).

8. Ins. by s. 8, *ibid.* (w.e.f. 12-1-2015).

(4) On the expiry of the lease period, the lease shall be put up for auction as per the procedure specified in this Act.

(5) Notwithstanding anything contained in sub-sections (2), (3) and sub-section (4), the period of lease granted before the date of commencement of the Mines and Minerals (Development and Regulation) Amendment Act, 2015 (10 of 2015), where mineral is used for captive purpose, shall be extended and be deemed to have been extended up to a period ending on the 31st March, 2030 with effect from the date of expiry of the period of renewal last made or till the completion of renewal period, if any, or a period of fifty years from the date of grant of such lease, whichever is later, subject to the condition that all the terms and conditions of the lease have been complied with.

(6) Notwithstanding anything contained in sub-sections (2), (3) and sub-section (4), the period of lease granted before the date of commencement of the Mines and Minerals (Development and Regulation) Amendment Act, 2015 (10 of 2015), where mineral is used for other than captive purpose, shall be extended and be deemed to have been extended up to a period ending on the 31st March, 2020 with effect from the date of expiry of the period of renewal last made or till the completion of renewal period, if any, or a period of fifty years from the date of grant of such lease, whichever is later, subject to the condition that all the terms and conditions of the lease have been complied with.

(7) Any holder of a lease granted, where mineral is used for captive purpose, shall have the right of first refusal at the time of auction held for such lease after the expiry of the lease period.

(8) Notwithstanding anything contained in this section, the period of mining leases, including existing mining leases, of Government companies or corporations shall be such as may be prescribed by the Central Government.

(9) The provisions of this section, notwithstanding anything contained therein, shall not apply to a mining lease granted before the date of commencement of the Mines and Minerals (Development and Regulation) Amendment Act, 2015 (10 of 2015), for which renewal has been rejected, or which has been determined, or lapsed.]

9. Royalties in respect of mining leases.—(1) The holder of a mining lease granted before the commencement of this Act shall, notwithstanding anything contained in the instrument of lease or in any law in force at such commencement, pay royalty in respect of any ¹[mineral removed or consumed by him or by his agent, manager, employee, contractor or sub-lessee] from the leased area after such commencement, at the rate for the time being specified in the Second Schedule in respect of that mineral.

(2) The holder of a mining lease granted on or after the commencement of this Act shall pay royalty in respect of any ¹[mineral removed or consumed by him or by his agent, manager, employee, contractor or sub-lessee] from the leased area at the rate for the time being specified in the Second Schedule in respect of that mineral.

²[(2A) The holder of a mining lease, whether granted before or after the commencement of the Mines and Minerals (Regulation and Development) Amendment Act, 1972 (56 of 1972) shall not be liable to pay any royalty in respect of any coal consumed by a workman engaged in a colliery provided that such consumption by the workman does not exceed one-third of a tonne per month.]

(3) The Central Government may, by notification in the Official Gazette, amend the Second Schedule so as to enhance or reduce the rate at which royalty shall be payable in respect of any mineral with effect from such date as may be specified in the notification:

³[Provided that the Central Government shall not enhance the rate of royalty in respect of any mineral more than once during any period of ⁴[three years].]

1. Subs. by Act 56 of 1972, s. 4, for “mineral removed by him” (w.e.f. 12-9-1972).

2. Ins. by s. 4, *ibid.* (w.e.f. 12-9-1972).

3. Subs. by s. 4, *ibid.*, for the proviso (w.e.f. 12-9-1972).

4. Subs. by Act 37 of 1986, s. 8, for “four years” (w.e.f. 10-2-1987).

¹**9A. Dead rent to be paid by the lessee.**—(1) The holder of a mining lease, whether granted before or after the commencement of the Mines and Minerals (Regulation and Development) Amendment Act, 1972, shall notwithstanding anything contained in the instrument of lease or in any other law for the time being in force, pay to the State Government, every year, dead rent at such rate, as may be specified, for the time being, in the Third Schedule, for all the areas included in the instrument of lease:

Provided that where the holder of such mining lease becomes liable, under section 9, to pay royalty for any mineral removed or consumed by him or by his agent, manager, employee, contractor or sub-lessee from the leased area, he shall be liable to pay either such royalty, or the dead rent in respect of that area, whichever is greater.

(2) The Central Government may, by notification in the Official Gazette, amend the Third Schedule so as to enhance or reduce the rate at which the dead rent shall be payable in respect of any area covered by a mining lease and such enhancement or reduction shall take effect from such date as may be specified in the notification:

Provided that the Central Government shall not enhance the rate of the dead rent in respect of any such area more than once during any period of ²[three years].]

³**9B. District Mineral Foundation.**—(1) In any district affected by mining related operations, the State Government shall, by notification, establish a trust, as a non-profit body, to be called the District Mineral Foundation.

(2) The object of the District Mineral Foundation shall be to work for the interest and benefit of persons, and areas affected by mining related operations in such manner as may be prescribed by the State Government.

(3) The composition and functions of the District Mineral Foundation shall be such as may be prescribed by the State Government.

(4) The State Government while making rules under sub-sections (2) and (3) shall be guided by the provisions contained in article 244 read with Fifth and Sixth Schedules to the Constitution relating to administration of the Scheduled Areas and Tribal Areas and the Provisions of the Panchayats (Extension to the Scheduled Areas) Act, 1996 (40 of 1996) and the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 (2 of 2007).

(5) The holder of a mining lease or a prospecting licence-cum-mining lease granted on or after the date of commencement of the Mines and Minerals (Development and Regulation) Amendment Act, 2015, shall, in addition to the royalty, pay to the District Mineral Foundation of the district in which the mining operations are carried on, an amount which is equivalent to such percentage of the royalty paid in terms of the Second Schedule, not exceeding one-third of such royalty, as may be prescribed by the Central Government.

(6) The holder of a mining lease granted before the date of commencement of the Mines and Minerals (Development and Regulation) Amendment Act, 2015, shall, in addition to the royalty, pay to the District Mineral Foundation of the district in which the mining operations are carried on, an amount not exceeding the royalty paid in terms of the Second Schedule in such manner and subject to the categorisation of the mining leases and the amounts payable by the various categories of lease holders, as may be prescribed by the Central Government.

9C. National Mineral Exploration Trust.—(1) The Central Government shall, by notification, establish a Trust, as a non-profit body, to be called the National Mineral Exploration Trust.

(2) The object of the Trust shall be to use the funds accrued to the Trust for the purposes of regional and detailed exploration in such manner as may be prescribed by the Central Government.

1. Ins. by Act 56 of 1972, s. 5 (w.e.f. 12-9-1972).

2. Subs. by Act 37 of 1986, s. 9, for “four years” (w.e.f. 10-2-1987).

3. Ins. by Act 10 of 2015, s. 9 (w.e.f. 12-1-2015).

(3) The composition and functions of the Trust shall be such as may be prescribed by the Central Government.

(4) The holder of a mining lease or a prospecting licence-cum-mining lease shall pay to the Trust, a sum equivalent to two per cent. of the royalty paid in terms of the Second Schedule, in such manner as may be prescribed by the Central Government.]

CHAPTER III

PROCEDURE FOR OBTAINING, PROSPECTING LICENCES OR MINING LEASES, IN RESPECT OF LAND IN WHICH THE MINERALS VEST IN THE GOVERNMENT

10. Application for prospecting licences or mining leases.—(1) An application for ¹[a reconnaissance permit, prospecting licence or mining lease] in respect of any land in which the minerals vest in the Government shall be made to the State Government concerned in the prescribed form and shall be accompanied by the prescribed fee.

(2) Where an application is received under sub-section (1), there shall be sent to the applicant an acknowledgment of its receipt within the prescribed time and in the prescribed form.

(3) On receipt of an application under this section, the State Government may, having regard to the provisions of this Act and any rules made thereunder, grant or refuse to grant the ²[permit, licence or lease].

³**[10A. Rights of existing concession holders and applicants.**—(1) All applications received prior to the date of commencement of the Mines and Minerals (Development and Regulation) Amendment Act, 2015, shall become ineligible.

(2) Without prejudice to sub-section (1), the following shall remain eligible on and from the date of commencement of the Mines and Minerals (Development and Regulation) Amendment Act, 2015:—

(a) applications received under section 11A of this Act;

(b) where before the commencement of the Mines and Minerals (Development and Regulation) Amendment Act, 2015 a reconnaissance permit or prospecting licence has been granted in respect of any land for any mineral, the permit holder or the licensee shall have a right for obtaining a prospecting licence followed by a mining lease, or a mining lease, as the case may be, in respect of that mineral in that land, if the State Government is satisfied that the permit holder or the licensee, as the case may be,—

(i) has undertaken reconnaissance operations or prospecting operations, as the case may be, to establish the existence of mineral contents in such land in accordance with such parameters as may be prescribed by the Central Government;

(ii) has not committed any breach of the terms and conditions of the reconnaissance permit or the prospecting licence;

(iii) has not become ineligible under the provisions of this Act; and

(iv) has not failed to apply for grant of prospecting licence or mining lease, as the case may be, within a period of three months after the expiry of reconnaissance permit or prospecting licence, as the case may be, or within such further period not exceeding six months as may be extended by the State Government;

(c) where the Central Government has communicated previous approval as required under sub-section (1) of section 5 for grant of a mining lease, or if a letter of intent (by whatever name called) has been issued by the State Government to grant a mining lease, before the commencement of the Mines and Minerals (Development and Regulation) Amendment Act, 2015, the mining lease

1. Subs. by Act 38 of 1999, s. 11, for “a prospecting licence or a mining lease” (w.e.f. 18-12-1999).

2. Subs. by s. 11, *ibid.*, for “licence or lease” (w.e.f. 18-12-1999).

3. Ins. by Act 10 of 2015, s. 10 (w.e.f. 12-1-2015).

shall be granted subject to fulfilment of the conditions of the previous approval or of the letter of intent within a period of two years from the date of commencement of the said Act:

Provided that in respect of any mineral specified in the First Schedule, no prospecting licence or mining lease shall be granted under clause (b) of this subsection except with the previous approval of the Central Government.

10B. Grant of mining lease in respect of notified minerals through auction.—(1) The provisions of this section shall not be applicable to cases covered by section 10A or section 17A or to minerals specified in Part A or Part B of the First Schedule or to land in respect of which the minerals do not vest in the Government.

(2) Where there is inadequate evidence to show the existence of mineral contents of any notified mineral in respect of any area, a State Government may, after obtaining the previous approval of the Central Government, grant a prospecting licence-cum-mining lease for the said notified mineral in such area in accordance with the procedure laid down in section 11.

(3) In areas where the existence of mineral contents of any notified mineral is established in the manner prescribed by the Central Government, the State Government shall notify such areas for grant of mining leases for such notified mineral, the terms and conditions subject to which such mining leases shall be granted, and any other relevant conditions, in such manner as may be prescribed by the Central Government.

(4) For the purpose of granting a mining lease in respect of any notified mineral in such notified area, the State Government shall select, through auction by a method of competitive bidding, including e-auction, an applicant who fulfils the eligibility conditions as specified in this Act.

(5) The Central Government shall prescribe the terms and conditions, and procedure, subject to which the auction shall be conducted, including the bidding parameters for the selection, which may include a share in the production of the mineral, or any payment linked to the royalty payable, or any other relevant parameter, or any combination or modification of them.

(6) Without prejudice to the generality of sub-section (5), the Central Government shall, if it is of the opinion that it is necessary and expedient to do so, prescribe terms and conditions, procedure and bidding parameters in respect of categories of minerals, size and area of mineral deposits and a State or States, subject to which the auction shall be conducted:

Provided that the terms and conditions may include the reservation of any particular mine or mines for a particular end-use and subject to such condition which allow only such eligible end users to participate in the auction.

(7) The State Government shall grant a mining lease to an applicant selected in accordance with the procedure laid down in this section in respect of such notified mineral in any notified area.

10C. Grant of non-exclusive reconnaissance permits.—(1) Non-exclusive reconnaissance permits may be granted in respect of any notified mineral or non-notified mineral or a group of specified minerals, other than minerals specified in Part A or Part B of the First Schedule, subject to such terms and conditions as may be prescribed by the Central Government.

(2) The holder of such non-exclusive reconnaissance permit shall not be entitled to make any claim for the grant of any prospecting licence-cum-mining lease or a mining lease.]

¹[11. Grant of prospecting licence-cum-mining lease through auction in respect of minerals other than notified minerals.—(1) The provisions of this section shall not be applicable to cases covered by section 10A or section 17A or to minerals specified in Part A or Part B of the First Schedule or to land in respect of which minerals do not vest in the Government.

1. Subs. by Act 10 of 2015, s. 11, for section 11 (w.e.f. 12-1-2015).

(2) In areas where there is evidence to show the existence of mineral contents as required by clause (a) of sub-section (2) of section 5, the State Government shall grant a mining lease for minerals other than notified minerals following the procedure laid down in section 10B.

(3) In areas where there is inadequate evidence to show the existence of mineral contents as required under clause (a) of sub-section (2) of section 5, the State Government shall grant a prospecting licence-cum-mining lease for minerals other than notified minerals in accordance with the procedure laid down in this section.

(4) The State Government shall notify the areas in which prospecting licence-cum-mining leases shall be granted for any minerals other than notified minerals, the terms and conditions subject to which such prospecting licence-cum-mining leases shall be granted, and any other relevant conditions, in such manner as may be prescribed by the Central Government.

(5) For the purpose of granting prospecting licence-cum-mining leases, the State Government shall select, through auction by method of competitive bidding, including e-auction, an applicant who fulfils the eligibility conditions as specified in this Act.

(6) The Central Government shall prescribe the terms and conditions, and procedure, subject to which the auction shall be conducted, including the bidding parameters for the selection, which may include a share in the production of the mineral, or any payment linked to the royalty payable, or any other relevant parameter, or any combination or modification of them.

(7) Without prejudice to the generality of sub-section (6), the Central Government shall, if it is of the opinion that it is necessary and expedient to do so, prescribe terms and conditions, procedure and bidding parameters in respect of categories of minerals, size and area of mineral deposits and a State or States, subject to which the auction shall be conducted.

(8) The State Government shall grant a prospecting licence-cum-mining lease to an applicant selected in accordance with the procedure laid down in this section.

(9) The holder of a prospecting licence-cum-mining lease shall be required to complete, within the period laid down in section 7, the prospecting operations satisfactorily as specified in the notice inviting applications.

(10) A holder of a prospecting licence-cum-mining lease, who completes the prospecting operation as laid down in sub-section (9) and establishes the existence of mineral contents in the area in conformity with such parameters as may be prescribed for this purpose by the Central Government, shall be required to apply for a mining lease for such area and shall have the right to get the mining lease and thereafter undertake mining operations in accordance with the provisions of this Act.]

¹[**11A. Procedure in respect of coal or lignite.**—The Central Government may, for the purpose of granting reconnaissance permit, prospecting licence or mining lease in respect of an area containing coal or lignite, select, through auction by competitive bidding on such terms and conditions as may be prescribed, a company engaged in,—

(i) production of iron and steel;

(ii) generation of power;

(iii) washing of coal obtained from a mine; or

(iv) such other end use as the Central Government may, by notification in the Official Gazette, specify,

and the State Government shall grant such reconnaissance permit, prospecting licence or mining lease in respect of coal or lignite to such company as selected through auction by competitive bidding under this section:

1. Ins. by Act 34 of 2010, s. 2 (w.e.f. 13-2-2012).

Provided that the auction by competitive bidding shall not be applicable to an area containing coal or lignite,—

(a) where such area is considered for allocation to a Government company or corporation for mining or such other specified end use;

(b) where such area is considered for allocation to a company or corporation that has been awarded a power project on the basis of competitive bids for tariff (including Ultra Mega Power Projects).

Explanation.—For the purposes of this section, “company” means a company as defined in section 3 of the Companies Act, 1956 (1 of 1956) and includes a foreign company within the meaning of section 591 of that Act.]

¹**[11B. Power of Central Government to make rules for regulating atomic minerals specified under Part B of First Schedule.**—The Central Government may, by notification in the Official Gazette, make rules for regulating the grant of mining leases or other mineral concessions in respect of minerals specified in Part B of the First Schedule and for purposes connected therewith, and the State Government shall grant a reconnaissance permit, prospecting licence or mining lease in respect of any such mineral in accordance with such rules.

11C. Power of Central Government to amend First Schedule and Fourth Schedule.—The Central Government may, by notification in the Official Gazette, amend the First Schedule and the Fourth Schedule so as to add or delete any mineral as may be specified in the notification.]

12. Registers of prospecting licences and mining leases.—(1) The State Government shall cause to be maintained in the prescribed form—

(a) a register of applications for prospecting licences;

(b) a register of prospecting licensees;

²[(c) a register of applications for mining leases;

(d) a register of mining lessees;

(e) a register of applications for reconnaissance permits; and

(f) a register of reconnaissance permits,]

in each of which shall be entered such particulars as may be prescribed.

(2) Every such register shall be open to inspection by any person on payment of such fee as the State Government may fix.

³**[12A. Transfer of mineral concessions.**—(1) The provisions of this section shall not apply to minerals specified in Part A or Part B of the First Schedule.

(2) A holder of a mining lease or a prospecting licence-cum-mining lease granted in accordance with the procedure laid down in section 10B or section 11 may, with the previous approval of the State Government, transfer his mining lease or prospecting licence-cum-mining lease, as the case may be, in such manner as may be prescribed by the Central Government, to any person eligible to hold such mining lease or prospecting licence-cum-mining lease in accordance with the provisions of this Act and the rules made thereunder.

(3) If the State Government does not convey its previous approval for transfer of such mining lease or prospecting licence-cum-mining lease, as the case may be, within a period of ninety days from the date of receiving such notice, it shall be construed that the State Government has no objection to such transfer:

1. Ins. by Act 10 of 2015, s. 12 (w.e.f. 12-1-2015).

2. Subs. by Act 38 of 1999, s. 13, for clauses (c) and (d) (w.e.f. 18-12-1999).

3. Ins. by Act 10 of 2015, s. 13 (w.e.f. 12-1-2015).

Provided that the holder of the original mining lease or prospecting licence-cum-mining lease shall intimate to the State Government the consideration payable by the successor-in-interest for the transfer, including the consideration in respect of the prospecting operations already undertaken and the reports and data generated during the operations.

(4) No such transfer of a mining lease or prospecting licence-cum-mining lease, referred to in sub-section (2), shall take place if the State Government, within the notice period and for reasons to be communicated in writing, disapproves the transfer on the ground that the transferee is not eligible as per the provisions of this Act:

Provided that no such transfer of a mining lease or of a prospecting licence-cum-mining lease, shall be made in contravention of any condition subject to which the mining lease or the prospecting licence-cum-mining lease was granted.

(5) All transfers effected under this section shall be subject to the condition that the transferee has accepted all the conditions and liabilities under any law for the time being in force which the transferor was subject to in respect of such a mining lease or prospecting licence-cum-mining lease, as the case may be.

(6) The transfer of mineral concessions shall be allowed only for concessions which are granted through auction.]

¹[Provided that where a mining lease has been granted otherwise than through auction and where mineral from such mining lease is being used for captive purpose, such mining lease may be permitted to be transferred subject to compliance of such terms and conditions and payment of such amount or transfer charges as may be prescribed.

Explanation.—For the purposes of this proviso, the expression “used for captive purpose” shall mean the use of the entire quantity of mineral extracted from the mining lease in a manufacturing unit owned by the lessee.]

CHAPTER IV

RULES FOR REGULATING THE (GRANT OF PROSPECTING LICENCES AND MINING LEASES

13. Power of Central Government to make rules in respect of minerals.—(1) The Central Government may, by notification in the Official Gazette, make rules for regulating the grant of ²[reconnaissance permits, prospecting licences and mining leases] in respect of minerals and for purposes connected therewith.

(2) In particular, and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely:—

(a) the person by whom, and the manner in which, applications for ³[reconnaissance permits, prospecting licences or mining leases] in respect of land in which the minerals vest in the Government may be made and the fees to be paid therefor;

(b) the time within which, and the form in which, acknowledgement of the receipt of any such application may be sent;

(c) the matters which may be considered where applications in respect of the same land are received on the same day;

⁴[(d) the terms and conditions of auction by competitive bidding for selection of the company under section 11A;]

(e) the authority by which ²[reconnaissance permits, prospecting licences or mining leases] in respect of land in which the minerals vest in the Government may be granted;

(f) the procedure for obtaining ⁵[a reconnaissance permit, a prospecting licence or a mining lease] in respect of any land in which the minerals vest in a person other than the Government and the terms on which, and the conditions subject to which, such ⁶[a permit, licence or lease] may be granted or renewed;

1. Ins. by Act 25 of 2016, s. 3 (w.e.f. 6-5-2016).

2. Subs. by Act 38 of 1999, s. 14, for “prospecting licences and mining leases” (w.e.f. 18-12-1999).

3. Subs. by s. 14, *ibid.*, for “prospecting licences or mining leases” (w.e.f. 18-12-1999).

4. Ins. by Act 34 of 2010, s. 3 (w.e.f. 13-2-2012)).

5. Subs. by Act 38 of 1999, s. 14, for “a prospecting licence or a mining lease” (w.e.f. 18-12-1999).

6. Subs. by s. 14, *ibid.*, for “a licence or lease” (w.e.f. 18-12-1999).

(g) the terms on which, and the conditions subject to which, may other ¹[reconnaissance permit, prospecting licence or mining lease] may be granted or renewed;

(h) the facilities to be afforded by holders of mining leases to persons deputed by the Government for the purpose of undertaking research or training in matters relating to mining operations;

²[(i) the fixing and collection of fees for ³[reconnaissance permits, prospecting licences or mining leases] surface rent, security deposit, fines, other fees or charges and the time within which and the manner in which the dead rent or royalty shall be payable;]

(j) the manner in which rights of third parties may be protected (whether by payment of compensation or otherwise) in cases where any such party may be prejudicially affected by reason of any ⁴[reconnaissance, prospecting or mining operations];

⁵[(jj) parameters of existence of mineral contents under clause (a) of sub-section (2) of section 5;]

(k) the grouping of associated minerals for the purposes of section 6;

(l) the manner in which, and the conditions subject to which, ⁶[a reconnaissance, permit, a prospecting licence or a mining lease] may be transferred;

(m) the construction, maintenance and use of roads, power transmission lines, tramways, railways, aerial ropeways, pipelines and the making of passages for water for mining purposes on any land comprised in a mining lease;

(n) the form of registers to be maintained under this Act;

⁷* * * * *

(p) the reports and statements to be submitted by holders of ⁸[reconnaissance permits or prospecting licences] or owners of mines and the authority to which such reports and statements shall be submitted;

(q) the period within which applications for revision of any order passed by a State Government or other authority in exercise of any power conferred by or under this Act, may be made ⁹[the fees to be paid therefore and the documents which shall accompany such applications] and the manner in which such applications shall be disposed of; and

⁹[(qq) the manner in which rehabilitation of flora and other vegetation, such as trees, shrubs and the like destroyed by reason of any prospecting or mining operations shall be made in the same area or in any other area selected by the Central Government (whether by way of reimbursement of the cost of rehabilitation or otherwise) by the person holding the prospecting licence or mining lease;]
¹⁰***

¹¹[(qqa) the amount of payment to be made to the District Mineral Foundation under sub-sections (5) and (6) of section 9B;

(qqb) the manner of usage of funds accrued to the National Mineral Exploration Trust under sub-section (2) of section 9C;

1. Subs. by Act 38 of 1999, s. 14, for “prospecting licence or mining lease” (w.e.f. 18-12-1999).

2. Subs. by Act 37 of 1986, s. 11, for clause (i) (w.e.f. 10-2-1987).

3. Subs. by Act 38 of 1999, s. 14, for “prospecting licences or mining leases” (w.e.f. 18-12-1999).

4. Subs. by s. 14, *ibid.*, for “prospecting or mining operations” (w.e.f. 18-12-1999).

5. Ins. by Act 10 of 2015, s. 14 (w.e.f. 12-1-2015).

6. Subs. by Act 38 of 1999, s.14, for “a prospecting licence or a mining lease” (w.e.f. 18-12-1999).

7. Omitted by Act 37 of 1986, s. 11 (w.e.f. 10-2-1987).

8. Subs. by Act 38 of 1999, s. 14, for “prospecting licences” (w.e.f. 18-12-1999).

9. Ins. by Act 37 of 1986, s. 11 (w.e.f. 10-2-1987).

10. The word “and” omitted by Act 10 of 2015, s. 14 (w.e.f. 12-1-2015).

11. Ins. by s. 14, *ibid.* (w.e.f. 12-1-2015).

(*qqc*) the composition and functions of the National Mineral Exploration Trust under sub-section (3) of section 9C;

(*qqd*) the manner of payment of amount to the National Mineral Exploration Trust under sub-section (4) of section 9C;

(*qqe*) the terms and conditions subject to which mining leases shall be granted under sub-section (3) of section 10B;

(*qqf*) the terms and conditions, and procedure, subject to which the auction shall be conducted including the bidding parameters for the selection under sub-section (5) of section 10B;

(*qqg*) the time limits for various stages in processing applications for grant of mining lease or prospecting licence-cum-mining lease under sections 10B, 11, 11A, 11B, and section 17A, and their renewals;

(*qqh*) the terms and conditions for grant of non-exclusive reconnaissance permits under sub-section (1) of section 10C;

(*qqi*) the terms and conditions for grant of prospecting licence-cum-mining leases under sub-section (4) of section 11;

(*qqj*) the terms and conditions, and procedure, including the bidding parameters for the selection under sub-section (6) of section 11;

¹[(*qqja*) the terms and conditions and amount or transfer charges under the proviso to sub-section (6) of section 12A;]

(*qqk*) the amount to be payable by a Government company or corporation, or a joint venture for grant of mining lease under sub-section (2C) of section 17A; and]

(*r*) any other matter which is to be, or may be, prescribed under this Act.

²[**13A. Power of Central Government to make rules for the grant of prospecting licences or mining leases in respect of territorial waters or continental shelf of India.**—(1) The Central Government may, by notification in the Official Gazette, make rules for the grant of prospecting licences or mining leases in respect of any minerals underlying the ocean within the territorial waters or the continental shelf of India.

(2) Without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely:—

(a) the conditions, limitations and restrictions subject to which such prospecting licences or mining leases may be granted;

(b) regulation of exploration and exploitation of minerals within the territorial waters or the continental shelf of India;

(c) ensuring that such exploration or exploitation does not interfere with navigation and

(d) any other matter which is required to be, or may be, prescribed.]

14. ³[**Sections 5 to 13**] not to apply to minor minerals.—The provisions of ³[sections 5 to 13] (inclusive) shall not apply to ⁴[quarry leases, mining leases or other mineral concessions] in respect of minor minerals.

15. Power of State Governments to make rules in respect of minor minerals.—(1) The State Government may, by notification in the Official Gazette, make rules for, regulating the grant of ⁵[quarry leases, mining leases or other mineral concessions] in respect of minor minerals and for purposes connected therewith.

1. Ins. by Act 25 of 2016, s. 4 (w.e.f. 6-5-2016).

2. Ins. by Act 56 of 1972, s. 6 (w.e.f. 12-9-1972).

3. Subs. by Act 37 of 1986, s. 12, for “sections 4 to 13” (w.e.f. 10-2-1987).

4. Subs. by Act 56 of 1972, s. 7, for “prospecting licences and mining leases” (w.e.f. 12-9-1972).

5. Subs. by s. 8, *ibid.*, for “prospecting licence and mining leases” (w.e.f. 12-9-1972).

¹[(1A) In particular and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely:—

(a) the person by whom and the manner in which, applications for quarry leases, mining leases or other mineral concessions may be made and the fees to be paid therefor;

(b) the time within which, and the form in which, acknowledgement of the receipt of any such applications may be sent;

(c) the matters which may be considered where applications in respect of the same land are received within the same day;

(d) the terms on which, and the conditions subject to which and the authority by which quarry leases, mining leases or other mineral concessions may be granted or renewed;

(e) the procedure for obtaining quarry leases, mining leases or other mineral concessions;

(f) the facilities to be afforded by holders of quarry leases, mining leases or other mineral concessions to persons deputed by the Government for the purpose of undertaking research or training in matters relating to mining operations;

(g) the fixing and collection of rent, royalty, fees, dead rent, fines or other charges and the time within which and the manner in which these shall be payable;

(h) the manner in which rights of third parties may be protected (whether by way of payment of compensation or otherwise) in cases where any such party is prejudicially affected by reason of any prospecting or mining operations;

(i) the manner in which rehabilitation of flora and other vegetation such as trees, shrubs and the like destroyed by reason of any quarrying or mining operations shall be made in the same area or in any other area selected by the State Government (whether by way of reimbursement of the cost of rehabilitation or otherwise) by the person holding the quarrying or mining lease;

(j) the manner in which and the conditions subject to which, a quarry lease, mining lease or other mineral concession may be transferred;

(k) the construction, maintenance and use of roads power transmission lines, tramways, railways, serial rope ways, pipelines and the making of passage for water for mining purposes on any land comprised in a quarry or mining lease or other mineral concession;

(l) the form of registers to be maintained under this Act;

(m) the reports and statements to be submitted by holders of quarry or mining leases or other mineral concessions and the authority to which such reports and statements shall be submitted;

(n) the period within which and the manner in which and the authority to which applications for revision of any order passed by any authority under these rules may be made, the fees to be paid therefore, and the powers of the revisional authority; and

(o) any other matter which is to be, or may be, prescribed.]

(2) Until rules are made under sub-section (1), any rules made by a state Government regulating the grant of ²[quarry leases, mining leases or other mineral concessions] in respect of minor minerals which are in force immediately before the commencement of these Act shall continue in force.

³[(3) The holder of a mining lease or any other mineral concession granted under any rule made under sub-section (1) shall pay ⁴[royalty or dead rent, whichever is more] in respect of minor minerals removed or consumed by him or by his agent, manager, employee, contractor or sub-lessee at the rate prescribed for the time being in the rules framed by the State Government in respect of minor minerals:

1. Ins. by Act 37 of 1986, s. 13 (w.e.f. 10-2-1987).

2. Subs. by Act 56 of 1972, s. 8, for “prospecting licence and mining leases” (w.e.f. 12-9-1972).

3. Ins. by s. 8, *ibid.* (w.e.f. 12-9-1972).

4. Subs. by Act 37 of 1986, s. 13, for “royalty” (w.e.f. 10-2-1987).

Provided that the State Government shall not enhance the rate of ¹[royalty or dead rent] in respect of any minor mineral for more than once during any period of ²[three] years.]

³[(4) Without prejudice to sub-sections (1), (2) and sub-section (3), the State Government may, by notification, make rules for regulating the provisions of this Act for the following, namely:—

(a) the manner in which the District Mineral Foundation shall work for the interest and benefit of persons and areas affected by mining under sub-section (2) of section 9B;

(b) the composition and functions of the District Mineral Foundation under sub-section (3) of section 9B; and

(c) the amount of payment to be made to the District Mineral Foundation by concession holders of minor minerals under section 15A.]

⁴[15A. Power of State Government to collect funds for District Mineral Foundation in case of minor minerals.—The State Government may prescribe the payment by all holders of concessions related to minor minerals of amounts to the District Mineral Foundation of the district in which the mining operations are carried on.]

16. Power to modify mining leases granted before 25th October, 1949.—⁵[(1) (a) All mining leases granted before the commencement of the Mines and Minerals (Regulation and Development) Amendment Act, 1972 (56 of 1972) ⁶[if in force at the date of commencement of the Mines and Minerals (Regulation and Development) Amendment Act, 1994 (25 of 1994), shall be brought in conformity with the provisions of this Act and the rules made thereunder within two years from the date of the commencement of the Mines and Minerals (Regulation and Development) Amendment Act, 1994], or such further time as the Central Government may, by general or special order, specify in this behalf.

(b) Where the rights under any mining lease, granted by the proprietor of an estate or tenure before the commencement of the Mines and Minerals (Regulation and Development) Amendment Act, 1972 (56 of 1972), have vested, on or after the 25th day of October, 1949, in the State Government in pursuance of the provisions of any Act of any Provincial or State Legislature which provides for the acquisition of estates or tenures or provides for agrarian reform, such mining lease shall be brought into conformity with the provisions of this Act and the rules made thereunder within ⁷[two years from the commencement of the Mines and Minerals (Regulation and Development) Amendment Act, 1994 (25 of 1994)], or within such further time as the Central Government may, by general or special order, specify in this behalf.]

⁸[(1A) Where any action is taken under clause (a) or clause (b) of sub-section (1) to bring the period of any lease in conformity with the provisions of this Act and the rules made thereunder, then notwithstanding anything contained in section 8, the period of such lease shall continue to operate for a period of two years from the date of bringing such lease in conformity with the provisions of this Act.]

(2) The Central Government may, by notification in the Official Gazette, make rules for the purpose of giving effect to the provisions of sub-section (1) and in particular such rules shall provide—

(a) for giving previous notice of the modification or alteration proposed to be made in any existing mining lease to the lessee and where the lessor is not the Central Government, also to the lessor and for affording him an opportunity of showing cause against the proposal;

(b) for the payment of compensation to the lessee in respect of the reduction of any area covered by the existing mining lease; and

1. Subs. by Act 37 of 1986, s. 13, for “royalty” (w.e.f. 10-2-1987).

2. Subs. by s. 13, *ibid.*, for “four” (w.e.f. 10-2-1987).

3. Ins. by Act 10 of 2015, s. 15 (w.e.f. 12-1-2015).

4. Ins. by s. 16, *ibid.* (w.e.f. 12-1-2015).

5. Subs. by Act 56 of 1972, s. 9, for sub-section (1) (w.e.f. 12-9-1972).

6. Subs. by Act 25 of 1994, s. 6, for certain words (w.e.f. 25-1-1994).

7. Subs. by s. 6, *ibid.*, for “six months from the commencement of the Mines and Minerals (Regulation and Development) Amendment Act, 1972” (w.e.f. 25-1-1994).

8. Ins. by s. 6, *ibid.* (w.e.f. 25-1-1994).

(c) for the principles on which, the manner in which, and the authority by which, the said compensation shall be determined.

CHAPTER V

SPECIAL POWERS OF CENTRAL GOVERNMENT TO UNDERTAKE PROSPECTING OR MINING OPERATIONS IN CERTAIN CASES

17. Special powers of Central Government to undertake prospecting or mining operations in certain lands.—(1) The provisions of this section shall apply ^{1***} in respect of land in which the minerals vest in the Government of a State ²[or any other person].

(2) Notwithstanding anything contained in this Act, the Central Government, after consultation with the State Government, may undertake ³[reconnaissance, prospecting or mining operations] in any area not already held under any ⁴[reconnaissance permit, prospecting licence or mining lease] and where it proposes to do so, it shall, by notification in the Official Gazette—

(a) specify the boundaries of such area;

(b) state whether ³[reconnaissance, prospecting or mining operations] will be carried out in the area; and

(c) specify the mineral or minerals in respect of which such operations will be carried out.

(3) Where, in exercise of the powers conferred by sub-section (2), the Central Government undertakes ³[reconnaissance, prospecting or mining operations] in any area, the Central Government shall be liable to pay ⁵[reconnaissance permit fee or prospecting fee] royalty, surface rent or dead rent, as the case may be, at the same rate at which it would have been payable under this Act, if such ³[reconnaissance, prospecting or mining operations] had been undertaken by a private person under a ⁴[reconnaissance permit, prospecting licence or mining lease].

(4) The Central Government, with a view to enabling it to exercise the powers conferred on it by sub-section (2) may, after consultation with the State Government, by notification in the Official Gazette, declare that no ⁴[reconnaissance permit, prospecting licence or mining lease] shall be granted in respect of any land specified in the notification.

⁶[17A. Reservation of areas for purposes of conservation.—(1) The Central Government, with a view to conserving any mineral and after consultation with the State Government, may reserve any area not already held under any prospecting licence or mining lease and, where it proposes to do so, it shall, by notification in the Official Gazette, specify the boundaries of such area and the mineral or minerals in respect of which such area will be reserved.

⁷[(1A) The Central Government may in consultation with the State Government, reserve any area not already held under any prospecting licence or mining lease, for undertaking prospecting or mining operations through a Government company or corporation owned or controlled by it, and where it proposes to do so, it shall, by notification in the Official Gazette, specify the boundaries of such area and the mineral or minerals in respect of which such area will be reserved.]

(2) The State Government may, with the approval of the Central Government, reserve any area not already held under any prospecting licence or mining lease, for undertaking prospecting or mining operations through a Government company or corporation owned or controlled by it ^{8***} and where it proposes to do so, it shall, by notification in the Official Gazette, specify the boundaries of such area and the mineral or minerals in respect of which such areas will be reserved.

1. The word “only” omitted by Act 56 of 1972, s. 10 (w.e.f. 12-9-1972).

2. Ins. by s. 10, *ibid.* (w.e.f. 12-9-1972).

3. Subs. by Act 38 of 1999, s. 15, for “prospecting or mining operations” (w.e.f. 18-12-1999).

4. Subs. by s. 15, *ibid.*, for “prospecting licence or mining lease” (w.e.f. 18-12-1999).

5. Subs. by s. 15, *ibid.*, for “prospecting fee” (w.e.f. 18-12-1999).

6. Ins. by Act 37 of 1986, s. 14 (w.e.f. 10-2-1987).

7. Ins. by Act 25 of 1994, s. 7 (w.e.f. 25-1-1994).

8. The words “or by the Central Government” omitted by s. 7, *ibid.* (w.e.f. 25-1-1994).

¹[(2A) Where in exercise of the powers conferred by sub-section (1A) or sub-section (2), the Central Government or the State Government, as the case may be, reserves any area for undertaking prospecting or mining operations, the State Government shall grant prospecting licence or mining lease, as the case may be, in respect of such area to such Government company or corporation:

Provided that in respect of any mineral specified in Part A and Part B of the First Schedule, the State Government shall grant the prospecting licence or mining lease, as the case may be, only after obtaining the previous approval of the Central Government.

(2B) Where the Government company or corporation is desirous of carrying out the prospecting operations or mining operations in a joint venture with other persons, the joint venture partner shall be selected through a competitive process, and such Government company or corporation shall hold more than seventy-four per cent. of the paid up share capital in such joint venture.

(2C) A mining lease granted to a Government company or corporation, or a joint venture, referred to in sub-sections (2A) and (2B), shall be granted on payment of such amount as may be prescribed by the Central Government.]

(3) ²[Where in exercise of the powers conferred by sub-section (1A) or sub-section (2) the Central Government or the State Government, as the case may be,] undertakes prospecting or mining operations in any area in which the minerals vest in a private person, it shall be liable to pay prospecting fee, royalty, surface rent or dead rent, as the case may be, from time to time at the same rate at which it would have been payable under this Act if such prospecting or mining operations had been undertaken by a private person under prospecting licence or mining lease.]

CHAPTER VI

DEVELOPMENT OF MINERALS

18. Mineral development.—(1) It shall be the duty of the Central Government to take all such steps as may be necessary ³[for the conservation and systematic development of minerals in India and for the protection of environment by preventing or controlling any pollution which may be caused by prospecting or mining operations] and ⁴[for such purposes] the Central Government may, by notification in the Official Gazette, make such rules as it thinks fit.

(2) In particular, and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely:—

- (a) the opening of new mines and the regulation of mining operations in any area;
- (b) the regulation of the excavation or collection of minerals from any mine;
- (c) the measures to be taken by owners of mines for the purpose of beneficiation of ores, including the provision of suitable contrivances for such purpose;
- (d) the development of mineral resources in any area;
- (e) the notification of all new borings and shaft sinkings and the preservation of bore-hole records, and specimens of cores of all new bore-holes;
- (f) the regulation of the arrangements for the storage of minerals and the stocks thereof that may be kept by any person;
- (g) the submission of samples of minerals from any mine by the owner thereof and the manner in which and the authority to which such samples shall be submitted; and the taking of samples of any minerals from any mine by the State Government or any other authority specified by it in that behalf;

1. Ins. by Act 10 of 2015, s. 17 (w.e.f. 12-1-2015).

2. Subs. by Act 25 of 1994, s. 7, for “Where in exercise of the powers conferred by sub-section (2) the State Government” (w.e.f. 25-1-1994).

3. Subs. by Act 37 of 1986, s. 15, for “for the conservation and development of minerals in India” (w.e.f. 10-2-1987).

4. Subs. by s. 15, *ibid.*, for “for that purpose” (w.e.f. 10-2-1987).

(h) the submission by owners of mines of such special or periodical returns and reports as may be specified, and the form in which and the authority to which such returns and reports shall be submitted;

¹[(i) the regulation of prospecting operations;

(j) the employment of qualified geologists or mining engineers to supervise prospecting or mining operations;

(k) the disposal or discharge of waste slime or tailings arising from any mining or metallurgical operations carried out in a mine;

(l) the manner in which and the authority by which directions may be issued to the owners of any mine to do or refrain from doing certain things in the interest of conservation or systematic development of minerals or for the protection of environment by preventing or controlling pollution which may be caused by prospecting or mining operations;

(m) the maintenance and submission of such plans, registers or records as may be specified by the Government;

(n) the submission of records or reports by persons carrying on prospecting or mining operations regarding any research in mining or geology carried out by them;

(o) the facilities to be afforded by persons carrying out prospecting or mining operations to persons authorised by the Central Government for the purpose of undertaking research or training in matters relating to mining or geology;

(p) the procedure for and the manner of imposition of fines for the contravention of any of the rules framed under this section and the authority who may impose such fines; and

(q) the authority to which, the period within which, the form and the manner in which applications for revision of any order passed by any authority under this Act and the rules made thereunder may be made, the fee to be paid and the documents which should accompany such applications.]

(3) All rules made under this section shall be binding on the Government.

²**[18A. Power to authorise Geological Survey of India, etc., to make investigation.—**(1) Where the Central Government is of opinion that for the conservation and development of minerals in India, it is necessary to collect as precise information as possible with regard to any mineral available in or under any land in relation to which any prospecting licence or mining lease has been granted, whether by the State Government or by any other person, the Central Government may authorise the Geological Survey of India, or such other authority or agency as it may specify in this behalf, to carry out such detailed investigations for the purpose of obtaining such information as may be necessary:

Provided that in the cases of prospecting licences or mining leases granted by a State Government, no such authorisation shall be made except after consultation with the State Government.

(2) On the issue of any authorisation under sub-section (1), it shall be lawful for the Geological Survey of India or the specified authority or agency, and its servants and workmen—

(a) to enter upon such land,

(b) to dig or bore into the sub-soil,

(c) to do all other acts necessary to determine the extent of any mineral available in or under such land,

(d) to set out boundaries of the land in which any mineral is expected to be found,

(e) to mark such boundaries and line by placing marks,

1. Ins. by Act 37 of 1986, s. 15 (w.e.f. 10-2-1987).

2. Ins. by Act 56 of 1972, s. 11 (w.e.f. 12-9-1972).

(f) where otherwise the survey cannot be completed on the boundaries and line marked, to cut down and clear away any part of any standing crop, fence or jungle:

Provided that no such authority or agency shall enter into any building or upon any enclosed court or garden attached to a dwelling-house (except with the consent of the occupier thereof) without previously giving such occupier at least seven days' notice in writing of its intention to do so.

(3) Whenever any action of the nature specified in sub-section (2) is to be taken, the Central Government shall, before or at the time when such action is taken, pay or tender payment for all necessary damage which is likely to be caused, and in case of dispute as to the sufficiency of the amount so paid or tendered or as to the person to whom it should be paid or tendered, the Central Government shall refer the dispute to the principal civil court of original jurisdiction having jurisdiction over the land in question.

(4) The fact that there exists any such dispute as is referred to in sub-section (3) shall not be a bar to the taking of any action under sub-section (2).

(5) After the completion of the investigation, the Geological Survey of India or the specified authority or agency by which the investigation was made shall submit to the Central Government a detailed report indicating therein the extent and nature of any mineral which lies deposited in or under the land.

(6) The costs of the investigation made under this section shall be borne by the Central Government:

Provided that where the State Government or other person in whom the minerals are vested or the holder of any prospecting licence or mining lease applies to the Central Government to furnish to it or him a copy of the report submitted under sub-section (5), that State Government or other person or the holder of a prospecting licence or mining lease, as the case may be, shall bear such reasonable part of the costs of investigation as the Central Government may specify in this behalf and shall, on payment of such part of the costs of investigation, be entitled to receive from the Central Government a true copy of the report submitted to it under sub-section (5).]

CHAPTER VII

MISCELLANEOUS

19. Prospecting licences and mining leases to be void if in contravention of Act.—Any ¹[reconnaissance permit, prospecting licence or mining lease] granted, renewed or acquired in contravention of the provisions of this Act or any rules or orders made thereunder shall be void and of no effect.

Explanation.—Where a person has acquired more than one ¹[reconnaissance permit, prospecting licence or mining lease] ²*** and the aggregate area covered by such ³[permits, licences or leases], as the case may be, exceeds the maximum area permissible under section 6, only that ¹[reconnaissance permit, prospecting licence or mining lease] the acquisition of which has resulted in such maximum area being exceeded shall be deemed to be void.

20. Act and rules to apply to all renewals of prospecting licences and mining leases.—The provisions of this Act and the rules made thereunder shall apply in relation to the renewal after the commencement of this Act of any prospecting licence or mining lease granted before such commencement as they apply in relation to the renewal of a prospecting licence or mining lease granted after such commencement.

⁴[20A. Power of Central Government to issue directions.—(1) Notwithstanding anything contained in this Act, the Central Government may issue such directions to the State Governments, as may be required for the conservation of mineral resources, or on any policy matter in the national interest, and for the scientific and sustainable development and exploitation of mineral resources.

1. Subs. by Act 38 of 1999, s. 16, for “prospecting licence or mining lease” (w.e.f. 18-12-1999).

2. The words “in any State” omitted by Act 25 of 1994, s. 8 (w.e.f. 25-1-1994).

3. Subs. by Act 38 of 1999, s. 16, for “licences or leases” (w.e.f. 18-12-1999).

4. Ins. by Act 10 of 2015, s. 18 (w.e.f. 12-1-2015).

(2) In particular, and without prejudice to the generality of the foregoing powers, the Central Government may also issue directions in respect of the following matters, namely:—

- (i) improvement in procedure for grant of mineral concessions and to ensure co-ordination among agencies entrusted with according statutory clearances;
- (ii) maintenance of internet-based databases including development and operation of a mining tenement system;
- (iii) implementation and evaluation of sustainable development frameworks;
- (iv) reduction in waste generation and related waste management practices and promotion of recycling of materials;
- (v) minimising and mitigating adverse environmental impacts particularly in respect of ground water, air, ambient noise and land;
- (vi) ensuring minimal ecological disturbance, in terms of bio-diversity, flora, fauna and habitat;
- (vii) promoting restoration and reclamation activities so as to make optimal use of mined out land for the benefit of the local communities; and
- (viii) such other matters as may be necessary for the purposes of implementation of this Act.]

21. Penalties.—¹[(1) Whoever contravenes the provisions of sub-section (1) or sub-section (1A) of section 4 shall be punishable with imprisonment for a term which may extend to five years and with fine which may extend to five lakh rupees per hectare of the area.

(2) Any rule made under any provision of this Act may provide that any contravention thereof shall be punishable with imprisonment for a term which may extend to two years or with fine which may extend to five lakh rupees, or with both, and in the case of a continuing contravention, with additional fine which may extend to fifty thousand rupees for every day during which such contravention continues after conviction for the first such contravention.]

(3) Where any person trespasses into any land in contravention of the provisions of sub-section (1) of section 4, such trespasser may be served with an order of eviction by the State Government or any authority authorised in this behalf by that Government and the State Government or such authorised authority may, if necessary, obtain the help of the police to evict the trespasser from the land.

²[(4) Whenever any person raises, transports or causes to be raised or transported, without any lawful authority, any mineral from any land, and, for that purpose, uses any tool, equipment, vehicle or any other thing, such mineral tool, equipment, vehicle or any other thing shall be liable to be seized by an officer or authority specially empowered in this behalf.

(4A) Any mineral, tool, equipment, vehicle or any other thing seized under sub-section (4), shall be liable to be confiscated by an order of the court competent to take cognizance of the offence under sub-section (1) and shall be disposed of in accordance with the directions of such court.]

(5) Whenever any person raises, without any lawful authority, any mineral from any land, the State Government may recover from such person the mineral so raised, or, where such mineral has already been disposed of, the price thereof, and may also recover from such person, rent, royalty or tax, as the case may be, for the period during which the land was occupied by such person without any lawful authority.

³[(6) Notwithstanding anything contained in the Code of Criminal Procedure, 1973 (2 of 1974), an offence under sub-section (1) shall be cognizable.]

22. Cognizance of offences.—No court shall take cognizance of any offence punishable under this Act or any rules made thereunder except upon complaint in writing made by a person authorised in this behalf by the Central Government or the State Government.

1. Subs. by Act 10 of 2015, s. 19, for sub-sections (1) and (2) (w.e.f. 12-1-2015).

2. Subs. by Act 38 of 1999, s. 17, for sub-section (4) (w.e.f. 18-12-1999).

3. Ins. by Act 37 of 1986, s. 16 (w.e.f. 10-2-1987).

23. Offences by companies.—(1) If the person committing an offence under this Act or any rules made thereunder is a company, every person who at the time the offence was committed was in charge of, and was responsible to the company for the conduct of the business of the company, shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly:

Provided that nothing contained in this sub-section shall render any such person liable to any punishment, if he proves that the offence was committed without his knowledge or that he exercised all due diligence to prevent the commission of such offence.

(2) Notwithstanding anything contained in sub-section (1), where an offence under this Act has been committed with the consent or connivance of any director, manager, secretary or other officer of the company, such director, manager, secretary or other officer shall be deemed to be guilty of that offence and shall be liable to be proceeded against and punished accordingly.

Explanation.—For the purposes of this section,—

- (a) “company” means any body corporate and includes a firm or other association of individuals;
- (b) “director” in relation to a firm means a partner in the firm.

¹[**23A. Compounding of offences.**—(1) Any offence punishable under this Act or any rule made thereunder may, either before or after the institution of the prosecution, be compounded by the person authorised under section 22 to make a complaint to the court with respect to that offence, on payment to that person, for credit to the Government, of such sum as that person may specify:

Provided that in the case of an offence punishable with fine only, no such sum shall exceed the maximum amount of fine which may be imposed for that offence.

(2) Where an offence is compounded under sub-section (1), no proceeding or further proceeding, as the case may be, shall be taken against the offender in respect of the offence so compounded, and the offender, if in custody, shall be released forthwith.]

²[**23B. Power to search.**—If any gazetted officer of the Central or a State Government authorised by the Central Government ³[or a State Government, as the case may be,] in this behalf by general or special order has reason to believe that any mineral has been raised in contravention of the provisions of this Act or rules made thereunder or any document or thing in relation to such mineral is secreted in any place ³[or vehicle], he may search for such mineral, document or thing and the provisions of section 100 of the Code of Criminal Procedure, 1973 (2 of 1974), shall apply to every such search.]

⁴[**23C. Power of State Government to make rules for preventing illegal mining, transportation and storage of minerals.**—(1) The State Government may, by notification in the Official Gazette, make rules for preventing illegal mining, transportation and storage of minerals and for the purposes connected therewith.

(2) In particular and without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters, namely:—

- (a) establishment of check-posts for checking of minerals under transit;
- (b) establishment of weigh-bridges to measure the quantity of mineral being transported;
- (c) regulation of mineral being transported from the area granted under a prospecting licence or a mining lease or a quarrying licence or a permit, in whatever name the permission to excavate minerals, has been given;
- (d) inspection, checking and search of minerals at the place of excavation or storage or during transit;
- (e) maintenance of registers and forms for the purposes of these rules;

1. Ins. by Act 56 of 1972, s. 13 (w.e.f. 12-9-1972).

2. Ins. by Act 25 of 1994, s. 9 (w.e.f. 25-1-1994).

3. Ins. by Act 38 of 1999, s. 18 (w.e.f. 18-12-1999).

4. Ins. by s. 19, *ibid.* (w.e.f. 18-12-1999).

(f) the period within which and the authority to which applications for revision of any order passed by any authority be preferred under any rule made under this section and the fees to be paid therefor and powers of such authority for disposing of such applications; and

(g) any other matter which is required to be, or may be, prescribed for the purpose of prevention of illegal mining, transportation and storage of minerals.

(3) Notwithstanding anything contained in section 30, the Central Government shall have no power to revise any order passed by a State Government or any of its authorised officers or any authority under the rules made under sub-sections (1) and (2).]

24. Power of entry and inspection.—(1) For the purpose of ascertaining the position of the working, actual or prospective, of any mine or abandoned mine or for any other purpose connected with this Act or the rules made thereunder, any person authorised by the ¹[Central Government or a State Government] in this behalf, by general ²*** order, may—

(a) enter and inspect any mine;

(b) survey and take measurements in any such mine;

(c) weigh, measure or take measurements of the stocks of minerals lying at any mine;

(d) examine any document, book, register, or record in the possession or power of any person having the control of, or connected with, any mine and place marks of identification thereon, and take extracts from or make copies of such document, book, register or record;

(e) order the production of any such document, book, register, record, as is referred to in clause (d); and

(f) examine any person having the control of, or connected with, any mine.

(2) Every person authorised by the ¹[Central Government or a State Government] under sub-section (1) shall be deemed to be a public servant within the meaning of section 21 of the Indian Penal Code, and every person to whom an order or summons is issued by virtue of the powers conferred by clause (e) or clause (f) of that sub-section shall be legally bound to comply with such order or summons, as the case may be.

³**[24A. Rights and liabilities of a holder of prospecting licence or mining lease.**—(1) On the issue of a ⁴[reconnaissance permit, prospecting licence or mining lease] under this Act and the rules made thereunder, it shall be lawful for the ⁵[holder of such permit, licence or lease], his agents or his servants or workmen to enter the lands over which ⁶[such permit, lease or licence had been granted] at all times during its currency and carry out all such ⁷[reconnaissance, prospecting or mining operations] as may be prescribed:

Provided that no person shall enter into any building or upon an enclosed court or garden attached to a dwelling-house (except with the consent of the occupier thereof) without previously giving such occupier at least seven days' notice in writing of his intention to do so.

(2) The holder of a ⁴[reconnaissance permit, prospecting licence or mining lease] referred to in sub-section (1) shall be liable to pay compensation in such manner as may be prescribed to the occupier of the surface of the land granted under ⁸[such permit, licence or lease] for any loss or damage which is likely to arise or has arisen from or in consequence of the ⁹[reconnaissance, mining or prospecting operations].

1. Subs. by Act 38 of 1999, s. 20, for "Central Government" (w.e.f. 18-12-1999).

2. The words "or special" omitted by s. 20, *ibid.* (w.e.f. 18-12-1999).

3. Ins. by Act 37 of 1986, s. 17 (w.e.f. 10-2-1987).

4. Subs. by Act 38 of 1999, s. 21, for "prospecting licence or mining lease" (w.e.f. 18-12-1999).

5. Subs. by s. 21, *ibid.*, for "holder of such licence or lease" (w.e.f. 18-12-1999).

6. Subs. by s. 21, *ibid.*, for "such lease or licence had been granted" (w.e.f. 18-12-1999).

7. Subs. by s. 21, *ibid.*, for "prospecting or mining operations" (w.e.f. 18-12-1999).

8. Subs. by s. 21, *ibid.*, for "such licence or lease" (w.e.f. 18-12-1999).

9. Subs. by s. 21, *ibid.*, for "mining or prospecting operations" (w.e.f. 18-12-1999).

(3) The amount of compensation payable under sub-section (2) shall be determined by the State Government in the manner prescribed.]

25. Recovery of certain sums as arrears of land revenue.—¹[(1)] Any rent, royalty, tax, fee or other sum due to the Government under this Act or the rules made thereunder or under the terms and conditions of any ²[reconnaissance permit, prospecting licence or mining lease] may, on a certificate of such officer as may be specified by the State Government in this behalf by general or special order, be recovered in the same manner as an arrear of land revenue.

³[(2) Any rent, royalty, tax, fee or other sum due to the Government either under this Act or any rule made thereunder or under the terms and conditions of any ²[reconnaissance permit, prospecting licence or mining lease] may, on a certificate of such officer as may be specified by the State Government in this behalf by general or special order, be recovered in the same manner as if it were an arrear of land revenue and every such sum which becomes due to the Government after the commencement of the Mines and Minerals (Regulation and Development) Amendment Act, 1972 (56 of 1972), together with the interest due thereon shall be a first charge on the assets of the holder of the ²[reconnaissance permit, prospecting licence or mining lease], as the case may be.]

26. Delegation of powers.—(1) The Central Government may, by notification in the Official Gazette, direct that any power exercisable by it under this Act may, in relation to such matters and subject to such conditions, if any, as may be specified in the notification be exercisable also by—

(a) such officer or authority subordinate to the Central Government; or

(b) such State Government or such officer or authority subordinate to a State Government, as may be specified in the notification.

(2) The State Government may, by notification in the Official Gazette, direct that any power exercisable by it under this Act may, in relation to such matters and subject to such conditions, if any, as may be specified in the notification, be exercisable also by such officer or authority subordinate to the State Government as may be specified in the notification.

(3) Any rules made by the Central Government under this Act may confer powers and impose duties or authorise the conferring of powers and imposition of duties upon any State Government or any officer or authority subordinate thereto.

27. Protection of action taken in good faith.—No suit, prosecution or other legal proceedings shall lie against any person for anything which is in good faith done or intended to be done under this Act.

28. Rules and notifications to be laid before Parliament and certain rules to be approved by Parliament.—⁴[(1) Every rule and every notification made by the Central Government under this Act shall be laid, as soon as may be after it is made, before each House of Parliament while it is in session for a total period of thirty days which may be comprised in one session or in two or more successive sessions, and if, before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses agree in making any modification in the rule or notification or both Houses agree that the rule or notification should not be made, the rule or notification shall thereafter have effect only in such modified form or be of no effect, as the case may be; so, however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule or notification.]

(2) Without prejudice to the generality of the rule making power vested in the Central Government, no rules made with reference to clause (c) of sub-section (2) of section 16 shall come into force until they have been approved, whether with or without modifications, by each House of Parliament.

1. Section 25 re-numbered as sub-section (1) thereof by Act 56 of 1972, s. 14 (w.e.f. 12-9-1972).

2. Subs. by Act 38 of 1999, s. 22, for “prospecting licence or mining lease” (w.e.f. 18-12-1999).

3. Ins. by Act 56 of 1972, s. 14 (w.e.f. 12-9-1972).

4. Subs. by s. 15, *ibid.*, for sub-section (1) (w.e.f. 12-9-1972).

¹[(3) Every rule and every notification made by the State Government under this Act shall be laid, as soon as may be after it is made, before each House of the State Legislature where it consists of two Houses, or where such Legislature consists one House, before that House.]

29. Existing rules to continue.—All rules made or purporting to have been made under the Mines and Minerals (Regulation and Development) Act, 1948 (53 of 1948), shall, in so far as they relate to matters for which provision is made in this Act and are not inconsistent therewith, be deemed to have been made under this Act as if this Act had been in force on the date on which such rules were made and shall continue in force unless and until they are superseded by any rules made under this Act.

²**[30. Power of revision by Central Government.**—The Central Government may, of its own motion or on an application made within the prescribed time by an aggrieved party,—

(a) revise any order made by a State Government or other authority in exercise of the powers conferred on it by or under this Act with respect to any mineral other than a minor mineral; or

(b) where no such order has been made by the State Government or other authority in exercise of the powers conferred on it by or under this Act with respect to any mineral other than a minor mineral within the time prescribed therefore, pass such order as it may think fit and appropriate in the circumstances:

Provided that in cases covered by clause (b) the Central Government shall, before passing any order under this clause, give an opportunity of being heard or to represent in the matter.]

³**[30A. Special provisions relating to mining leases for coal granted before 25th October, 1949.**—Notwithstanding anything contained in this Act, the provisions of sub-section (1) of section 9 and sub-section (1) of section 16 shall not apply to or in relation to mining leases granted before the 25th day of October, 1949, in respect of coal, but the Central Government, if it is satisfied that it is expedient so to do, may, by notification in the Official Gazette, direct that all or any of the said provisions (including any rules made under sections 13 and 18) shall apply to or in relation to such leases subject to such exceptions and modifications, if any, as may be specified in that or in any subsequent notification.]

⁴**[30B. Constitution of Special Courts.**—(1) The State Government may, for the purposes of providing speedy trial of offences for contravention of the provisions of sub-section (1) or sub-section (1A) of section 4, constitute, by notification, as many Special Courts as may be necessary for such area or areas, as may be specified in the notification.

(2) A Special Court shall consist of a Judge who shall be appointed by the State Government with the concurrence of the High Court.

(3) A person shall not be qualified for appointment as a judge of a Special Court unless he is or has been a District and Sessions Judge.

(4) Any person aggrieved by the order of the Special Court may prefer an appeal to the High Court within a period of sixty days from the date of such order.

30C. Special Courts to have powers of Court of Session.—Save as otherwise provided in this Act, the Code of Criminal Procedure, 1973 (2 of 1974), shall apply to the proceedings before the Special Court and for the purpose of the provisions of this Act, the Special Court shall be deemed to be a Court of Session and shall have all powers of a Court of Session and the person conducting a prosecution before the Special Court shall be deemed to be a public prosecutor.]

31. Relaxation of rules in special cases.—The Central Government may, if it is of opinion that in the interests of mineral development it is necessary so to do, by order in writing and for reasons to be recorded, authorise in any case the grant, renewal or transfer of any ⁵[reconnaissance permit, prospecting

1. Ins. by Act 25 of 1994, s. 10 (w.e.f. 25-1-1994).

2. Subs. by Act 10 of 2015, s. 20, for section 30 (w.e.f. 12-1-2015).

3. Ins. by Act 15 of 1958, s. 2 (w.e.f. 15-5-1958).

4. Ins. by Act 10 of 2015, s. 21 (w.e.f. 12-1-2015).

5. Subs. by Act 38 of 1999, s. 23, for “prospecting licence or mining lease” (w.e.f. 18-12-1999).

licence or mining lease], or the working of any mine for the purpose of searching for or winning any mineral, on terms and conditions different from those laid down in the rules made under section 13.

32. [*Amendments to Act 53 of 1948*].—*Rep. by the Repealing and Amending Act, 1960 (58 of 1960), s. 2 and the First Schedule (w.e.f. 26-12-1960).*

33. Validation of certain acts and indemnity.—All acts of executive authority done, proceedings taken and sentences passed under the Mines and Minerals (Regulation and Development) Act, 1948 (53 of 1948), with respect to the regulation of mines and the development of minerals during the period commencing on the 26th day of January, 1950, and ending with the date of commencement of this Act by the Government or by any officer of the Government or by any other authority, in the belief or purported belief that the acts, proceedings or sentences were being done, taken or passed under the said Act, shall be as valid and operative as if they had been done, taken or passed in accordance with law, and no suit or other legal proceeding shall be maintained or continued against any person whatsoever, on the ground that any such acts, proceedings or sentences were not done, taken or passed in accordance with law.

¹[THE FIRST SCHEDULE

[See sections 4(3), 5(I), 7(2) and ²[8(I), 8A(I), 10A, 10B(I), 10C(I), 11(I), 11B, 11C, 12A(I), and 17A(2A)]]

SPECIFIED MINERALS

PART A

Hydro carbons/energy minerals

1. Coal and lignite.

PART B

Atomic minerals

1. Beryl and other beryllium-bearing minerals.
2. Lithium-bearing minerals.
3. Minerals of the “rare earths” group containing Uranium and Thorium.
4. Niobium-bearing minerals.
5. Phosphorites and other phosphatic ores containing Uranium.
6. Pitchblende and other Uranium ores.
- ³[7. Titanium bearing minerals and ores (ilmenite, rutile and leucoxene).]
8. Tantalum-bearing minerals.
9. Uraniferous allanite, monazite and other thorium minerals.
10. Uranium bearing tailings left over from ores after extraction of copper and gold, ilmenite and other titanium ores.
- ⁴[11. Zirconium-bearing minerals and ores including Zircon.]

PART C

Metallic and non-metallic minerals

1. Asbestos.
2. Bauxite.
3. Chrome ore.
4. Copper ore.
5. Gold.
6. Iron ore.
7. Lead.
- ⁵***
9. Manganese ore.
10. Precious stones.
11. Zinc.]

1. Subs. by Act 25 of 1994, s. 12, for the First Schedule (w.e.f. 25-1-1994).

2. Subs. by Act 10 of 2015, s. 22, for “8(2)” (w.e.f. 12-1-2015).

3. Subs. by Act 38 of 1999, s. 24, for item 7 (w.e.f. 18-12-1999).

4. Subs. by s. 24, *ibid.*, for item 11 (w.e.f. 18-12-1999).

5. Omitted by s. 24, *ibid.* (w.e.f. 18-12-1999).

¹[SECOND SCHEDULE

(See section 9)

RATES OF ROYALTY IN RESPECT OF MINERALS AT ITEMS 1 TO 9, 11 TO 40 AND 42 TO 55

1. Apatite and Rock Phosphate:	
(i) Apatite	Five per cent. of average sale price on <i>ad valorem</i> basis.
(ii) Rock Phosphate	Twelve and half per cent. of average sale price on <i>ad valorem</i> basis.
(a) Above 25% P ₂ O ₅	
(b) Upto 25% P ₂ O ₅	Six per cent. of average sale price on <i>ad valorem</i> basis.
2. Asbestos:	
(i) Chrysotile	Eight Hundred and Eighty rupees per tonne.
(ii) Amphibole	Fifteen per cent. of average sale price on <i>ad valorem</i> basis.
3. Barytes:	Six and half per cent. of average sale price on <i>ad valorem</i> basis.
4. Bauxite and Laterite:	(a) Metallurgical Grade: Zero point six zero per cent. of London Metal Exchange Aluminium metal price chargeable on the contained aluminium metal in ore produced for those dispatched for use in alumina and aluminium metal extraction. (b) Non Metallurgical Grade: Twenty five per cent. of average sale price on <i>ad valorem</i> basis for those dispatched for use other than alumina and aluminium metal extraction.
5. Brown Ilmenite (Leucoxene), Ilmenite, Rutile and Zircon:	Two per cent. of average sale price on <i>ad valorem</i> basis.
6. Cadmium:	Fifteen per cent. of average sale price on <i>ad valorem</i> basis.
7. Calcite:	Fifteen per cent. of average sale price on <i>ad valorem</i> basis.
8. China clay or Kaolin: (including ball clay and white shale, white clay)	
(i) Crude	Eight per cent. of average sale price on <i>ad valorem</i> basis.
(ii) Processed (including washed)	Twelve per cent. of average sale price on <i>ad valorem</i> basis.
9. Clay others:	Twenty rupees per tonne.
10. Coal (including Lignite):	*
11. Chromite:	Fifteen per cent. of average sale price on <i>ad valorem</i> basis.
12. Columbite-tantalite:	Ten per cent. of average sale price on <i>ad valorem</i> basis.

1. Subs. by notification No. G.S.R. 630(E), for the Second Schedule (w.e.f. 1-9-2014).

13. Copper:	Four point six two per cent. of London Metal Exchange Copper metal price chargeable on the contained copper metal in ore produced.
14. Diamond:	Eleven point five per cent. of average sale price on <i>ad valorem</i> basis.
15. Dolomite:	Seventy-five rupees per tonne.
16. Dunite:	Thirty rupees per tonne.
17. Felspar:	Fifteen per cent. of average sale price on <i>ad valorem</i> basis.
18. Fire Clay: (including plastic, pipe, lithomargic and natural pozzolanic clay)	Twelve per cent. of average sale price on <i>ad valorem</i> basis.
19. Fluorspar: (also called fluorite)	Eight per cent. of average sale price on <i>ad valorem</i> basis.
20. Garnet:	
(i) Abrasive	Four per cent. of average sale price on <i>ad valorem</i> basis.
(ii) Gem	Ten per cent. of average sale price on <i>ad valorem</i> basis.
21. Gold:	
(i) Primary	Four per cent. of London Bullion Market Association Price (commonly referred to as London Price) chargeable on the gold metal in ore produced.
(ii) By-product gold	Three point three per cent. of London Bullion Market Association Price (commonly referred to as London Price) chargeable on the by-product gold metal actually produced.
22. Graphite:	
(i) With 80 per cent. or more fixed carbon	Two hundred and twenty-five rupees per tonne.
(ii) With 40 per cent. or more fixed carbon but less than 80 per cent. fixed carbon	One hundred and fifty rupees per tonne.
(iii) With 20 per cent. or more fixed carbon but less than 40 per cent. fixed carbon	Sixty-five rupees per tonne.
(iv) With less than 20 per cent. fixed carbon	Twenty-five rupees per tonne.
23. Gypsum:	Twenty per cent. of average sale price on <i>ad valorem</i> basis.
24. Iron Ore: (CLO, Lumps, fines and concentrates all grades)	Fifteen per cent. of average sale price on <i>ad valorem</i> basis.

25. Lead:	(a) Eight point five per cent. of London Metal Exchange Lead metal price chargeable on the contained lead metal in ore produced. (b) Fourteen point five per cent. of London Metal Exchange Lead metal price chargeable on the contained lead metal in the concentrate produced.
26. Limestone:	
(i) L. D. Grade (less than 1.5 per cent. silica content)	Ninety rupees per tonne.
(ii) Others	Eighty rupees per tonne.
27. Lime kankar:	Eighty rupees per tonne.
28. Limeshell:	Eighty rupees per tonne.
29. Magnesite:	Three per cent. of average sale price on <i>ad valorem</i> basis.
30. Manganese Ore:	
(i) Ore of all grade	Five per cent. of average sale price on <i>ad valorem</i> basis.
(ii) Concentrates	One point seven per cent. of average sale price on <i>ad valorem</i> basis.
31. Marl:	Sixty rupees per tonne.
32. Crude Mica, waste mica and scrap mica:	Four per cent. of average sale price on <i>ad valorem</i> basis.
33. Monazite:	One hundred and twenty-five rupees per tonne.
34. Nickel:	Zero point one two per cent. of London Metal Exchange Nickel metal price chargeable on the contained nickel metal in ore produced.
35. Ochre:	Twenty-four rupees per tonne.
36. Pyrites:	Two per cent. of average sale price on <i>ad valorem</i> basis.
37. Pyrophyllite:	Twenty per cent. of average sale price on <i>ad valorem</i> basis.
38. Quartz:	Fifteen per cent. of average sale price on <i>ad valorem</i> basis.
39. Ruby:	Ten per cent. of average sale price on <i>ad valorem</i> basis.
40. Sand (others):	Twenty rupees per tonne.
41. Sand for stowing:	**
42. Shale:	Sixty rupees per tonne.
43. Silica sand and moulding sand and Quartzite:	Ten per cent. of average sale price on <i>ad valorem</i> basis.
44. Sillimanite:	Two point five per cent. of average sale price on <i>ad valorem</i> basis.

45. Silver:	
(i) By-product	Seven per cent. of London Metal Exchange Price chargeable on by-product silver metal actually produced.
(ii) Primary Silver	Five per cent. of London Metal Exchange Silver Metal Price chargeable on the contained silver metal in ore produced.
46. Slate:	Forty-five rupees per tonne.
47. Talc, Steatite and Soapstone:	Eighteen per cent. of average sale price on <i>ad valorem</i> basis.
48. Tin:	Seven point five per cent. of London Metal Exchange Tin metal price chargeable on the contained tin metal in ore produced.
49. Tungsten:	Twenty rupees per unit per cent. of contained WO ₃ per tonne of ore and on pro rata basis.
50. Uranium:	Two per cent. of annual compensation amount received by M/s. Uranium Corporation of India Ltd., to be apportioned among the States on the basis of data provided by Department of Atomic Energy.
51. Vanadium:	Twenty per cent. of average sale price on <i>ad valorem</i> basis.
52. Vermiculite:	Five per cent. of average sale price on <i>ad valorem</i> basis.
53. Wollastonite:	Fifteen per cent. of average sale price on <i>ad valorem</i> basis.
54. Zinc:	(a) Nine point five per cent. of London Metal Exchange Zinc metal price on <i>ad valorem</i> basis chargeable on contained zinc metal in ore produced. (b) Ten per cent. of London Metal Exchange Zinc metal price on <i>ad valorem</i> basis chargeable on contained zinc metal in concentrate produced.
55. All other minerals not herein before specified (Agate, Corundum, Diaspore, Felsite, Fuschite-Quartzite, Jasper, Kyanite, Perlite, Pyroxenite, Rock Salt, Selenite, etc.)	Twelve per cent. of average sale price on <i>ad valorem</i> basis.

Notes:—

1. * Rates of royalty in respect of item No. 10 relating to Coal (including Lignite) as revised *vide* notification number G.S.R. 349(E), dated the 10th May, 2012 read with corrigendum G.S.R. 525(E), dated the 14th June, 2012 of the Government of India in the Ministry of Coal shall remain in force until revised through a separate notification by the Ministry of Coal.
2. ** Rates of royalty in respect of item No. 41 relating to Sand for stowing revised *vide* notification number G.S.R. 214(E), dated the 11th April, 1997, will remain in force until revised through a separate notification by the Ministry of Coal.]

¹[THIRD SCHEDULE

(See section 9A)

Rates of Dead Rent

1. Rates of dead rent applicable to the leases granted for low value minerals are as under:

RATES OF DEAD RENT IN RUPEES PER HECTARE PER ANNUM

From 2nd Year of Lease	3rd and 4th Year of Lease	5th Year onwards
400	1000	2000

2. Two times the rate specified at paragraph 1 above in case of lease granted for medium value minerals.

3. Three times the rate specified at paragraph 1 above in case of lease granted for high value minerals.

4. Four times the rate specified at paragraph 1 above in case of lease granted for precious metals and stones.

Note:

1. For the purpose of this notification:—

(a) **“precious metals and stones”** means gold, silver, diamond, ruby, sapphire and emerald;

(b) **“high value minerals”** means semi-precious stones (agate, gem garnet), corundum, copper, lead, zinc, and asbestos (chrysotile variety);

(c) **“medium value minerals”** means chromite, manganese ore, kyanite, sillimanite, vermiculite, magnesite, wollastonite, perlite, diaspore, apatite, rock phosphate, fluorite (fluorspar), barytes, and iron ore;

(d) **“low value minerals”** means the minerals other than precious metals and stones, high value minerals and medium value minerals.]

1. Subs. by notification No. G.S.R.631(E), for “Third Schedule” (w.e.f. 1-9-2014).

¹[THE FOURTH SCHEDULE
[See clause (ea) of section 3]

Notified Minerals

1. Bauxite.
2. Iron ore.
3. Limestone.
4. Manganese ore.]

1. Ins. by Act 10 of 2015, s. 23 (w.e.f. 12-1-2015).