GAS CYLINDERS RULES, 1981

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G.S.R. 77 (E), dated the 24th February, 19811 - Where as a draft of revised Gas Rules, was published as required by Section 18 of the Indian Ex- plosives Act, 1884 of 1884), at pages 1131 to 1138/12 of the Gazette of India, Extraordinary, Pt. II, Section 3(i), dated the 1st September, 1979, under the notification of Government of India in the Ministry of Industry (Department of Industrial development) No. G.S.R. 523 (E), dated the 1st September, 1979 inviting objections and suggestions from all persons likely to be effected thereby, before the expiry of a period of 45 days 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 22nd September, 1979; And whereas objections and suggestions received from the public on the said draft Rules have been considered by the Central Govern- ment hereby makes the following rules, namely:

CHAPTER 1
Preliminary

1. Short title and commencement :-

(1) These rules may be called the Gas Cylinders Rules, 1981.

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

2. Definitions :-
In these rules unless the context otherwise requires:

(i) "Act" means the Indian Explosives Act, 1884 (4 of 1884);

(ii) "Chief Controller" means the Chief Controller of Explo- sives Government of India;

(iii) "competent person" means a person recognised by the Chief Controller to be a competent person, or a person who holds a certificate of competency for the job in respect of which

(iv) compressed gas" means any permanent gas, liquefiable gas or gas dissolved in liquid under pressure or gas mixture which in a closed gas cylinder exercises a pressure either exceeding 2.5 Kgf/ Cm2 abs.(1.5 Kgf/Cm2 gauge) at + 15 C or a pressure exceeding 3 Kgf/Cm2 abs. (2 Kgf/Cm2 gauge) at + 50 C or both.

Explanation.- Hydrogen flouride falls within the scope of comp- ressed gas although its vapour at 50C is 1.7 to 1.8 atmospheric gauge;

(v) "Conservator" in relation to a port includes any person acting under the authority of the officer or body of persons appointed to be Conservator of that port under S.7 of the Indian Ports Act, 1908 (15 of 1908);

(vi) "Controller of Explosives" includes the Deputy Chief Contr- oller of Explosives, Deputy Controller of Explosives and Assistant: Controller of Explosives;

(vii) "critical temperature" means the temperature above which gas cannot be liquefied by the application of pressure alone;

(viii) "dissolved acetylene cylinder" means a cylinder having a value and with or without safety devices, containing aporous mass, a solvent for the storage of dissolved acetylene and at least suffi- cient acetylene to saturate the solvent at atmospheric pressure and at a temperature of + 15C.

Explanation.- Acetone or any other solvent used shall not be capable of chemical reaction with the acetylene gas or with the po- rous mass or with the metal of the cylinder or value;

(ix) "dissolved gas" means a gas which under pressure is dissolved in a fluid solvent appropriate to the particular gas as for example, acetylene in acetone or ammonia in water ;

(x) "district authority" means -

(a) a Commissioner of Police or Deputy Commissioner of Po- lice in any town having a Commissioner of Police, and

(b) in any other place, the District Magistrate;

(xi) "District Magistrate" includes an Additional District Magis- trate, and in the States of Punjab and Haryana and in the Karaikal, Mahe and Yaman areas of the Union territory of Pondicherry, also includes a Sub-divisional Magistrate;

(xii) "filling pressure" means the maximum permissible gauge pressure, converted to + 15C, at which a gas cylinder for perma- nent gas or gas dissolved under pressure can be filled ;

(xiii) "filling ratio" mean the ratio of the weight of a liquefiable gas introduced in the cylinder to the weight of the water the cyli- nders will hold all 5C;

(xiv) "flammable gas" means any gas which, if either a mixture of 13 percent, or less (by volume) with air forms a flammable mix- ture or the flammability range with air is greater than 12 per cent. regardless of the lower limit and these limits shall bedetermined at atmospheric temperature and pressure.

Explanation.- "Flammability range" means the difference bet- ween the minimum and maximum percentage by volume of the gas in mixture with air that forms a flammable mixture;

(xv) "form" means a form set forth in Sch. V ;

1 (xvi) 'Gas Cylinder' or 'Cylinder' means any closed metal container having a volume exceeding 500 millilitre but not exceeding 1000 litres intended for the storage and transport of compressed gas, including any liquefied petroleum gas (LPG) container fitted to a motor vehicle as its fuel tank, but not including any other such container fitted to a special transport or under carriage.

(xvii) "high pressure liquefiable gas" means a liquefiable gas having a critical temperature between - 10C and X 70C;

(xviii) "hydrostatic stretch test" means subjecting the cylinder to a hydrostatic pressure equal to the test pressure of the cylinder and recording the permanent stretch undergone by the cylinder;

(xix) "hydrostatic test" means the test to which a cylinder is subjected to a hydrostatic pressure equal to the test pressure of the cylinder;

(xx) "Import" means bringing into India by land, sea or air;

(xxi) "inspecting authority" means a person having qualifica- tion and wide experience in the field of design, manufacture and testing of gas cylinders and recognized by the Chief Controller as authority for inspection and certification of gas cylinders;

(xxii) "Installation" means any permises wherein any place has been specially prepared for the manufacture (filling) or storage of compressed gas in cylinder ;

(xxiii) "liquefiable gas" means a gas that may be liquefied by pressure at - 10C but will be completely vaporised when in equilibrium with normal atmospheric pressure (760 mm. hg)at 30C;

(xxiv) "low pressure liquefiable gas" means a liquefiable gas having critical temperature higher than X 70C ;

(xxv) "manufacture of gas" means filling of a cylinder with any compressed gas and also includes transfer of compressed gas from one cylinder to any other cylinder ;

(xxvi) "permanent gas" means a gas whose critical temperature is below - 10C that is to say a gas which cannot be liquefied under any pressure at a temperature above - 10C ;

(xxvii) "schedule" means the schedule annexed to these rules;

(xxviii) "tare weight" in relation to,-

(1) acetylene cylinder means the weight of the cylinder together with any fittings, permanently attached and includes the wight of valve any safety device, porous mass, requisite quantity of solvent for dissol- ving acetylene, and the weight of acetylene gas saturating the solvent at atmospheric pressure and temperature of 15C ;

(2) liquefiable gas cylinder means the weight of the cylinder toge- ther with any fittings permanently attached thereto and includes the weight of valve;

(3) permanent gas cylinder means the weight of the cylinder toge- ther with any fittings permanently attached thereto ;

(xxix) "test pressure" means the internal pressure required for the hydrostatic test or hydrostatic stretch of the cylinder, as follows:

(1) For permanent and high pressure liquefiable gases. It should be calculated from the following : Ph = 200.t.Re 1.25(Do-t) Where \Ph = Test pressure in Kgf/ Cm2. \Do= Outside diameter of the cylinder in mm. \t= Minimum calculated wall thickness of the cylinder shell in mm. Re = Minimum specified yield strength of the material of cylinder in Kgf/mm2. It is limited to 75 per cent. of the minimum value of tensile strength in the case of normalised cylinder and 85 per cent. of the min- imum value of the tensile strength for quenched and tempered cylinder; provided that the value of test pressure shall not exceed 80 per cent. of the yield strength.

(2) For low pressure liquefiable gas - One and a half times the sa- turated vapour pressure of the gas at 65C or as specified in IS; 8867; whichever is higher.

(xxx) "transport" means the moving of a cylinder filled with any compressed gas from one place to another;

(xxxi) "water capacity" means the volume of water in litres, a cylinder will hold at 15C;

(xxxii) "working pressure for low pressure liquefiable gas" means the saturated vapour pressure at 65C.

Explanation.- For the valves of saturated vapour pressure of different gas see IS; 3710;

(xxxiii) "working pressure for permanent gas" means the internal pressure of the gas in the cylinder at a temperature of 15"C;

(xxxiv) "yield strength" means the stress corresponding to a permanent strain of 0.2 per cent of the original gauge length in a tensile test. For practical purposes it may be taken as a stress at which elongation first occurs in the test piece without the increase of load in a tensile test.

1. Substituted for " (xvi) "Gas Cylinder" or "cylinder" means any closed metal con- tainer intended for the storage and transport of compressed gas, de- signed not to be fitted to a special transport or under-carriage, and having a volume exceeding 500 ml. but not exceeding 1000 litres; ", vide " THE GAS CYLINDERS RULES, 1981" Dt.10th August, 1998 Published in [257] Ministry of Industry (Deptt. of Industrial Development), Noti. No. G.S.R. 487(E), dated August 10, 1998, published in the Gazette of India, Extra., Part II, Section W), dated 10th August, 1998, p. 2, No. 297 [f. No. 2/4/96.EXPL] [L]

CHAPTER 2
General Provisions

3. Filling, possession, impart and transport of cylinders :-

(1) No person shall fill any cylinder with any compressed gas or import, possess or transport any cylinder so filled or intended to be filled with gas unless:

(a) such cylinder and its valve have been constructed to a type and standard specified in Sch. I as amended from time to time by an order issued by the Chief Controller ;

(b) the test and inspection certificates issued by the inspecting authority in respect of cylinder and its valve are made available to the Chief Controller and prior approval of the said authority is ob- tained.

(2) The .test and inspection certificates required to be obtained from the inspecting authority in respect of cylinders and valves inspected and certified by it in accordance with the approved design and specifica- tion or code shall give the information included in Sch. II.

(3) Any person desiring to fabricate cylinders, valves and other fittings shall submit to the Chief Controller the particulars set forth in Sch. III.

(4) Notwithstanding anything contained in sub-rule (1), cylinders of specifications not conforming to the specifications specified in Sch. I and imported into India for filling and shipment to the country of origin or supply to a foreign going vessel touching Indian port, could be filled with such gas provided-

(a) the cylinder has passed the hydrostatic test or hydrostatic str- etch test, as the case may be, within the period specified in these rules and the pressure applied during the test shall be the test pres- sure marked on the cylinder,

(b) the cylinder is not filled with-

(i) any liquefiable gas in excess of the filling ratio specified in IS; 3710;

(ii) any permanent gas at a pressure in excess of the pressure for which the cylinder is designed ;

(c) a separate record of the cylinder tested and filled is main- tained at the filling station,

(d) the filled cylinders are removed from the filling station and shipped off as expeditiously as possible.

4. Valves :-

(1) Valves fitted to gas cylinders shall comply in all respects with the specifications, namely ;

(a) in respect of Industrial gas cylinders, IS : 3224 ;

(b) in respect of Medical gas cylinders, IS : 3745 :

(c) in respect of cylinders used with breathing apparatus, IS: 7302 as amended from time to time;

(d) in respect of cylinders used for filling liquefied petroleum gas IS : 8776 for cylinders of water capacity not exceeding 5 litres and, IS ; 8737 for cylinders of water capacity exceeding litres: Provided that the Chief Controller may, if he is of opinion that it is necessary so to do in the public interest, permit the use of valves not conforming to any of the specifications.

(2) Valves fitted to carbon dioxide cylinders shall be provided in the body with safety release consisting of softened copper disc so arranged as to burst at a pressure between 200 and 220 Kg/Cm2.

(3) Valves for cylinders containing flammable gases not listed in IS : 3224 shall have outlets provided with left handed screw threads for the pipes or other connections.

(4) All other valves shall have outlets with right handed screw threads.

(5) The valves shall be attached to the cylinder neck by screwing and not by making any permanent attachment or inserting adapter in between.

(6) The design of spindle operated valves shall be such that when fitted to the cylinders it shall not be possible to withdraw the spindle under normal operating conditions.

5. Safety Relief Devices :-

(1) Cylinders manufactured in India, if fitted with safety relief devices in their bodies, shall have such safety devices manufactured and maintained in accordance with IS: 5903.

(2) Cylinders containing obnoxious or poisonous gases shall not be provided with any safety device.

Explanation.- For the purpose of this sub-rule, "obnoxious or poi- sonous gases" include Carbon monoxide, Hydro-Cyanic Acid, Hydrogen Chloride, Hydrogen Bromide, HydrogenFluoride, Sulphur Dioxide, Chlo- rine, Methyl Bromide, Nitrogen tetroxide, Nitrosyl Chloride, Town gas, Hydrogen Sulphide, Carbonyl Chloride (Phosgene), Cynogen, Cynogen Chloride, Fluorine and Carbon oxychloride.

(3) Cylinders manufactured in foreign countries, approved for use in this country, if fitted with safety relief devices shall have these dev- ices fully maintained in accordance with the requirements of the specifi- cations to which they were originally made.

6. Marking on Cylinders :-

(1) Markings generally :

(a) Every gas cylinder shall be clearly and permanently marked in accordance with the following conditions by stamping, engraving or similar process:

(i) on the shoulder of the cylinder which shall be re-enforced by forging or other means, or

(ii) on such a part which is inseparably bound with the cyli- nder and which is not or only negligibly affected by the stresses due to the gas pressure within it.

(b) The name plate shall not be affixed to the cylinder by sol- dering if there is a risk of corrosion or embrittlement.

(c) In conjunction with the original marking, space shall be provided for stamping the test date obtained at the periodic ins- pection.

(d) Markings shall be so carried out and the letters and nume- rals used shall be of such shape and size that the marking is clear and easily readable and does not give place for misreading.

(2) Marking on permanent and liquefiable gas cylinders:

(a) Every cylinder shall be marked with the following mar- kings, namely;

(i) manufacturer's, owner's and inspector's marking and rota- tion number; (these markings shall be registered with the Chief Controller);

(ii) specification to which the cylinder has been made;

(iii) a symbol to indicate the nature of heat treatment given to the cylinder during manufacture or after repairs;

(iv) the date of the last hydrostatic test or hydrostatic str- etch test, as the case may be, with the code mark or

recognised testing station where the test was carried out. The code mark shall be registered with the Chief Controller. In the case of liquefied petroleum gas cylinders, the quarter and the year of test shall be given as an additional marking in a neckring or on a shoulder plate;

(v) working pressure and test pressure;

(vi) tare weight.

Explanation.- in the case of liquefiable gas cylinder, tare weight shall include the weight of valve fitted to the cylinder. The weight of the valve shall be indicated separately;

(vii) water capacity.

(b) All the markings, except the manufacturer's markings, which may be on the base, shall be stamped on the neck end of the cylinder.

7. Markings on valve :-
Valves fitted to the cylinder shall be cle- arly and durably marked in accordance with the following provisions by stamping, engraving or similar process;

(i) the specification of the valves;

(ii) year and quarter of manufacture;

(iii) manufacturer's symbol;

(iv) working pressure;

(v) the name or the chemical symbol of the gas for which the valve is to be used.

(vi) the type of screw threads on the outlet, namely, left handed (L.H.) or right handed (R.H.);

(vii) Inspector's stamp;

(viii) where dip tubes are provided, special indications shall be given by a clear and durable marking on the valve or on a badge fixed between the valve and the cylinder. The total length in mm. of the tube shall also be indicated.

8. Identification colours :-

(1) Every person filling any cylinder with any compressed gas shall, before it is stored or despatched, see that the cylinder is painted with the appropriate identification colours speci- fied in IS : 4379 for industrial cylinders and IS: 3933 for medical cylinders.

(2) Cylinders used for new gases and gas mixtures for which identi- fication colours are not provided in sub-rule (1) shall be painted with the colours indicated in the following table, namely :

Explanation.- Cylinders intended for gas mixtures can be marked with the words "Gas Mixture" or "Mixed Gas." In addition, the cylinders shall be marked with the names (symbols if necessary) of the components of the mixture by stamping, if the cylinders are intended for the permanent use of the particular gas mixture, or by painting, if the cylinders are intended for the casual use of the parti- cular gas mixture.

(3) No person shall in any way interfere with or change the colour painted on a gas cylinder : Provided that nothing in this sub-rule shall be deemed to prohibit the re-painting of a cylinder with the identification colour painted on it when it is required for the maintenance of the cylinder or when a cylinder is converted from one gas service to another gas service in accordance with these rules.

9. Labelling of cylinders :-

(1) Every cylinder shall be labelled with the name of the gas and the name and address of the person by whom the cylinder was filled with gas.

(2) A warning in the following terms shall be attached to every cylinder containing permanent or liquefiable gas, namely : "WARNING" Gas Cylinders Rules, 1981

(i) Do not change the colour of this cylinder.

(ii) This cylinder should not be filled with any gas other than the one it now contains.

(iii) No flammable material should be stored in the immediate vicinity of this cylinder or in the same room in which it is kept.

(iv) No oil or similar lubricant should be used on the valves or other fittings of this cylinder.

(v) Please look for the next date of test, which is marked on a metal ring inserted between the valve and the neck of the cylinder, and if this date is over, do not accept the cylinder.

10. Restriction on delivery or despatch of cylinders :-

(1) No person shall deliver or despatch any cylinder filled with any compressed gas to any other person in India who is not the holder of a licence to possess such compressed gas cylinders or his authorized agent unless he is

exempted under these rules to possess such compressed gas cylinder without a licence.

(2) The gas cylinders delivered or despatched by a person under sub-rule (1) shall be of the type for which he is licensed and shall not exceed the quantity which the person to whom it is delivered or despat- ched is authorized to possess under these rules.

(3) Nothing in sub-rules (1) and (2) shall apply to the delivery or despatch of gas cylinders to the Defence forces of the Union, port autho- rities or Railway administration.

11. Repairing of seamless gas cylinders during use :-
No person shall repair or cause to repair any leakage in the body of a seamless gas cylinder.

12. Repairing of welded/brazed cylinders :-

(1) Welded or brazed cylinder showing leaks at any plaice other than the welded or brazed seams shall not be repaired and shall be rendered unserviceable.

(2) In the case of cylinders having welded/brazed seam, repairing of minor defects, such as small weld cracks, pin holes, blow holes, under- cuts in welding, leaks at the weld (shown in periodical hydrostatic test) may be allowed provided -

(i) the defects have been removed by grinding, chipping, gou- ging or other approved methods ;

(ii) the repairing is carried out by a certified welder at the premises of a manufacturer of cylinders recognized by the Chief Controller under the supervision of a competent person by -

(a) welding if the original seams were welded ;

(b) brazing, if the original seams were brazed ;

(iii) the cylinder is properly heat-treated after the repairs;

(iv) the welded or brazed seams of the cylinder are radiogra- phed if the cylinder was originally required to be radiographed after its manufacture;

(v) after repairs and heat-treatment, the cylinder is sub- jected to the same pneumatic and hydrostatic test stretch test as was done at the time of manufacture.

(3) Welded or brazed cylinder, before repairing, shall be thorou- ghly cleaned and gas-freed or otherwise prepared for safely carrying out hot work and certified in writing, by a competent person, to have been so prepared. The certificate shall be preserved for a period of three months and produced to the Chief Controller on demand.

(4) No person shall refill any cylinder which has been repaired under sub-rule (2) with any gas unless a full report on the repairs and test carried out on the cylinder, accompanied by the repairer's certificate of testing are furnished to the Chief Controller and his permission is obta- ined for its refilling.

(5) Notwithstanding anything contained in sub-rule (2), no repairs shall be carried out to any dissolved acetylene gas cylinder showing leaks in its weld seam.

13. Prohibition of employment of children and intoxicated person :-
No child under the age of eighteen years and no person who is in a state of intoxication shall be employed in loading or unloading or transport of any compressed gas cylinder or in any premises licensed under these rules.

14. Prohibition of smoking, fires, lights and dangerous substances :-

(1) No person shall smoke and no fires, other than blow pipe flames for repairs, or no articles or substances of flammable nature or liable to spontaneous ignition or to cause or communicate fire or explosion shall be allowed at any time in proximity to a place where any cylinder for flammable gases is being filled, stored or handled.

(2) No person in or near any place where cylinders containing fla- mmable gases are filled, stored or handled shall have in his possession any matches, fuses or other appliances for producing ignition or explosion.

15. General precaution :-

(1) Cylinders together with their valves and other fittings and. the identification colours under these rules shall always be maintained in good condition.

(2) No oil or similar lubricant shall be used on any valves or other fittings of any cylinder.

(3) Save as provided in rule 12 and rule 41, no cylinder shall be sub- jected to any heat treatment or exposed to high temperature or to the sun or stored with any other flammable or explosive material.

(4) Every cylinder containing compressed gas shall have its valve securely closed so as to prevent leakage. Valves fitted to the cylinders containing Liquefied Petroleum Gas and highly toxic gases like Boron trifluoride, Carbon monoxide, Flourine, Hydrogen Chloride, Cynogen Chloride, Chlorine trifluoride, Hydrogen Cynide,Hydrogen Fluoride, Hydrogen Sulphide, Methyl bromide, Nitrogen tetroxide, Chlorine, Ammonia or Sulphur Dioxide shall be provided with security nut on the outlet to act as a secondary means of safeguard against leakage of gas.

(5) If a leak in the valve cannot be recified by tightening the gland nut or the spindle, the cylinder shall be

removed to an open space where it is least dangerous to life and property and the filler shall be informed.

16. Special precautions against :-

(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 gas under pressure in a cylinder is stored, handled or transported.

(2) Every person storing compressed gas cylinders and every person in charge of or engaged in the storage, handling and transport of such gas cylinders, shall at all times -

(a) comply with the provision of these rules and the conditions of any licence relating thereto;

(b) observe all precautions for the prevention of accident by fire or explosion ; and

(c) prevent any person from committing any act referred to in sub-rule (1).

17. Competent person to be incharge of operations :-
Every pe- rson holding or acting under a licence granted under these rules, shall, whenever cylinders are filled, loaded, unloaded, examined or tested, de- pute a competent and experienced person to be present and to conduct any of the said operations in accordance with the provisions of these rules.

18. Handling and use :-

(1) Cylinders shall be adequately supported during handling.

(2) Trolleys and cradles of adequate strength shall, as far as poss- ible, be used when moving the cylinder.

(3) The cylinders shall be handled carefully and not be allowed to fall upon one another or otherwise subjected to any undue shock.

(4) Sliding, dropping or playing with cylinders is prohibited.

(5) Liquefied petroleum gas cylinders and cylinders containing liquefiable gases shall always be kept in an upright position and shall be so placed that they cannot be knocked over.

(6) Cylinders used in horizontal position shall be so secured that they cannot roll.

(7) Open flames, lights, lighting of fires, welding and smoking shall be prohibited in close proximity to any cylinder containing flammable gases except those while in use for welding, cutting or heating.

(8) Working places shall not be classified as storage places for the purpose of licensing.

19. Restrictions on filling :-

(1) Welded cylinders shall not be used for filling any permanent or high pressure liquefiable gas or highly toxic gases like Boron trichloride, Carbonyl Chloride (Phosgene), Chlorine tri- fluoride, Cynogen, Cynogen Chloride, Hydrogen Cynide, [1] [* *]Hydrogen Sulphide

(2) No cylinder which has once been used for storage and transpor- tation of coal gas shall be used for filling with any other gas.

(3) No cylinder shall be filled with any gas that is capable of com- bining chemically so as to endanger its serviceability.

1. The words "Hydrogen Flue ride" omitted by G.S.R. 50 (E) dated 29th January, 1991.

20. Storage of cylinders :-

(1) Cylinders shall be stored in a cool, dry well ventilated place under cover, away from boilers, open flames, steam pipes' or any potential sources of heat and such place of storage shall be easily accessible.

(2) The storage room or shed shall be of fire resistant construction.

(3) Thin wall cylinders such as liquefied petroleum gas cylinders and dissolved gas cylinders shall not be stacked in a horizontal position.

(4) Cylinders containing flammable gases and toxic gases shall be kept separated from each other and from cylinders containing other types of gases by an adequate distance or by a suitable partition wall.

(5) Cylinders shall not be stored under conditions which will cause them to corrode.

(6) Cylinders shall not be stored along with any combustible mate- rial.

(7) Empty cylinders shall be segregated from the filled ones and care shall be taken that all the valves are tightly shut.

21. Electrical installations :-
In premises for filling and storing flammable gases in cylinders all electric meters, distribution boards, switches, fuses, plugs and sockets, electric fixed lamps, portable hand lamps and motors, shall be of flame proof construction conforming to appropriate Indian Standard Specifications or such other specifications as are approved by the Chief Controller and shall be effectively earthed.

22. Purity of gas :-

(1) Compressed gases shall be free from impu- rities which are likely to corrode the metal of the cylinder or form an explosive substance with it or cause the gases to decompose or explode.

(2) The gases shall be as dry as is possible and in no instance shall the aqueous phase separate when a liquefied gas is cooled to 0C.

(3) Before filling any cylinder with gases like carbon monoxide, coal gas, hydrogen or methane, the gas shall be free from hydrogen sul- phide and sulphurous impurities as far as practicable. The moisture shall be less than 0.02 g/m3 of gas at normal temperature and pressure.

23. Cylinder subjected to the action of fire :-

(1) A cylinder ex- posed to fire shall not be used unless it has undergone proper examination and hydrostatic stretch test. If deleterious structural changes in the material due to the action of heat of the fire is apprehended to have taken place, the cylinder shall have to be subjected to proper heat treatment, followed by hydrostatic test or hydrostatic stretch test, as the case may be before the cylinder is taken into use.

(2) Dissolved acetylene cylinders which have been damaged by fire shall be condemned and destroyed with due precautions by an experienced and competent person.

24. Ownership of cylinder :-
A cylinder filled with a compressed gas shall not be transported unless it was charged by or with the consent of the owner of the cylinder.

25. Re-testing of cylinder :-
A cylinder for which prescribed periodical re-test has become due shall not be charged and transported until such re-test has been properly made.

26. Owners record :-
The owner of a cylinder shall keep for the life of each cylinder, a record containing the following information regarding each cylinder, namely:

(i) Cylinder manufacturer's name and the rotation number ;

(ii) the specification number to which the cylinder is manu- factured ;

(iii) date of original hydrostatic test/hydrostatic stretch test;

(iv) cylinder manufacturer's test and inspection certificates;

(v) number and date of letter of approval granted by the Chief Controller.

27. Conversion of cylinders :-
Gas cylinders designed and approved for filling with a particular gas shall not be used for fitting with any other gas unless specific approval is obtained from the Chief Controller.

CHAPTER 3
Importation of Cylinders

28. Licence for import of gas cylinders :-
No person shall import cylinder filled or intended to be filled with any compressed gas except under and in accordance with the conditions of a licence granted under these rules.

29. Declaration by the Master of ship or ships agent :-

(1) The ma- ster of every ship carrying cylinders filled with compressed gas for impor- tation into India, or the agent for such ship, shall give, the Conservator of the Port not less than 48 hours' notice of its intended arrival at the port.

(2) The master of every ship carrying such cylinders shall deliver to the pilot, before entering any port, a written declaration under his signa- ture in Form A: Provided that if the agent for such ship delivers to the Conservator of the Port written declaration referred to in sub-ruled) under his sig- nature, no such declaration shall be made by the master of the ship.

(3) Every declaration delivered to a pilot under 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 befor- warded by him, with all convenient despatch, to the Customs Collector of the Port.

30. Production of licence for import :-
Every person desiring to import cylinders filled with any compressed gas or intended to be so filled shall produce personally or through his agent) before the Customs Collector his licence for the import of such gas cylinders.

31. Permission of the Customs Collector :-

(1) No imported cyli- nder shall be landed except with the permission of the Customs Collector

(2) If the Customs Collector is satisfied that the gas cylinders car lawfully be imported, he shall permit it to be

landed.

(3) Nothing in this rule shall affect the power of the Customs Col- lector to detain the gas cylinders under any othe law for the time being in force.

32. Importation by land :-
No gas cylinder filled with any compre- ssed gas, shall be imported by land save with the previous sanction in each case, of the Central Government and under Such conditions and restrictions as it may impose.

33. Importation by Air :-
No cylinder filled with any compressed gas shall be imported by air save with the previous sanction in each case of the Director General, Civil Aviation.

CHAPTER 4
Transport of Cylinders

34. Transport of Cylinders by vehicles :-

(1) Cylinders filled with any compressed gas shall not be transported by a bicycle or any other two-wheeled mechanically propelled vehicle.

(2) Cylinders shall be so transported as not to project in the horizon- tal plane beyond the side or ends of the vehicle by which they are transported.

(3) There shall not be sharp projections on the inside of the vehicle.

(4) Cylinders shall be adequately secured to prevent their falling of the vehicle and being subjected to rough handling, excessive shocks or local stresses.

(5) Cylinders transported in vehicles shall be blocked or braced and be so secured to prevent movement, striking each other or falling down.

(6) Cylinders filled with any compresed gas shall not be transported along with any other article of a highly flammable or corrosive nature.

35. Restriction on transport :-

(1) Cylinders containing flammable gases shall not be transported along with the cylinders containing any other type of compressed gas. [1] [Provided that such Cylinders containing flammable gases in quan- tity for which no licence for possession is necessary under Cl. (c) of Rule 52 may be transported alongwith Cylinders containing any other type of compressed gas.]

(2) Cylinders containing toxic or corrosive gas shall not be transported along with food-stuffs.

1. Ins. by G.S.R. 504 (E), dated 13th July, 1993 (w.e.f. 13th July, 1993).

36. Loading and unloading for transport :-

(1) No lifting magnet shall be used in loading or unloading of cylinders filled with any com- pressed gas.

(2) When any such operation is carried on by means of a crane or a fork-lift truck, a proper cradle with chains or wire rope slings shall beused.

37. Protection of valves during transport :-

(1) Every cylinder containing compressed gas shall, when transported, have its valve protected against damage in the manner provided in sub-rules (2) and (3) unless it is securely packed in a box or crate.

(2) Where the design of the cylinder does not provide for the valve lying wholly below the level of the body of the cylinder, astout metal cap, metal cover or a protective metal ring or grill of a design approved by the Chief Controller shall be provided, the design being such that the cap or cover or ring or grill is no where in close proximity to any part of the valve or valve body.

(3) Where metal caps or metal covers are provided, to protect valves fitted to cylinders other than those containing highly toxic gases like Hydrogen Cyanide, Phosgene, Cynogen, Cyanogen Chloride, it shall be provided with a vent of such size so as to prevent any gas pressure in- side the cap or covers.

(4) Cylinders containing highly toxic gases like Hydrogen Cynide, Phosgene, Cynogen, Cyanogen Chloride gases, shall have their valves protected with gas-tight metal caps or covers.

(5) Nothing in sub-rules (1), (2) and (3) shall apply to cylinders con- taining oxygen or nitrous oxide for medical purposes having water capacity not exceeding 5 litres.

38. Leaky cylinders :-

(1) No person shall tender or transport any leaky cylinder.

(2) Any cylinder containing a flammable or toxic gas, which deve- lops a leak during transport shall promptly be removed to an isolated open place away from any source of ignition and the person responsible for transportation shall immediately contact the filler or the consignor as the case may be, for necessary advice.

39. Periodicity of examination and testing of cylinders :-

(1) No person shall fill any cylinder with any compressed gas unless the cylinder has been examined and subjected to hydrostatic stretch test, as the case may be, and other tests set forth in this chapter within such period as is specified in the Code issued by Indian Standards Institution or as app- roved in writing by the Chief Controller.

(2) Any testing station desiring to obtain recognition for periodical testing and examination of cylinders shall provide the facilities set forth in Sch. IV.

40. Condition of cylinders for testing :-

Cylinders for testing shall be first emptied of their contents. The cylinder contents shall be released in a safe manner keeping in mind the dangers associated with the nature of the gas in the cylinder. Cylinders which contain or may have been contaminated by, poisonous or obnoxious substances shall be emptied by test stations properly equipped and sufficiently experienced to handle the particular gas.

41. Inspection of cylinders before carrying out hydrostatic/hydro- static stretch test :-

(1) Prior to carrying our hydrostatic/hydrostatic stretch test, every cylinder shall be thoroughly cleaned by steam cleaning or washing out with approved solvents. Where the interior of the cylinder is affected by rust or other foreign matter it shall be cleaned by one of the following methods namely ;

(a) Approved blasting, rotary wire brushing ;

(b) burn out treatment carried out in a furnace at a tempera- ture not exceeding 300C for a period of not exceeding one hour after which all free rusts and any other foreign matter shall be removed by steam cleaning or washing with approved solvents.

(2) The cylinders after cleaning shall be visually examined exter- nally and as far as practicable internally for surface defect in accordance with the Code of Practice issued by the Indian Standards Institution or any other Code approved in writing by the Chief Controller.

42. Hydrostatic/hydrostatic stretch test :-

(1) For cylinders used for permanent gases, high pressure liquefiable gases and all toxic and corrosive gases:

(i) The cylinders shall be subjected to hydrostatic stretch test in accordance with IS : 5844. The test pressure applied to the cyli- nder shall be retained for a period of not less than thirty seconds.

(ii) The permanent stretch by the cylinder due to applica- tion or test pressure shall not exceed the following limits, namely :

(a) In the case of cylinders below 10 per cent. of the 20 litres water capacity for total stretch suf- non - corresive gases. fered during the test.

(b) In other cases. 10 per cent. of the stretch suffered during the test or 1/5000th of the original volume of the cylinder, which- ever is less.

(2) For cylinders for low pressure non-corrosive liquefiable gases :

(i) The cylinder shall be subjected to hydrostatic test in acc- ordance with IS : 5844 by non-jacket method except that the volu- metric changes during the test need not be measured.

(ii) The test pressure shall be retained for a period of not less than thirty seconds. Any reduction in pressure noticed during this retention period of any leakage, visible bulge or deformation shall treated as a case of failure in the test.

(3) As soon as the test is completed, the cylinder shall be thorou- ghly dried internally and shall be clearly stamped on the neck and with marks and figures indicating the person by whom the test has been carried out and the date of test, Code mark of the person by whom the test has been carried out shall be registered with the Chief Controller.

43. Condemning of cylinders :-

(1) Any cylinder which fails to pass periodic examination or test or which loses in its tare weight by over 5 per cent. or which for any other defect is found to be unsafe for use shall be destroyed by flattening it as a whole or after being cut into pieces in such a manner that the pieces cannot again be joined together by welding or otherwise to form a cylinder.

(2) All markings on the cylinder shall be defaced before it is des- troyed.

(3) History sheets of such cylinders shall be closed and kept on record for a period of one year. Reports of the details of such closed history cards shall be sent to the Chief Controller, in writing, on the 1st January, April, July and October every year.

(4) A cylinder which has been used for the generation of any gas or for any purpose other than storage, transportation and use of compressed gas shall be deemed to have been condemned and unsuitable for such use as

a cylinder within the meaning of these rules.

44. Records of test :-
Full record of cylinders examined and tested at any testing station shall be maintained giving the following particulars, namely:

(a) Name of the manufacturer and the owner of the cylinder.

(b) Rotation Number.

(c) The specification to which the cylinder conforms.

(d) Date of original hydrostatic/hydrostatic stretch test.

(e) The reports and certificates furnished by the manufac- turer, if available.

(f) Test pressure.

(g) Maximum working pressure.

(h) Water capacity.

(i) Tare Weight.

(j) Variation, if any, in the tare weight marked on the cyli- nder and actual tare weight.

(k) Condition of cylinder shell.

(l) Name of gas.

(m) Typeofvalvefitted,and

(n) Remarks, if any.

The above particulars shall form the history card for each cylinder and all changes from time to time shall be indicated therein.

CHAPTER 6
Dissolved Acetylene gas cylinders

45. Additional requirements for dissolved acetylene cylinders :-
Dissolved Acetylene gas cylinder shall comply with the following addi- tional provisions, namely:

(i) The porous-substance shall fill as completely as possible the cylinder into which the acetylene is compressed.

(ii) The porosity of the substance shall not exceed 92 per cent and in no case shall be less than 75 per cent.

(iii) Any solvent used shall not be capable of chemical reac- tion with the acetylene gas or with the porous substance or with the metal of the cylinder.

(iv) If acetone is used as a solvent it shall comply with the requirements of IS : 170. The quatity of acetone including the gas in. solution shall be such that the cylinder meets the requirements of of additional tests specified in IS: 7312. The maximum amount of acetone filled in a cylinder shall be proportionate to the porosity of the porous mass and the volume- tric capacity of the cylinders in the following scale:

(v) The valves of the cylinders shall not contain more than 70 per cent. copper in their composition.

(vi) The pressure in the cylinder shall not exceed 16 Kgf/Cm2 at temperature of 15C.

(vii) Every cylinder shall before being filled with porous mass be tested by hydrostatic pressure to a pressure of not less than 60Kgf/Cm2. This pressure may be reduced to 53Kgf/Cm2 if the cylinder is fitted with fusible plug. No cylinder which shows a per- manent stretch in excess of 7-1/2 per cent of the total stretch suff- ered during hydrostatic stretch test shall be allowed.

(viii) The safety relief devices if fitted, shall operate at a pressure of 53 Kgf/Cm2 or at a temperature of 100C + 4C - 20C.

(ix) Every cylinder shall have permanently and conspicuously marked upon it or upon a brass plate soldered to it the name of the manufacturer and the words "Acetylene properly compressed into porous substance" and shall bear the following markings, namely:

(a) serial number and identification of manufacturers;

(b) number of the standard ;

(c) test pressure;

(d) the date of hydrostatic stretch test with code mark of the place where the test was carried out;

(e) date of filling of porous mass;

(f) water capacity;

(g) a symbol to indicate the nature of heat treatment;

(h) identification of porous mass;

(i) tare weight;

(j) inspector's official mark ; and

(k) maximum gas capacity.

46. Restriction on filling of dissolved acetylene cylinders :-
No person shall charge with acetylene any cylinder unless he is in possession of full particulars and the previous history of such cylinder and has otherwise assured himself that the cylinder complies with the require- ments of these rules.

47. Examination of dissolved acetylene cylinders before filling :-
Whenever a cylinder is charged with acetylene, it shall be subjected to a thorough visual examinations, if the history of the cylinder shows that it has not been subjected to such an examination within the previous two years and at the same time the valves will be removed and the conditions of the porous substance at the neck of the cylinder ascertained. This period of periodical examination shall be one year in case the cylinders are filled with loose porous mass.

48. Licence for compression of acetylene :-
The compression of the acetylene gas into a cylinder shall be carried out only on such premises as are licensed by the Chief Controller.

49. Record of dissolved acetylene cylinders :-
Each firm charging acetylene in cylinders shall keep a record of every cylinder charged by it. This record shall give the following information, namely :

(a) the date of each charging of the cylinder,

(b) the dates upon which solvent has been added ;

(c) the dates upon which the cylinder has been thoroughly examined as provided in rule 47, the results of each such examina- tion and the name of the person carrying out such examination, and in the case of cylinders first issued by the firm, the tare weight of the cylinder including porous substance and acetone or other solvent, the nature of the solvent and the maximum pressure allowed in the cylinder.

This record shall be open for inspection of the Chief Controller and the Controller of Explosives.

50. Labelling of dissolved acetylene cylinders :-
A warning label attached to every dissolved acetylene cylinder shall, in addition to the particulars given in sub-rule (2) of rule 9 bear the following additional particulars, namely:

(a) Date of last filling of gas in the cylinder ; and

(b) weight of gas filled.

CHAPTER 7
Filling and Possession

51. Licence for filling and possession :-

(1) No person shall fill any cylinder with compressed gas and no cylinders filled with compressed gas shall be possessed by any one except under and in accordance with the conditions of a licence granted under these rules.

(2) The licensee shall be responsible for all operations connected with the filling and possession of cylinders in the licensed premises.

52. No licence needed for filling and possession in certain cases :-
Notwithstanding anything contained in rule 51, no licence shall be nece- ssary for-

(a) filling a small quantity of compressed gas from one cyli- nder to another for the purpose of any experiment or test of for breathing;

(b) possession of any cylinder filled with a compressed gas by a carrier or other person for the purpose of transport in accordance with the provisions of these rules;

(c) possession of cylinder filled with-

(i) liquefied petroleum gas when the total quantity of gas does not exceed 100 kg. at any one time;

(ii) any other flammable but non-toxic gas when the total number of cylinders containing such gas does not exceed 15 or the total weight of gas does not exceed 125 kg. whichever is less, at any one time;

(iii) any non-flammable non-toxic gas when the total num- ber of such cylinders does not exceed 50 at any one time;

(iv) any toxic gas when the total quantity of such cylinders does not exceed 5 at any one time;

(v) acetylene gas contained in cylinders in dissolved state when the total quantity of such cylinders does not exceed 15 any one time.

53. Restriction on filling :-
No person shall fill any cylinder with any compressed gas unless such a cylinder and its valve or other fitt- ings-

(a) are of approved type and standard as per rule 3 and has been specially approved for filling by the Chief Controller;

(b) have passed the examination and test specified in rule 41 and rule 42 ;

(c) conform to the provisions of rule 4, rule 5,rule 6, rule 7 and rule 8.

54. Working pressure and filling ratios :-

(1) The working or inte- rnal pressure in any cylinder charged with a permanent gas shall not exceed two third of the test pressure.

(2) Cylinders charged with liquefiable gases shall not befilled in excess of the filling ratios specified in IS: 3710 for low pressure liquefi- able gases and IS : 8866 for high pressure liquefiable gases.

55. Prior approval of specification and plans of premises proposed to be licensed :-

(1) Every person desiring to obtain a licence to fill and store any compressed gas in any cylinder shall submit to the Chief Co- ntroller:

(i) specifications and plans drawn to scale in triplicate clearly indicating;

(a) the manner in which the provisions prescribed in these rules will be complied with ;

(b) the premises proposed to be licensed, the area of which shall be distinctly coloured or otherwise marked ;

(c) the surrounding area lying within 100 metres of the edge of all facilities which are proposed to be licensed.

(ii) A scrutiny fee of rupees fifty paid in the manner pres- cribed in rule 72.

(2) If the Chief Controller after scrutiny of the specifications and plans and after making such inquiries as he deems fit, is satisfied that compressed gas will be filled and stored in the premises proposed to be licensed, according to the provisions of these rules, he shall return to the applicant one copy each of all the specifications and plans signed by him conveying his sanction subject to such conditions as he may specify.

56. Grant of licence :-
A licence under these rules may be granted by the Chief Controller on payment of the fees specified in Sch. V.

57. Application for licence :-
A person wishing to obtain or renew a licence under these rules shall submit an application, in writing, to the Chief Controller-

(a) in Form 'B' if the application is in respect of a licence in Form 'D', and

(b) in Form 'C', if the application is in respect of a licence in Form 'E' or Form 'F'.

58. Period for which licences may be granted or renewed :-

(1) A licence in Form 'D' for the import of cylinders filled or intended to be filled with compressed gas may be granted for such period as the Chief Controller may deem necessary subject to a maximum of one year.

(2) A licence in Form 'E', or Form 'F' for filling and storage of compressed gas respectively granted or renewed under these rules shall remain in force till the 31st day of March of the year upto which the licence is granted or renewed subject to a maximum of three years.

(3) Notwithstanding anything contained in sub-rule (2), the Chief Controller, where he is satisfied that a licence is required for a specific work which is not likely to last up to the 31st day of March of the year up to which the licence is granted or renewed may grant or renew a licence for such a period as is necessary.

59. Particulars of licence :-

(1) Every licence granted under these rules shall be subject to the condition specified therein and shall contain all the particulars which are contained in the form specified under these rules.

(2) One copy of the plan or plans for the licensed premises signed in token of approval by the Chief Controller, shall be attached to the licence which shall form part of such a licence, and an identical copy shall be filed for record in the Office of the Chief Controller.

60. Prior approval necessary for alteration in the licensed premises :-

(1) No alteration shall be carried out in the licensed pre- mises until the plan or plans showing such alterations has been approved in writing by the Chief Controller.

(2) A person wishing to carry out any alteration in the licensed premises shall submit to the Chief Controller-

(i) three copies of a properly drawn plan of the licensed pre- mises showing in distinct colour or colours the proposed altera- tions and the reasons therefor ;

(ii) a scrutiny fee of rupees ten paid in the manner prescribed in rule 72.

(3) If the Chief Controller, after scrutiny of the plan showing the proposed alteration and after making such enquiries as he deems fit, is satisfied that the proposed alteration may becarried out, he shall return to the licensee one copy of the plan signed by him and conveying his sanction subject to such condition or conditions as he may specify.

(4) The holder of the licence shall apply to the Chief Controller for the amendment of the licence as soon as the sanctioned alteration has been carried out.

(5) No additions or alterations carried out in the licensed premises sanctioned by the Chief Controller shall be brought into use unless the licence is received by the licensee duly amended.

61. Amendment of licence :-

(1) Any licence granted under these rules may be amended by the Chief Controller.

(2) The fee for amendment of a licence shall be rupees ten plus the amount, if any, by which the fee that would have been payable if the licence had originally been issued in the amended form exceeds the fee originally paid for the licence.

(3) A licensee who desires to have his liceneece amended shall submit to the Chief Controller-

(i) an application duly filled in and signed in Form 'B' if the licence has been granted for the import of compressed gas cyli- nders and in Form 'C' if the licence is granted to fill and store any compressed gas in cylinders;

(ii) the licence sought to be amended together with the app- roved plans attached to it;

(iii) where any alteration in the licensed premises have been carried out, three copies of the properly drawn plans showing the alterations sanctioned under rule 60 by the Chief Controller;

(iv) fees for the amendment of the licence as specified in sub- rule (2).

62. Renewal of licence :-

(1) A licence may be renewed by the Chief Controller.

(2) Every licence granted in Form 'E' and Form 'F' under these rules, may be renewable for three financial years where there has been no contravention of the provisions of the Act or any rules framed there- under or of any condition of the licence so renewed.

(3) Where a licence which has been renewed for more than one year is surrendered before its expiry, the renewed fee paid for the unexpired portion of the licence shall be refunded to the licensee pro- vided that no refund of renewal fee shall be made for any financial year during which the Chief Controller receives the renewed licence for surr- ender.

(4) Every application for the renewal of a licence shall be accom- panied by the licence which is to be renewed together with approved plans attached to the licence, and the renewal fee.

(5) Every application for the renewal of a licence shall be made so as to reach the licensing authority at least thirty days before the date on which it expires and if the application is so made, the licence shall be deemed to be in force until such date as the Chief Controller renews the licence or until an intimation that the renewal of the licence is refused has been communicated to the applicant,

(6) Where the renewal of a licence is refused, the fee paid shall be refunded to the licensee after deducting therefrom the proportionate fee for the period beginning from the date from which the licence was to be renewed upto the date on which renewal thereof is refused.

(7) The same fee shall be charged for the renewal of a licence for each financial year as for the grant thereof : Provided that-

(i) if the application with accompaniments required under sub-rule (4) is not received within the time specified in sub-rule (5), the licence shall be renewed only on payment of a fee amoun- ting to twice the fee ordinarily payable;

(ii) if such an application with accompaniments is received by the Chief Controller after the date of expiry but not later than thirty days from the date of expiry, the licence may, without prejudice to any other action that may be taken in this behalf, be renewed on payment of twice the fee ordinarily payable: Provided further that in the case of an application for the renewal of a licence for a period of more than one financial year at a time, the fee prescribed under the first proviso, if payable, shall be paid only for the first financial year of renewal.

(8) No licence shall be renewed if the application for renewal is received by the Chief Controller after thirty days or the date of its expiry.

63. Refusal of licence :-

(1) The Chief Controller shall, while refusing to grant, amend, renew a licence, record his reasons for such refusal in writing.

(2) A copy of the order containing the reasons for such refusal shall be given to the applicant on-payment of a fee of rupees five paid in the manner prescribed in rule 72.

64. Suspension and cancellation of licence :-

(1) Every licence granted under these rules shall be liable to be suspended or cancelled by an order of the Chief Controller for any contravention of the Actor of any rules framed thereunder or of any condition contained in such li- cence, or by an order of the Central Government if any time the contin- uance of the licence in the hands of the licensee is deemed objectionable, provided that-

(i) before suspending or cancelling a licence under this rule, the holder of the licence shall be given an opportunity of being heard ;

(ii) the maximum period of suspension shall not exceed three

(iii) the suspension of a licence shall not debar the holder of the li- cence from applying for its renewal in accordance with the provi- sions of rule 62.

(2) Notwithstanding anything contained in sub-rule (1) an oppor- tunity of being heard may not be given to the holder of a licence before his licence is suspended or cancelled in cases-

(i) where the licence is suspended by the Chief Controller as an interim measure for violation of any of the provisions of the Act or these rules, or of any condition contained in such licence or in his opinion such violation is likely to cause imminent danger to the public: Provided that where a licence is so suspended, the Chief Cont- roller shall give the holder of the licence an opportunity of being heard before the order of suspension is confirmed ;

(ii) where the licence is suspended or cancelled by the Cen- tral Government, if that Government considers that in the public interest or in the interest of the security of the State such oppor- tunity should not be given.

(3) The Chief Controller or the Central Government suspending or cancelling a licence under sub-rule (1), shall record its reasons for so doing in writing.

65. Procedure on expiration, suspension or cancellation of licence :-
A person licensed to fill or store compressed gas shall, on the expiration, suspension or cancellation of his licence, forthwith give notice to the Chief Controller of the nature and quantity of compressed gas in his possession and shall comply with any directions which the Chief Controller may give in regard to its disposal.

66. Appeal :-

(1) An appeal shall lie with the Central Government against any order passed by the Chief Controller refusing to grant, amend or renew a licence or cancelling or suspending a licence.

(2) Every appeal shall be in writing and shall be accompanied by a copy of the order appealed against and shall be presented within sixty days of the order passed.

67. Procedure on death or disability of licensee :-

(1) If, a licensee dies or becomes insolvent or mentally incapable or is otherwise disabled, the person carrying on the business of such licensee shall not be liable to any penalty of confiscation under the Act or these rules for exercising the powers granted to the licensee during such time as may reasonably be required to allow him to make an application for a new licence in his own name for the unexpired portion of the original licence in res- pect of the year in which the licensee dies or becomes insolvent or men- tally incapable or is otherwise disabled : Provided that nothing in this sub-rule shall be deemed to authorise the exercise of any power under this sub-rule by any person after the expiry of the period of the licence.

(2) A fee of rupees five shall be charged for a new licence for the unexpired portion of the original licence granted to any person app- lying for it under this rule and the fee shall be paid in the manner pres- cribed in rule 72.

68. Loss of licence :-
Where a licence granted under these rules is lost or accidentally destroyed., a duplicate may be granted on submission of a copy of the plan or plans identical with those attached to the licence and on payment of a fee of rupees ten paid in the manner prescribed in rule 72.

69. Production of licence on demand :-

(1) Every person holding or acting under a licence granted under these rules shall produce it, or an authenticated copy of it, at the place to which the licence applies, when called upon to do so by any of the officers specified in rule 77.

(2) Copies of any licence may, for the purposes of this rule be au- thenticated by the authority which granted the licence-

(a) on payment of a fee of rupees five in the manner pres- cribed in rule 72 for each authenticated copy ; and

(b) on the submission of a copy or copies of the plans iden- tical with the approved plan or plans attached to the

licence.

70. Procedure on reports of infringement :-
The District Autho- rity shall inform the Chief Controller of the action taken by him on any reports of infringement of the Act or of these rules which the Chief Con- troller may make to him.

71. Executive control over authorities :-
Every authority, other than the Central Government, acting under this Chapter shall perform its duties subject to the 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.

72. Payment of fee :-
All fees payable under these rules shall be paid through crossed demand draft drawn on any Nationalised Bank in favour of the Accounts Officer, Pay and Accounts Office, Department of Explosives, Nagpur. In case, however, the amount does not exceed Rs. 100 (rupees one hundred) the payment may be made by cash, money order, postal order or cheque drawn on alocal Bank.

CHAPTER 8
CHAPTER VIII

73. Power to exempt :-
If the Chief Controller is satisfied that in respect of any cylinder or class of cylinders-or any mode of conveyance any of the requirements of these rules may be safely suspended or modified he may, by written order, authorise such suspension or modifi- cation for such period and under such condition as he may think fit. Any such order may be revoked at any time.

CHAPTER 9
Accidents and Inquiries

74. Notice of accidents :-

(1) The notice of an accident required to be given under sub-section (1) of Section 8 of the Act shall be given forthwith-

(i) to the Chief Controller by Express telegram (Telegraphic Address-Explosives, Nagpur) followed within 24 hours by a letter giving particulars of the occurrence; and

(ii) to the officer in-charge of the nearest police station by the quickest route.

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(2) Pending the visit of the Chief Controller, or his represen- tative, or until instruction is received from the Chief Controller that he does not wish to make any further investigation or inquiry, all wreckage and debris shall be left untouched except in so far as its removal may be necessary for the rescue of the persons injured and recovery of the bodies of any persons killed by the accident or in the case of railways, for the restoration of through communication.

75. Inquiry into accidents :-

(1) Whenever a District Magistrate, a Commissioner of Police or a Magistrate subordinate to a District Magis- trate (hereinafter in this rule referred to as the Magistrate) holds an inquiry under sub-section (1) of Section 9 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 the Magistrate has received written information from the Chief Controller that he does not wish to send a representative.

(2) The Magistrate shall, at least fourteen days before holding an 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 Magistrate, may before the inquiry is adjourned under sub-ruled) take evidence to identify any bodies and may order the internment thereof.

(4) The Chief Controller or his representative shall be at liberty at any such inquiry to examine any witness.

(5) Where evidence is given at an inquiry of any neglect ashaving caused or contributed to the explosion or accidents or of any defect in or about or in connection with any installation or any vehicle appearing to the Magistrate or Jury to require a remedy and the Chief Controller or the officer nominated by him is not present at the enquiry, the Magis- trate shall send to the Chief Controller notice in writing of the neglect or defect.

76. 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 circums- tances of the accident, 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.

(2) Persons attending as witness before the enquiry Court shall be allowed such expenses as would be allowed to witnesses to attending before a Civil Court subordinate to the High Court having jurisdiction in the place where the inquiry is held and in case of any dispute as to the amount to be allowed, the question shall be referred to the local

Magis- trate, who, on a request made by the enquiry officer, shall ascertain and certify the proper amount of such expenses.

(3) All expenses incurred in or about an inquiry or investigation under this rule shall be deemed to be part of the expenses of the Depart- ment of Explosives in carrying the Indian Explosives Act, 1884 (4 of 1884) into execution.

CHAPTER 10
Powers

77. Dangerous practices :-

(1) If in matter which is not provided for by any express provision of, or condition of a licence granted under these rules, the Controller of Explosives finds any compressed gas-filling station or a storage place, where a cylinder is being filled or possessed, or any part thereof or anything or practice therein or connected therewith or with the handling or transport of compressed gas cylinders, dangerous or defective, so as, in his opinion, to tend to endanger the public safety or the bodily safety of any person, such Controller may by an order in writing require the occupier of such filling station or storage place or the owner of the cylinder to remedy the same within such time as may be specified in the order, and the said occupier shall carry out the orders within the specified time.

(2) Where the occupier or owner objects to an order made under sub-rule (1), he may appeal to the Chief Controller within the time speci- fied in the order for compliance with it, and the order of the Chief Con- troller on such appeal shall be final.

(3) Every appeal preferred under sub-rule (2) shall be in writing and shall be accompanied by a copy of the order appealed against and shall be made within a period of thirty days from the date of the order appealed against.

(4) If the occupier or owner fails to comply with an order made under sub-rule (1) within the time specified in it or, where an appeal is preferred under sub-rule (2), fails to comply with the order of the Chief Controller thereon within the time fixed in such order, he shall be deemed to have commited a breach of this rule.

78. Powers of inspection, search, seizure, detention and removal :-

(1) Any of the officers, specified in the first column of the Table below may exercise the powers specified in sub-section (1) of Section 7 of the Act in the area specified in the corresponding entry in the second column of that table: Section 7 of the Act shall not be exercised by any Magis- trate or Police Officer except under and in accordance with the instruc- tions of the Chief Controller, Deputy Chief Controller, Controller or Deputy Controller or Assistant Controller of Explosives.

(2) Every facility shall be afforded to the officers specified in sub-rule (1) to ascertain that these rules are being duly observed.

SCHEDULE 1
TYPES AND STANDARD OF CYLINDERS AND VALVES

A. Cylinders: 1. Austrian origin.- Seamless Steel cylinders manufactured by Messrs. Jos. Heiser of Austria-inspected and certified by Bureau Veritas conforming to sepcifications BS : 399, BS : 400, BS : l045, Home Office 'S' and 'T', DOT : 3A : 1800 and above, DOT : 3AA : 1800 and above for permanent gases and BS; 401, BS: 1287, BS: 1228, DOT :3/A/DOT: 3AA for liquifiable gases. 2. Czechoslovakian origin.- Seamless Steel cylinders manufac- tured by Messrs. Vitkovicke, Zelezarny Klementa Gottawalda of Czech-oslovakia inspected and certified by Inspekta Praha conforming to speci- fications BS :399 for permanent gases and BS: 401, BS: 1287 for liquefi- able gases and CSN specification with steel conforming to CSN : 13142.6 for permanent high pressure liquefiable gases and with steel conforming to CSN : 11353.1 for low pressure liquefiable gases. 3. Hungarian origin.- Steel cylinders manufactured by Messrs. Csepel Steel and Metal Works, Budapest-inspected and certified by Boiler Commissioner Chief Department of Government Supervision for Energetics and Security of Technical Energy, Budapest conforming to specification MSZ : 2665-53 with Chrome Alloy steel designated as Cr. 135 having 200 mm. nominal diameter with 5 mm. minimum wall thickness for permanent and liquefiable gases. 4. Indian origin--(a) .Welded Steel cylinders manufactured by Shri Ambica Cylinder Manufacturing Co. Ahmedabad,Apeejay Struc- turals Ltd., Rajbandh, District Burdwan (West Bengal), Bharat Pumps and Compressors Ltd., Naini, Allahabad, Gannon Dunkerley and Co., Ltd., Bombay, Hindustan General Industries Limited, Nangloi, Delhi-41, Hyderabad Allwyn Metal Works Limited, Hyderabad, Ideal Engineers Hyderabad Private Limited, Hyderabad, Indian Gas Cylinders, Fari- dabad, Kosan Metal Products Pvt. Ltd., Bombay, Martin Burn Ltd., Cal- cutta-inspected and certified by ISI or any other appropriate authority approved by the Chief Controller, conforming to IS : 3196, IS : 7142, IS : 7681 specifications for low pressure liquefiable gas service. (b) Seamless manganese steel cylinders for permanent and high pressure liquefiable gases conforming to IS : 7285 manufactured by Bharat Pumps and Compressors Ltd., Naini, Allahabad-inspected and certified by ISI. 5. Italian origin.- Steel cylinders manufactured by Messrs. Acc- iaieria E. Tubificio, Di Brescia-inspected and certified by Bureau Var- itas conforming to specification DOT : 3AA : 1800 and above for perma- nent gases and DOT: 3AA for liquefiable gases. 6. Japanese origin.- (a) Steel cylinders manufactured by Me- ssrs. Showa Koatsu Kogyo Co. Ltd,-inspected and certified by Com- pany's own inspector or KHK or Lloyd's or Bureau Veritas confor- ming to specfications BS : 399, BS : 400, BS : 1045, Home Office 'S' and 'T', DOT : 3A: 1800 and above, JIS : B : 8241 : 1968 relating to Manga- nese Steel for permanent gases and BS: 401, BS: 1287, BS: 1288, DOT: 3A/DOT: 3AA, for liquefiable gases. (b) Steel cylinders manufactured by Messrs. Sumikin Kiko Co. Ltd./Sumitomo Metal Industries Ltd., or Nihon Koatsu Yoki-inspected and certified by KHK or Lloyd's or Bureau Veritas conforming to speci- fications BS : 399, BS : 400, BS : 1045, Home Office 'S' and 'T', DOT : 3A : 1800 and above, 31S : B : 8241 : 1968 relating to Manganese Steel for permanent gases and BS; 401, BS: 1287, BS: 1288, DOT : 3A/DOT : 3AA, for liquefiable gases. (c) Steel cylinders manufactured by Messrs. Totskuka High Pre- ssure Gas Cylinder Co. Tokyo, Japan, Kanto Koatsu Yoki Manufacturing Co. Ltd., Japan and Kokai High Pressure Cylinder Co. Ltd., Japan - ins- pected and certified by KHK or Lloyd's, or Bureau Vertitas conforming to specifications DOT : 3A : 1800 and above and DOT : 3AA : 1800 and above for permanent gases and DOT : 3A/DOT : 3AA for liquefiable gases. 7. Polish origin.- -Seemless steel cylinders manufactured by Messrs. Prema Milmet, Poland made to PN-69222, BS : 1045 and BS: 1288 specifications) inspected and certified by Polish Government Inspecting Authority for permanent and liquefiable gases. 8. Russian origin- -Steel cylinders manufactured by approved manufacturers in U. S. S. R. - inspected and certified by appropriate authority conforming to specifications GOST : 949 ; 57 and GOST 949-73 for permanent and liquefiable gases. 9. U.K. origin.- -(a) Steel cylinders manufactured by Messrs. Chesterfield Tube Co. Ltd., of U. K. - inspected and certified by Company's own Inspector or Lloyd's conforming to specification BSS: 399, BS : 400, BS : 1045, Home Office 'S' and for 'I' for permanent gases and BS: 401, BS: 1287, BS: 1288 for liquefiable gases., (b) Aluminium Alloy cylinders manufactured by Messrs. Luxfer Limited-inspected and certified by National Vulcan Engineering Insu- rance Group Ltd, conforming to specifications HOAL-3 as per drawings No. 102017/ZAD/591, 102034/ZAD/583, 152048/ZAD/585, 152068/ ZAD/586 and 176012/ZAD/2083. 10. USA origin- Steel cylinders

manufactured in U. S. A. -ins- pected and certified by appropriate authority, conforming to specifi- cations DOT: 3A/3AA for permanent and liquefiable gases. 11. West German origin.- Steel cylinders manufactured by Mann- esmann of West Germany- inspected and certified by Llyod's or Bureau Veritas conforming to specifications BS : 1045, Home Office 'S' and "I" for permanent gases and BS: 401, BS: 1287, BS : 1288 for liquefi- able gases. 12. Yugoslavian origin.- Steel cylinders manufactured by Slavo- nski Partizan, Slavonski Brod of Yugoslavia-inspected and certified by Yugoslavian State Authority viz. Steam Boiler Inspection Authority or Lloyd's conforming to specifications BS : 1045, for permanent gases and BS: 401, BS: 1287, BS : 1288 for liquefiable gases and DGVO DIN 4664 for permanent and high pressure liquefiable gases. B. Containers : 1. Indian origin- -(a) Chlorine Tonne containers conforming to BS : 1500 : Part I Class I Vessels, manufactured by S/shri Ambica Cyli- nder Manufacturing Co. Ltd., Ahmedabad, Bharat Heavy Plates-Vessels Ltd., Visakhapatnam. Indian Sugar and General Engineering Corpora- tion, Yamunanagar (Haryana),Kaveri Structurals Tiruchirapalli, Larsen and Taubro Ltd., Saki Vihar Road, Bombay, Anup Engineering Co. Ltd., Ahmedabad, inspected and certified by Lloyd's. (b) Tonne containers for low pressure liquefiable gas service con- forming to BS : 1500 : Part I ; Class I vessel, manufactured by M/s Central Indian Machinery Manufacturing Co., inspected and certified by Bureau Veritas. (c) Tonne containers for low pressure liquefiable gas service con- forming to BS : 1515, manufactured by Messrs. Larsen and Taubro Ltd., Saki Vihar Road, Bombay and inspected and certified by Lloyds. 2. Japanese origin.- Chlorine tonne containers conforming to BS : 1500 : manufactured by Showa Koatsu Kogyo Co., Ltd.,-inspected and certified by Company's own Inspector or KHK or Lloyd's or Bureau Veritas. 3. U. K. origin.- Chlorine tonne containers conforming to BS : 1515 : Part I : 1965 manufactured by John Thompson Horseley Bridge Ltd., inspected and certified by the Ocean Accident and Guarantee Cor- poration Ltd. 4. U. S. A. origin- Chlorine tonne containers conforming to DOT : 106A : 500-X manufactured by Columbiana Boiler Co., inspe- cted and certified by appropriate authority in U.S.A. C. Dissolved acetylene gas cylinders: 1. Australian origin- Cylinders manufactured by Messrs. 3os Heiser Vormals J. Winters Sohn. Austria to BS : 401 specification and filled with Coyne 90-92 per cent porous mass- inspected and certified by Bureau Veritas. 2. Japanese origin- Cylinders manufactured by Messrs. Kanto Koatsu Yoki manufacturing Co. Ltd., and Japan Coyne Cylinder Co. to IS: 7312: 1974 filled with monolithic porous mass of 90-92 per cent poro- sity inspected and certified by Bureau Veritas. 3. Indian origin- Cylinders manufactured by Bharat Pumps and Compressors Ltd. to IS: 7312 specification filled with Monolithic porous mass 90-92 per cent. porosity inspected and certified by I.S.I. 4. Italian origin- Cylinders manufacturing by Messrs. Accia- ieria E Tubificia Di Brescia, Italy according to ICC : 8 specification having neck thread conforming to BS : 341- Shell tested at a pressure not less than 900 p.s. i.g. and filled with Silica Sintex porous mass of 90-92 per cent. prosity inspected and certified by Bureau Veritas. 5. U. K. origin.- Cylinders manufactured in U. K. to design No. DA. 759 and specification No. DA2A filled with appropriate porous mass, inspected and certified by British Oxygen Co. Ltd., U.K. 6. U. S. A. origin- Cylinders manufactured by Pressed Steel Tank Company and Coyne International to ICC : 8 specification having neck thread conforming to BS : 341 -shell tested at a pressure notless than 900 p.s.i.g. and filled with Coyne 90-92 per cent monolithic porous mass-inspected and certified by appropriate authority in U. S. A. 7. Yugoslavian origin.- Cylinders manufactured by Slavonski Partizan, Slavonski Brod of Yugoslavia to BS : 401 and filled with Silica Sintex 92 per cent. monolithic porous mass- inspected and certified by Lloyds. d. Valves : Valves conforming to IS : 322^ specification manufactured by the following Approved Manufacturers in India-inspected and certified by I.S.I. or appropriate authority as approved by the Chief Controller.

_____ Cannon Dunkerley and Company Liquefied petroleum gas cylinder Limited, Bombay, valves. Indian Oxygen Limited, Calcutta. Valves for high pressure gas cyli- nders, acetylene a.nd liquefied pe- troleum gas cylinders. Kosan Metal Products Private Ltd. Liquefied petroleum gas,Chlo- Bombay. rine and Refrigerent cylinder valves Martin Burn Limited, Calcutta. Liquefied petroleum gas cylinder valves. Ramnikial Jivanlal Kinariwala and Chlorinp/Ammonia cylinder va- Company, Ahmedabad. lves. Tekno Valves,Calcutta. Chlorine/Ammonia/Freon/Sul- phur Dioxide cylinder valves and fusable plugs for container. Vanaz Engineers Private Limited, Liquefied petroleum gas/Acety- Bombay. lene ammonia/Argon/Butadiene/ Carbon Dioxide/Chlorine/Ethyl Chloride/Ethylene/Ethylene Oxide/Hydrogen/Mafron/Methyl Bromide/Nitrogen/Nitrous/Oxide /Oxygen/Sulphur Dioxide/Fluoro Carbon cylinder valves.

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SCHEDULE 2

SCHEDULE II

[See rule 3(2)] (A) The test and inspection certificates to be obtained from the Inspecting Authority in respect of cylinders manufactured in accordance with the approved design and specification or Code shall include the following particulars, namely: 1. Place and date of inspection. 2. Gas cylinders for ... ...gas. 3. Manufactured by... ... . .. 4. Location at ..... 5. Manufacture for ..... 6. Location for ..... 7. Quantity ..... 8. Serial Nos. from . .... to . .. inclusive. 9. Specification to which the cylinders are manufactured. 10. Size..... mm. outsidediameter mm.....long. 11. Minimum wall thickness. ..... 12. Neck end threading as per..... specification. 13. Process of manufacture (whether spun type, or billet pierced or welded). 14. Method of heat treatment. 15. Design working pressure in kg/cm 2 at 15` C or 65` C as the case may be. 16. Hydrostatic test/hydrostatic stretch test pressure in kg/ cm . . 17. Record of Hydrostatic test/Hydrostatic stretch test with the date of test, in respect of each cylinder. 18. Pneumatic test pressure in kg/crir. 19. Result of pneumatic test. 20. Tare weight and water capacity of each cylinder. 21. Record of chemical analysis and physical properties of the steel used in the manufacture of cylinders. 22. Manufacturer's identification marks. 23. Inspector's mark. 24. Markings stamped on the shoulder of the cylinders. 25. Dated signature with stamp of the inspecting authority. (B) The test and inspection certificates to be obtained from the Inspecting Authority in respect of valves manufactured in accor- dance with the approved design and specification or Code shall include the following particulars namely : 1. Manufactured by- 2. Location at- 3. Manufactured by- 4. Location at - 5. Quantity- 6. Specification- 7. Results of inspection- (a) Valve inlet connection. (b) Valve outlet connection. (c) Valve outlet number. (d) Hydraulic Pressure test. (e) Pneumatic Proof test. (f) Tensile strength. (g) Elongation per cent. (h) Impact strength. (i) Quantity offered for inspection. (j) Quantity passed. (k) Quantity rejected and reasons for rejection. 8. Dated signature with stamp of the inspecting authority.

SCHEDULE 3

SCHEDULE III

[See rule 3(3)] Particulars to be submitted by person desiring to fabricate cylin- ders, valves and other fittings. 1. Applicant's name and full address. 2. Whether the applicant has manufactured any unfired pressure vessel/valve, if yes- (i) Date from which such vessels/valves were manufactured. (ii) For whom the pressure vessels/valves were fabricated their approximate numbers. (iii) Details of the pressure vessels/valves manufactured. 3. Specification/Codes proposed to be adopted for the manufac- ture of pressure vessels/valves. 4. Organizational set up of the applicant with specific reference to qualifications and experience of the personnel engaged in the manu- facture of pressure vessels/valves. 5. Organizational set up of the inspecting personnel engaged by the applicant. 6. Process of manufacture of pressure vessels/valves, begi- nning with raw material and ending with the finished vessels/valves. 7. Quality control checks/tests carried out at each stage of manufacture of pressure vessels/valves. 8. (i) Details of the equipment installed for chemical anal- ysis and mechanical tests. (ii) Details of templates/gauges provided to check/test. (iii) Steps take) to check the accuracy of testing and che- cking equipment and frequency of such checking. 9. Equipment available for carrying out non-destructive examination such as, radiography, Gamaray, ultra-sonic tests, etc. 10. List of machinery provided for manufacturing pressure vessels/valves. 11. Name and address of the independent inspecting authority. 12. Records and certificates of tests: (i) proforma of records for various tests carried out by the inspecting and certifying organisation, and (ii) proforma of test and inspection certificate issued by the independent inspecting authority.

SCHEDULE 4

SCHEDULE IV

[See rule 39(2)] Facilities required for cylinders-testing stations 1. Management : 1.1 GeneraL requirements Personal equipment, inspection procedures, recording and organisation shall be adequate and the test station will be operated to give consignment safe- operating con- ditions. The procedures and testing shall ensure that cylinders which fail to meet the requirements and intent of these rules are not returned into normal service. All personnel shall fully recognise their individual respo- nsibilities and that the

minimum inspectional requirement shall not be lowered for any reason whatsoever. NOTE- The area of responsibility shall be divided into three separate functions as indicated below. The numbers of personnel empl- oyed shall, however, berelated to the quantum of work. 1.2 Manager.-The manager responsible for the working of the test station shall be properly qualified ; his qualifications shall include training on the dangers associated with gas cylinders, purpose of inspec- tion, test methods, equipment, test requirements, and recording of test results, and he shall have appropriate technical qualification in Mecha- nical or Chemical Engineering. He shall also be conversant with the Codes, Specifications and/or Regulations applying to the cylinders for which the test station is approved. 1.3 Supervisor.- The Supervisor shall possess the following qualifications, namely: (i) have. at least two years' experience in the examination of gas cylinder; (ii) be at least 21 years of age; (iii) be conversant with these rules,Codes,Specifications and/or Regulations applying to the cylinders for which the test station is approved. 1.4 Operator.- - Personnel conducting inspections and tests shall have qualifications and experience suitable for the work on which they are engaged. They shall be trained to understand the dangers associated with gas cylinders and the purpose and method of inspection. 2. Equipment.-2.1 Type of equipment. The test station shall have adequate equipment to carry out inspec- tion and testing of cylinders as required under these rules. It shall contain- (i) One set of these rules, Codes, Specifications and/or Regu- lations applying to the cylinders which the test station is autho- rized to test. All these rules, Codes, Specifications and/or Regu- lations shall be maintained with all current amendments. (ii) Hydrostatic test apparatus comprising pressurizing equip- ment, pressure gauge and volumetric measuring equipment in accor- dance with IS : 5844-Hydrostatic stretch testing of compressed gas cylinders. The apparatus shall be equipped with at least two fifteen cm diameter (minimum) working pressure gauges. (ill) Dead-weight pressure gauge tester of appropriate pressure range or a calibrated pressure gauge of fifteen cm minimum dia- meter covering the appropriate pressure range. (iv) Extra-low voltage lamps to permit adequate internal vie- wing of cylinders and other lamps necessary for closed examination of external surfaces. (v) Straightedges, templates, miscellaneous tools and gauges for measurement. (vi) Weighing equipment, where applicable. (vii.) One set of standard test weights for the weighing machine stamped by the relevant statutory authority. (viii) Adequate cylinder handling equipment. (ix) Adequate cylinder draining equipment. (x) Facilities for internal drying of cylinders. (xi) Marking and stamping equipment. 2.2 Accuracy.- The accuracy of equipment shall be as follows: (i) Hydrostatic test apparatus in accordance with IS: 5844. Volumetric equipment shall be capable of measuring a permanent change in volume of the cylinder under test of the order of 1/20000 of its total capacity. (ii) Weighing equipment error not greater than 0.1 per cent. (iii) Working pressure gauge error not greater than I per cent. (iv) Calibrated pressure gauge error not greater than 0.25 per cent. of the full scale deflection. 2.3 Calibration.- Calibration of equipment shall be carried out at periods not exceeding the following- (i) Working pressure gauge- 3 weeks. (ii) Calibrated pressure gauge- 6 months. (iii) Weighing equipment- checked by test weight daily when in service. (iv) Test weights- 2 years. 3. Working conditions- - Working conditions for the test station shall be conducive to accurate and safe inspection and testing of gas cyli- nders. The test station shall comply with the following conditions: (i) It shall have good lighting to permit ready external exami- nation of gas cylinders, preferably including natural lighting. (ii) It shall have adequate ventilation to remove residual gases from cylinders. (iii) It shall provide sufficient space to permit safe working. (iv) It shall be maintained in a clean dry condition. 4. Condition of cylinders for test: - Cylinders forwarded to the test station shall have first been emptied of their contents and then labelled as "empty", prespective of this label all cylinders other than Cylinders at the manufacturers works shall be presumed to contain gas under pressure and the following precautions shall accordingly be observed- (i) The cylinder contents shall be released in a safe manner keeping in mind dangers associated with the nature of the gas in the cylinder. Cylinders which contain or may have been contami- natedby poisonous or ob-noxious substances shall be emptied only by test stations properly equipped and experienced to handle the particular gas. Such cylinders shall be clearly labelled that they have been contaminated. (ii) The valve shall be opened and if no gas escapes and the port is not visibly blocked, a charge of low pressure nitrogen or other in- inert gas shall be blown into the valve outlet. Discharge of gas after removal of the nitrogen supply indicated the cylinder is empty. When no gas discharges the valves shall be treated as "obst- ructed". Where a cylinder has contained poisonous or obnoxious substances, and the valve is suspected of being obstructed, the gas shall be released within an approved appliance and the valves shall be removed in such a manner that the gas escapes without danger to the operator. (ill) Should the valve be obstructed the contents of the cyli- nder shall be released in a safe manner as stated in (i) above. Work on cylinders containing combustible gases shall be carried out in the open air. NOTE -A suitable method of dealing with a valve in which the spindle cannot be removed is a drill a l/16th in (1.6 mm) diameter hole with a hand dril through the valve body to the gas passage below the spindle sea- ting. Alternatively, a fine-tooth hacksaw may be used. Drilling or sawing must be stopped immediately upon the first sign of escaping gas. A continuous jet of water must be directed on to the cutting tools and the operator must wear protective clothing. 5. Inspection and test- The test station shall adopt procedure which fully comply with requirements of these rules.

SCHEDULE 5

SCHEDULE V

[See rule 2(xv) and rule 56]

____ Sl. No. Form Pu

Authority of Li- which granted empowered Fees Rs. cence to grant licence

____ 1 2 3 4 5 6

____ 1 D To import

For the first 100 nos. cylinders troller of Cylinders or part filledw in- Explosives, thereof. 100.00 tended.to Exceeding 100 nos. be filled b exceeding 500 with comp- cylinders. 200.00 ressed gas. Exceeding 500 nos. of cylinders, Rs. 200.00 for every additional 500 nos. of cyl part thereof. 2 E To fill corn- Chief Con- For each type of gas pressed gas trollerof filled in the plant, incylinders. Explosives, namely; (a) non-toxic and non-fi- ammable,(c) non-toxic and flammable/d) di- ssolved acetylene gas (e) non-toxic and fla- mmable liquefied gas oth LPG or (f) liquefied petroleum gas, as the case may be. 500.00 3 F To store corn- Chief Con- (i) For toxic gases pressed gas troller of (pe well as in cylinders. Explosives, liquefied). Exceeding 5 nos. but not exceeding 100 nos. cylinders. 100.00 Exceeding 100 nos. but not ex 500 nos. cylinders. 200.00 Exceeding 500 nos. of cylinders. Rs. 200.00 for every additional 500 nos. of cylinders or part thereof. (ii) For and non-flammable gases (permanent as well as liquefied). Exceeding 50 nos. but not exceeding 500 nos. of cyl- inders. 100.00 Exceedir of cy- linders Rs. 200.00 for every additional 500 nos. of cylinders or part thereof. (iii.) For non-toxic and fl- ammable permanent gases: 15 but not ex- ceeding 200 cylinders. 100.00 Exceeding 200 but not exceeding 500 nos. of cyl- 200.00 inders. Exceeding 500 nos. of cy- Rs. 200.00 for every additional 500 nos. of cylinders of part thereof. (iv) For non-toxic and fl- ammable liquefiable gases : other than LP Exceeding 125 Kg but not exceeding 500 Kg. 100.00 Exceeding 500 Kg. but not exceeding 1000 Kg. 150.00 Exceeding 1000 Kg. but \ \ \ not exceeding 5000 Kg. 200.00 Exceeding 5000 kg. but \ \ \ \ \ \ \ \ \ \ not exceeding 10000 kg. 300.00 Exceeding 10,000 kg. Rs. 200.0 additi- onal 5000 kg. or part the- reof. (v) For liquefied petro- leum gases: Exceeding 100 kg. but not exceeding 500 kg. 100.00 Exceedir n exceeding 1000 kg. 150.00 Exceeding 1000 kg. but not exceeding 5000 kg. 200.00 Exceeding 5000 kg.but not exceeding 10,000 kg. 30 Exceeding 10,000 kg. Rs. 200.00 for every additi- onal 5000 kg. or part the- reof. (vi) For acetylene gas co- ntained in cylinders in di- ss state: Exceeding 15 but not exc- eeding 200 cylinders. 100.00 Exceeding 200 but not ex- ceeding 500 nos. of cylin- 200.00 ders. Exceedi nos. of cyl- inders Rs. 200.00 for every additional 500 nos. of cylinders of part thereof.