

**MINISTRY OF COMMERCE AND INDUSTRY**

**(Department of Industrial Policy and Promotion)**

**NOTIFICATION**

New Delhi, the 22nd November, 2016

**GSR. 1081(E).**— Whereas a draft of the Gas Cylinder Rules, 2015 was published as required by Section 18 of the Explosives Act, 1884 (4 of 1884) in the Gazette of India, Extraordinary, Part II, Section 3, Sub-Section (i) dated the 13<sup>th</sup> October, 2015, vide notification of the Government of India in the Ministry of Commerce and Industry (Department of Industrial Policy and Promotion) number GSR 779 (E), dated 13<sup>th</sup> October, 2015 inviting objections and suggestions

from all persons likely to be affected thereby, before the expiry of a period of forty-five days from the date on which the copies of the Gazette of India containing the said notification are made available to the public;

And whereas, the copies of the Gazette were made available to the public on the same day;

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

Now, therefore, in exercise of the powers conferred by sections 5 and 7 of the Explosives Act, 1884 (4 of 1884) and in supersession of the Gas Cylinders Rules, 2004, except as respects things done or omitted to be done before such supersession, the Central Government hereby makes the following rules, namely:-

## CHAPTER-I PRELIMINARY

**1. Short title and commencement.**(1) These rules may be called the Gas Cylinders Rules, 2016.

(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 Explosives Act, 1884 (4 of 1884);
- (ii) "Auto LPG" means liquefied petroleum gas meant for automotive fuel conforming to specification IS:14861;
- (iii) "Chief Controller" means the Chief Controller of Explosives;
- (iv) "composite cylinder" means a cylinder made of resin impregnated continuous filament wound over a metallic or a non-metallic liner. Composite cylinders using non-metallic liners are referred to as all composite cylinders;
- (v) "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/cm<sup>2</sup> abs (1.5 kgf/ cm<sup>2</sup> gauge) at +15° C or a pressure exceeding 3kgf/ cm<sup>2</sup> abs (2 kgf/ cm<sup>2</sup> gauge) at + 50° C or both including cryogenic liquids;

Explanation.— For the purposes of this clause Hydrogen Fluoride falls within the scope of compressed gas although its vapour pressure at 50° C is 1.7 to 1.8 atmosphere gauge;

- (vi) "Conservator" in relation to a port includes any person acting under the authority of the officer or body of person appointed to be Conservator of that port under section 7 of the Indian Ports Act, 1908 (15 of 1908);
- (vii) "Controller" includes the Joint Chief Controller of Explosives, the Deputy Chief Controller of Explosives, the Controller of Explosives and the Deputy Controller of Explosives;
- (viii) "Compressed Bio Gas (CBG)" means the mixture of hydrocarbon gases and vapours consisting mainly of Methane in gaseous form, which has been produced by the decomposition of animal and plant waste, purified and compressed for use as an automotive fuel and industrial application;
- (ix) "Compressed Natural Gas (CNG)" means mixtures of hydrocarbon gases and vapours, consisting mainly of Methane or suitable mixture of Hydrogen and Methane in gaseous form, which has been compressed for use as automotive fuel and industrial application and includes Compressed Bio Gas;
- (x) "Composite CNG dispensing unit" means an integrated unit comprising of CNG storage cascade, CNG compressor and CNG dispensing unit integrally attached with each other and installed inside an enclosure box;
- (xi) "CNG mother station" means CNG facilities connected with natural gas pipeline and having a compressor meant primarily to fill mobile cascade of daughter station and includes stationery cascade for CNG dispensing to vehicles;
- (xii) "CNG online station" means CNG facilities connected with natural gas pipeline and having a compressor primarily to fill stationary cascades for dispensing CNG to vehicles;
- (xiii) "CNG daughter station" means CNG facilities not connected to natural gas pipeline and receives CNG through mobile cascade;
- (xiv) "CNG daughter booster station" means CNG facilities not connected to natural gas pipeline and such CNG dispensing stations where mobile or stationary cascades are connected to the booster compressor for increase in discharge pressure for refueling of the vehicles;
- (xv) "Critical temperature" means the temperature above which gas cannot be liquefied by the application of pressure alone;

- (xvi) "cryogenic container " means a double walled insulated closed metal container having volume exceeding 500 ml but not exceeding 1000 liters intended for filling, storage and transport of cryogenic liquid fabricated as per codes approved by the Chief Controller;
- (xvii) "cryogenic liquid" means liquid form of permanent gas having normal boiling point below minus 150 ° C;
- (xviii) "cylinder testing station" means facilities and infrastructure for periodical testing and examination of cylinder;
- (xix) "dissolved acetylene cylinder" means a cylinder having a valve and with or without safety devices, containing porous mass, a solvent for the storage of dissolved acetylene and at least sufficient quantity of acetylene to saturate acetone as solvent at atmospheric pressure and at a temperature of +15° C;
- Explanation.- For the purpose of this clause, acetone or any other solvent used shall not be capable of chemical reaction with the acetylene gas or with the porous mass or with the metal of the cylinder or valve;
- (xx) "dissolved gas" means a gas which is dissolved under pressure in a fluid solvent appropriate to the particular gas;
- (xxi) "district authority" means-
- (a) a Commissioner of Police or Deputy Commissioner of Police in any town having a Commissioner of Police; and
- (b) in any other place, the District Magistrate;
- (xxii) "District Magistrate" includes an Additional District Magistrate, and in the States of Punjab and Haryana and in the Karaikal, Mahe and Yanam areas of the Union territory of Pondicherry, also includes a Sub-Divisional Magistrate;
- (xxiii) "fee" means the fee specified in Schedule V;
- (xxiv) "filling pressure" means the maximum permissible gauge pressure, converted to + 15° C, at which a gas cylinder for permanent gas or gas dissolved under pressure can be filled;
- (xxv) "filling ratio" means the ratio of the weight of a liquefiable gas introduced in the cylinder to the weight of the water that the cylinders will hold at 15° C;
- (xxvi) "flammable gas" means any gas which, if either a mixture of 13 percent or less (by volume) with air forms a flammable mixture or the flammability range with air is greater than 12 percent regardless of the lower limit and these limits shall be determined at atmospheric temperature and pressure;
- Explanation.- For the purpose of this clause: "flammability range" means the difference between the minimum and maximum percentages by volume of the gas in mixture with air that forms a flammable mixture;*
- (xxvii) "Form" means a Form set forth in Schedule V;
- (xxiii) "gas cylinder" or "cylinder" means any closed metal container having a volume exceeding 500 ml but not exceeding 1000 liters intended for the storage and transport of compressed gas, including any liquefied petroleum gas (LPG) container or compressed natural gas (CNG) cylinder fitted to a motor vehicle as its fuel tank but not including any other such container fitted to a special transport or under-carriage and includes a composite cylinder and cryogenic container, however, the water capacity of cylinder used for storage of CNG, nitrogen, compressed air, etc., may exceed 1000 liters up to 3000 liters provided the diameter of such cylinder does not exceed 60 cm;
- (xxix) "gas cylinders cascade " means a battery of cylinders connected with each other, a tube trailer, multiple element gas containers and bundle of cylinders, conforming to the specifications BS EN-13769, BS EN-13807, ISO-10961 or any other specification accepted by the Chief Controller;
- (xxx) "high pressure liquefiable gas" means a liquefiable gas having a critical temperature between - 10° C and + 70° C;
- (xxxi) "hot repair or reconditioning of the LPG cylinders or other welded cylinders "means repair or replacement of valve protection ring, foot ring , other protective fittings and removal of permissible dents of LPG cylinders or other welded cylinder followed by heat treatment as per the standards or codes accepted by the Chief Controller;
- (xxxii) "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;

- (xxxiii) "hydrostatic test" means the test to which a cylinder is subjected to a hydrostatic pressure equal to the test pressure of the cylinder;
- (xxxiv) "import" means bringing into India by land, sea or air;
- (xxxv) "inert gas" means a gas which is resistant to chemical action under normally encountered conditions;
- (xxxvi) "inspecting authority" means a person having qualifications and experience in the field of design, manufacture and testing of gas cylinders, valves and LPG regulators and recognised by the Chief Controller as authority for inspection and certification of gas cylinder, valves and LPG regulators.;
- (xxxvii) "installation" means premises wherein a place has been specially prepared for the manufacture or filling or storage of compressed gas cylinders;
- (xxxviii) "liquefiable gas" means a gas that may be liquefied by pressure at  $-10^{\circ}\text{C}$  but will be completely vaporised when in equilibrium with normal atmospheric pressure (760 mm. Hg) at  $17.5^{\circ}\text{C}$  which value shall be increased to  $30^{\circ}\text{C}$  for toxic gases;
- (xxxix) "liquefied petroleum gas" means any material, which comprises predominantly of any of the following hydrocarbons or mixture of them with vapour pressure not exceeding 16.87 kg/cm<sup>2</sup> (gauge) at  $65^{\circ}\text{C}$ ; Propane ( $\text{C}_3\text{H}_8$ ), propylene ( $\text{C}_3\text{H}_6$ ), butane ( $\text{C}_4\text{H}_{10}$ ), (n-butane and iso-butane) and butylene ( $\text{C}_4\text{H}_8$ );
- (xl) "low pressure liquefiable gas" means a liquefiable gas having critical temperature higher than  $+70^{\circ}\text{C}$ ;
- (xli) "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;
- (xlii) "oxidising gas" means a gas which gives up oxygen readily or removes hydrogen from a compound or attracts negative electrons;
- (xliii) "permanent gas" means a gas whose critical temperature is below  $-10^{\circ}\text{C}$  that is to say a gas which cannot be liquefied under any pressure at a temperature above  $-10^{\circ}\text{C}$ ;
- (xliv) "pneumatic test" means the test to which a gas cylinder is subjected to a pneumatic pressure equal to the pneumatic test pressure or working pressure, as specified in the manufacturing code;
- (xlv) "poisonous or toxic gas" means a gas which has a maximum allowable concentration in air for human respiration not exceeding 100 mg/m<sup>3</sup> at  $15^{\circ}\text{C}$  and 1 kgf/cm<sup>2</sup> absolute pressure;
- (xlvi) "porous mass" means single or multi-component substance introduced into, or formed in the cylinder shell, in order to fill it and due to its porosity allow the absorption of the solvent and the acetylene gas conforming to EN 13807 : 2003 - B.2.7;
- (xlvii) "Schedule" means the Schedule annexed to these rules;
- (xlviii) "tare weight" in relation to
- acetylene cylinder, means the weight of the cylinder together with any fittings, permanently attached and includes the weight of valve any safety device, porous mass, requisite quantity of solvent for dissolving acetylene, and the weight of acetylene gas saturating the solvent at atmospheric pressure and temperature of  $15^{\circ}\text{C}$ ;
  - liquefiable gas cylinder, means the weight of the cylinder together with any fittings permanently attached thereto and includes the weight of valve;
  - permanent gas cylinder, means the weight of the cylinder together with any fittings permanently attached thereto and excludes the weight of valve;
  - cryogenic container, means the weight of the container together with any fittings permanently attached thereto along with the weight of insulating material including the weight of the valves;
- (xlix) "test pressure" means the internal pressure required for the hydrostatic test or hydrostatic stretch test or pneumatic test of the cylinder as specified in the cylinder manufacturing codes;
- "transport" means the moving of a cylinder filled with any compressed gas from one place to another;
  - "water capacity" means the volume of water in litres, a cylinder will hold at  $15^{\circ}\text{C}$ ;
  - "working pressure for low pressure liquefiable gas" means the saturated vapour pressure at  $65^{\circ}\text{C}$  ;  
Explanation - For the purposes of this clause, it is clarified that the values of saturated vapour pressure of different gases are specified in IS: 3710;
- (liii) "working pressure for permanent gas" means the internal pressure of the gas in the cylinder at a temperature of  $15^{\circ}\text{C}$ ;
- (liv) "yield strength" means the stress corresponding to a permanent strain of 0.2 percent of the original gauge length in a tensile test.

**CHAPTER II**  
**GENERAL PROVISIONS**

**3. Filling, possession, import and transport of cylinder.-** (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 such gas unless-

- (a) such cylinder and its valve have been constructed to a type and standard specified in Schedule I as amended from time to time by an order issued by 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 obtained.

(2) For obtaining approval under clause (b) of sub-rule (1), the following particulars shall be submitted to the Chief Controller, namely:-

- (i) total number and serial numbers of the cylinders;
  - (ii) name and address of the manufacturer of the cylinders;
  - (iii) specification of the cylinder and the valve;
  - (iv) previous approval, if any;
  - (v) the test and inspection certificates in respect of the cylinders;
  - (vi) the test and inspection certificate pertaining to the valves fitted or to be fitted to the cylinder;
  - (vii) a scrutiny fee as per Schedule V.
- (3) (a) The test and inspection certificate required to be obtained from the inspecting authority in respect of cylinder and valve inspected and certified by it in accordance with the approved design and specification or code shall contain the information specified in Schedule II.
- (b) The Chief Controller may grant approval after making such inquiry, if any, as he may consider necessary, shall accord necessary permission for production of proto type;
- (c) The physical evaluation of the manufacturer such as, inspection, testing, quality control facilities and witnessing the type testing of the prototype may be carried out by technical officers nominated by the Chief Controller along with inspecting authority to assess the capability of the firm to undertake the manufacture of the product by a technical team which shall submit an inspection report along with its recommendations to the Chief Controller.
- (d) The Chief Controller on receipt of satisfactory compliance of the requirements specified in clauses (a) and (b) and after examining all the aspects of the inspection report, and making such inquiry, if any, as he may consider necessary, shall, subject to the other provisions of the Act and these rules, by an order in writing either grant the approval to the manufacturer initially for a period of one year which may further be extended after receipt of satisfactory performance report or refuse to grant the same.
- (e) In case of foreign manufacturers seeking approval, additional fees shall be paid as per Schedule V for physical evaluation of the unit:
- Provided that if the Chief Controller grants approval without conducting the inspection, he shall issue provisional permission pending physical evaluation to the manufactured cylinders or valves for a period which may require for conducting physical evaluation of the manufacturing facilities as stipulated in clauses (b) and re-evaluation of the foreign manufacturer's unit shall be carried out once in a period of every five years.
- (f) While granting approval to a foreign manufacturer, his proven track record, manufacturing experience of ten years and widely distributed market share shall be considered before following the procedure laid down in sub-rule (3) (a) to (e) .
- (g) Scrutiny fee to seek subsequent approval for any change in respect of design drawing shall be paid as specified in Schedule V.
- (4) (a) Any person desiring to manufacture cylinders, valves, LPG regulators attached to self-closing valves, multi-function valves and other fittings shall obtain approval from the Chief Controller and in order to seek such approval, submit the particulars set forth in Schedule III and a scrutiny fees as Per Schedule V together with design drawings and calculations duly endorsed by inspecting Authority.

(b) Scrutiny fee to seek subsequent approval for any change in respect of design drawing shall be paid as specified in Schedule V.

(5) Notwithstanding anything contained in sub-rule (1), cylinders of specifications as amended from time to time not conforming to the specifications specified in Schedule I, 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, namely:-

- (a) the cylinder has passed the hydrostatic test or hydrostatic stretch test, as the case may be, within the period specified in these rules and the pressure applied during the test shall be the test pressure 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 for low pressure liquefiable gases and IS:15975 for high pressure liquefiable gases;
  - (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 maintained at the filling station;
- (d) the filled cylinders are removed from the filling station and shipped off as expeditiously as possible.

**4. Valve.-** (1) Valve fitted to gas cylinder shall comply in all respects with the following specifications, namely:-

- i. in respect of industrial gas cylinder and CNG on-board cylinder, IS:3224;
- ii. in respect of medical gas cylinder, IS:3745;
- iii. in respect of cylinder used with breathing apparatus, IS:7302 as amended from time to time;
- iv. in respect of cylinder used for filling liquefied petroleum gas, IS:8776 for cylinder of water capacity not exceeding five liters and, IS: 8737 for cylinder of water capacity exceeding five liters;
- v. in respect of auto LPG container IS:15100;
- vi. in respect of small refrigerant cylinder IS:12300
- vii. in respect of LPG regulators fitted to LPG cylinder, IS :9798 .
- viii. in respect of the valve fitted to the cryogenic container-Codes accepted by the Chief Controller.
- ix. in respect of valve conforming to other standard as approved by the Chief Controller:

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 and LPG regulators not conforming to the specifications.

(2) Valve fitted to Carbon Dioxide cylinder shall be provided in the body with a safety release consisting of softened copper disc so arranged as to burst at a pressure between 200 kg/cm<sup>2</sup> and 220 kg/cm<sup>2</sup>.

(3) Valve for cylinder 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 valve 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 valve shall be such that when fitted to the cylinder, it shall not be possible to withdraw the spindle under normal operating conditions.

**5. Safety relief devices -** (1) The 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) The cylinders containing obnoxious or poisonous gases shall not be provided with any safety device.

*Explanation.-For the purposes of this sub-rule, "obnoxious or poisonous gases" include Carbon monoxide, Hydro-cynic acid, Hydrogen chloride, Hydrogen bromide, Hydrogen fluoride, Sulphur dioxide, Chlorine, Methyl bromide, Nitrogen tetra oxide, Nitrosyl chloride, Town gas, Hydrogen sulphide, Carbonyl chloride (Phosgene), Cyanogen, Cyanogen chloride, Fluorine and Carbon oxychloride.*

(3) The cylinders manufactured in foreign countries, approved for use in this country, if fitted with safety relief devices shall have these devices fully maintained in accordance with the requirements of the specification to which they were originally made.

**6. Markings on cylinders.-** (1) The markings on cylinder shall be as follows:-

- (a) Every cylinder shall be clearly and permanently marked in accordance with following conditions by stamping, engraving or similar processes, namely:-
- (i) on the shoulder of the cylinder which shall be reinforced by forging or other means; or
  - (ii) on such a part which is inseparably bound with the cylinder and which is not or only negligibly effected by the stresses due to the gas pressure within it;
- (b) the name plate shall not be affixed to the cylinder by soldering if there is a risk of corrosion or embitterment;
- (c) in conjunction with the original marking, space shall be provided for stamping the test date obtained at the periodic inspection;
- (d) markings shall be so carried out and the letters and numerals used shall be of such shape and size that the marking is clear and easily readable and does not give place for misreading.

## (2) The marking on permanent and liquefiable gas cylinder shall be as follows:-

## (a) Every cylinder shall be marked with the following markings, namely:-

- (i) Manufacturer's, owner's and inspector's marking and rotation 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 stretch test, as the case may be, with the code mark of recognised testing station where the test was carried out and the code mark shall be registered with the Chief Controller and in the case of liquefied petroleum gas cylinders, the quarter and the year of test shall be given as an additional marking in a neck or on a shoulder plate;
  - (v) working pressure and test pressure;
  - (vi) tare weight.
- Explanation. – For the purposes of this sub-clause, in the case of liquefiable gas cylinder, tare weight shall include the weight of valve fitted to the cylinder.
- (vii) water capacity;
  - (viii) marking "H" for Hydrogen and embrittling gases;
  - (ix) marking of expiry date on CNG On-board cylinders, other CNG cylinders, and auto LPG containers.

(b) All the markings, except the manufacture's markings, which may be on the base, shall be stamped on the neck end of the cylinder: seamless cylinders having no foot ring or skirt shall be stamped with the manufacturer's marking on the neck end of the cylinder.

**7. Markings on valve.-** The valve fitted to the cylinder shall be clearly and durably marked in accordance with the following provisions by stamping, engraving or similar processes, namely:-

- i. the specification of the valve;
- ii. year and month or quarter of manufacture
- iii. manufacturer's symbol;
- iv. working pressure;
- v. the name or chemical symbol of the gas for which the valve is to be used;
- vi. the type of screw threads on the outlet, in case of left handed as (L.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 and the total length in millimeter 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 dispatched, shall ensure that the cylinder is painted with appropriate identification colours specified in IS:4379 for industrial cylinders, IS:15683 or IS:2878 for fire extinguishers and IS:3933 for medical cylinders.

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

Name of the gas contained in the cylinder	Colour of the cylinder shell	Colour of band at neck end of cylinder
Non-flammable and non-toxic	White	
Non-flammable but toxic	White	Yellow (IS 5 shade No.356).
Flammable but non-toxic including other than the LPG	White	Red (IS 5 Shade No.537)
Flammable and toxic	White	Red and Yellow (IS 5 shade Nos.537 and 356)
Gas mixture (not covered in IS:4379 or IS:3933)	Major gas colour	Minor gas colour with and width approximately 1/5 <sup>th</sup> of the cylinder length
Fire Extinguishers	Red	Red (IS:5 shades 536 and 538)

Note:- The cylinders intended for gas mixtures shall be marked with the words "Gas Mixture ' or "Mixed Gas" and 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 particular 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 prohibit the re-painting of a cylinder with the identification color 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. **Labeling of cylinders.**— (1) Every cylinder shall be labeled with the name of the gas and the name and address of the person by whom the cylinder was filled with gas.

(2) Every cylinder intended to be exported shall be labeled with the name of the gas as per HAZCHEM UN NO. in line with ISO : 7225.

(3) A warning in the following terms shall be attached to every cylinder containing permanent or liquefiable gas, namely: -

**"WARNING"**

**Gas Cylinders, Rules, 2016**

- (i) Do not change the colour of this cylinder.
- (ii) This cylinder shall not be filled with any gas other than the one it now contains.
- (iii) No flammable material should be stored in the close vicinity of this cylinder or in the same room in which it is kept.
- (iv) No oil or similar lubricant shall 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 for filling.

10. **Restriction on delivery or dispatch of cylinder.**— (1) No person shall deliver or dispatch any cylinder filled with any compressed gas to any other person in India who is not the holder of a licence to possess such gas cylinder or to his authorised agent unless he is exempted under these rules to possess compressed gas cylinder without a licence.

(2) The gas cylinder delivered or dispatched 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 dispatched is authorised to possess under these rules.

(3) Nothing in sub-rules(1) and (2) shall apply to the delivery or dispatch of gas cylinder to the defence forces of the Union, port authorities or railway administration and other paramilitary forces:

Provided that this sub-rule shall not be applicable for co-operative societies run by the welfare associations of these organisations.



- 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 cylinders.
- 12. Repairing of welded or brazed cylinders.-** (1) Welded or brazed cylinder showing leaks at any place other than the welded or brazed seams shall not be repaired and shall be rendered unserviceable.
- (2) In the case of cylinders having welded or brazed seam, repairing of minor defects such as dents, damages of foot rings, valve protection rings and other protective fittings may be allowed provided
- the defects have been removed by grinding, chipping, gouging or other approved methods;
  - the repairing is carried out by a certified welder at the premises of a manufacturer of cylinders or premises approved by the Chief Controller under supervision of a qualified and experienced person;
  - the cylinder is properly heat-treated after the repairs ;
  - the welded or brazed seams of the cylinder are radio graphed if the cylinder was originally required to be radio graphed after its manufacture;
  - after repairs and heat-treatment, the cylinder is subjected to the same pneumatic and hydrostatic test or hydrostatic stretch test as was done at the time of manufacture.
- (3) Welded or brazed cylinder, before repairing, shall be thoroughly cleaned and gas-freed or otherwise prepared for safely carrying out hot work and certified in writing, by an employed person of the company having experience in the relevant field, to have been so prepared and 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 obtained 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.
- (6) Scrutiny fee as prescribed in Schedule -V.
- 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-charge of loading or unloading or transport of any compressed gas cylinder or in any premises licensed under these rules.
- 14. Prohibition of smoking, fire, light and dangerous substances: -** (1) No person shall smoke and no fire, other than blow pipe flame for repairs, or no articles or such other 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 flammable gases are filled, stored or handled shall have in his possession matches, fuses, mobile phone or any other appliance for producing ignition or explosion.
- 15. General precautions. -** (1) The cylinder together with its valve and other fittings and the 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.
- Save as provided in rule 12 and clause B2(1)(b) of Schedule IV, no cylinder shall be subjected to any heat treatment or exposed to a high temperature or to the Sun or stored with any other flammable or explosive material.
  - 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, Fluorine, Hydrogen Chloride, Cyanogen Chloride, Chlorine Trifluoride, Hydrogen Cyanide, Hydrogen Fluoride, Hydrogen Sulphide, Methyl Bromide, Nitrogen Tetroxide, Chlorine, Ammonia or Sulphur dioxide shall be provided with security plug on the outlet to act as a secondary means of safeguard against leakage of gas.
  - If a leak in the valve cannot be rectified 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 and in the case of LPG cylinder, the safety cap shall be fixed to arrest the leak and the cylinder shall be moved to an open space.
  - Proper neutralisation or scrubbing system shall be provided in the cylinder filling and storage area for toxic and corrosive gases.

(7) Adequate emergency handling equipments or kits and protective equipments like hand gloves, gas masks, breathing apparatus, goggles, gum boots shall be provided in the toxic, corrosive and flammable gas storage shed.

(8) An efficient alarm with operating switch in the premises shall be provided in toxic and corrosive gas storage area so that in the case of emergency, the alarm can be heard in the control room by operating the switch in the premises.

**16. Special precautions against accidents.-** (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 cylinders are 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 provisions of these rules and the conditions of any licence relating thereto;
- (b) observe all precautions for the prevention of accident by fire or explosion;
- (c) prevent any person from committing any acts referred to in sub-rule (1).

**17. Competent person to be in charge of operations.-** Every person holding or acting under a licence granted under these rules, shall, whenever cylinders are filled, loaded, unloaded, examined or tested, depute a competent and experienced person to be present and to conduct any of the said operations in accordance with provisions of these rules and the name, qualification and experience of such personnel deputed in each shift shall be furnished to the Chief Controller or Controller for considering filling permission round the clock.

**18. Handling and use. -** (1) The cylinder shall be adequately supported during handling.

(2) Conveyors, trolleys and cradles of adequate strength shall, as far as possible, be used when moving the cylinders and care shall be taken to avoid any damage to the cylinder valve.

(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 cylinder 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) The cylinders used in horizontal position shall be so secured that they cannot roll.

(7) Open flames, lights, mobile phones, 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. Restriction on filling. -** (1) Welded cylinders shall not be used for filling any permanent or high pressure liquefiable gas like Boron trifluoride, Carbonyl chloride (Phosgene), Chlorine trifluoride, Cyanogen, Cyanogen chloride, Hydrogen cyanide, Hydrogen sulphide:

(2) For export, compressed gases may be filled at lower pressure subject to the provisions of International Maritime Dangerous Goods Code (IMDG Code) or Agreement concerning to the International Carriage of Dangerous Goods by Road (ADR) and with prior approval of the Chief Controller.

(3) No cylinder which has once been used for storage and transportation of coal gas, carbon monoxide, Compressed Bio Gas, Hydrogen, CNG, Coal Bed Methane and methane shall be used for filling with any other gas except mixture of these gases with inert gases.

(4) No cylinder shall be filled with any gas that is capable of combining chemically which may endanger its serviceability.

**20. Loading, unloading and transport of cylinders or cascade.-** The cylinders or cascade filled with any compressed gas shall be transported after duly complying the provisions laid down in Schedule VI and also observing the relevant provisions of other statutes, as applicable.

**21. Storage of cylinders.-** (1) The 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 cylinder such as liquefied petroleum gas cylinder and dissolved gas cylinder shall not be stacked in a horizontal position.

- (4) The 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) The cylinders shall not be stored under conditions, which will cause them to corrode.
- (6) The cylinders shall not be stored along with any combustible material.
- (7) Empty cylinders shall be segregated from the filled one and care shall be taken that all the valves are tightly shut.

**22. Electrical installations.-**In premises for filling and storing flammable gases in cylinder all electric meters, distribution boards, switches, fuses, plugs and sockets, all electric fittings, fixed lamps, portable hand lamps and motors, shall be of flame proof construction conforming to IS or IEC-60079-1, IS or IEC-60079-11 or any other standard as approved by the Chief Controller and shall be effectively earthed.

**23. Purity of gas.-** (1) The compressed gases shall be free from impurities, 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 possible and in no instance shall the aqueous phase separate when a liquefied gas is cooled to 0° C.

(3) Before filling any cylinder with gases like carbon monoxide, coal gas, hydrogen or methane, the gas shall be free from hydrogen sulphide and other sulphurous impurities as far as practicable and the moisture shall be less than 0.02 g/m<sup>3</sup> of gas at normal temperature and pressure.

(4) The purity of gas shall conform to the relevant Indian Standard accepted by Chief Controller.

**24. Cylinder subjected to the action of fire.-** (1) (a) A cylinder exposed to fire shall not be used unless it has undergone proper examination and hydrostatic or hydrostatic stretch test.

(b) If deleterious structural changes in the material due to the action of heat of the fire are 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 cylinder, which have been damaged by fire shall be condemned and destroyed by a person conversant with hazards involved in handling of dissolved acetylene cylinder and also capable of handling a situation arising out of accidental explosion of cylinder during condemnation.

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

**26. 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 carried out as per the codes accepted by Chief Controller.

**27. Owner's record.-** The owner of a cylinder shall keep record for the life of each cylinder, 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 manufactured;
- (iii) date of original hydrostatic test or hydrostatic stretch test or pneumatic test;
- (iv) cylinder manufacturer's test and inspection certificate;
- (v) number and date of letter of approval granted by the Chief Controller.

**28. Conversion of cylinders-** (1) The cylinders designed and approved for filling with a particular gas shall not be used for filling with any other gas unless specific approval is obtained from the Chief Controller:

Provided that inert gas, oxygen and compressed air cylinder made to the same specification and design, tested and certified as per rule 26 may be converted from one gas to another after fitting with appropriate valve and painting with appropriate identification colour without prior permission from the Chief Controller, with approval of the cylinder owner by following ISO: 11621 or any other code accepted by Chief Controller for such conversion of the cylinders:

Provided further that the gas filler and the owner of the cylinder shall maintain proper records of conversion for examination of the Chief Controller or Controller as and when needed.

(2) Any person desiring for conversion approval shall submit to Chief Controller the following documents, namely:-

- (i) documentary evidence indicating that the cylinders have been purchased by him;
- (ii) an authenticated copy of letter permitting filling of the cylinders in the past;
- (iii) a statement in duplicate, showing manufacturer's serial numbers of the cylinders in ascending order;
- (iv) a certificate to the effect that the cylinders had not been converted to any other gas service in the past;

(v) scrutiny fee as specified in Schedule V.

**CHAPTER III**  
**IMPORTATION OF CYLINDERS, VALVES AND LPG REGULATORS**  
**PART I**  
**GENERAL**

- 29. Licence for import of gas cylinders.** - (1) No person shall import any gas cylinders 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 and the relevant provisions of Foreign Trade (Development And Regulation) Act, 1992 (22 of 1992).
- (2) No person shall import any valve and LPG regulator intended to be fitted on the gas cylinder except under and in accordance with the conditions of approval or licence granted under these rules.
- (3) The person importing cylinders shall have necessary infrastructure, handling transportation and storage facility including emergency action plan and qualified and trained technical manpower.
- (4) If the import of the cylinders filled with compressed gas is exceeding the quantity exempted under rule 44 of these rules, licence to store compressed gas in cylinders granted in Form F is obligatory.

**Part II IMPORTATION BY SEA**

- 30. Declaration by the master of ship or ship's agent.** - (1) The master of every ship carrying cylinder filled with compressed gas for importation into India, or the agent for such ship, shall give, the Conservator of the Port not less than forty-eight hours notice of its intended arrival at the port.
- (2) The master of every ship carrying such cylinders shall deliver to the pilot, before entering any port, a written declaration under his signature in Form A:
- Provided that if the agent for such ship delivers to the Conservator of the Port a written declaration referred to in sub-rule (2) under his signature, 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 be forwarded by him, with all convenient dispatch, to the Commissioner of Customs of the Port.
- 31. Production of licence for import.**- Every person desiring to import cylinder filled with any compressed gas or intended to be so filled, valve and LPG regulator shall produce personally or through his agent, before the Commissioner of Customs his licence for the import of such gas cylinder, valve or LPG regulator, as the case may be.
- 32. Permission of the Commissioner of Customs.**- (1) No imported cylinder, valve and LPG regulator shall be landed except with the permission of the Commissioner of Customs.
- (2) If the Commissioner of Customs is satisfied that the gas cylinder, valve and LPG regulator can lawfully be imported, he shall permit it to be landed.
- (3) Nothing in this rule shall affect the power of the Commissioner of Customs to detain the gas cylinder, valve and LPG regulator under any other law for the time being in force.

**Part III**  
**IMPORTATION BY LAND**

- 33. Importation by land.**- No gas cylinder filled with any compressed gas, valves and LPG regulators 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.

**Part IV**  
**IMPORTATION BY AIR**

- 34. 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 of Civil Aviation.

**CHAPTER IV**  
**EXAMINATION AND TESTING OF CYLINDERS**

- 35. 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 test or hydrostatic stretch test, as the case may be, and other tests set forth in Schedule IV within such period as is specified in IS:15975 issued by Bureau of Indian Standards or as approved 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 Schedule IV and shall submit to Chief Controller the particulars of the facilities provided and a scrutiny fee specified in Schedule V.

(3) The cylinder testing stations approved by the Chief Controller shall have the facilities for evacuation of cylinders, neutralisation or scrubbing for toxic and corrosive gases and cylinder condemnation.

(4) Permission for cylinders testing station shall initially be granted for a period of one year, which may be extended to a maximum period of ten years subject to the production of valid ISO accreditation certificate issued by any nationally or internationally accredited agency, testing records for the period of validity and on payment of fee as specified in Schedule V.

**36. Condemning of cylinder.-** (1) Any cylinder which fails to pass periodic examination or test or which loses in its tare weight by over five per cent. or which for any other defect is found to be unsafe for use or after expiry of the service life of the cylinder, shall not be filled with any compressed gas and 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 under intimation to the owner of the cylinder as specified in IS: 8198.

**Explanation-** For the purposes of this rule, service life of on-board CNG cylinders and other CNG cylinders to be twenty years and auto LPG containers made of low carbon steel to be fifteen years unless otherwise specified in the respective codes.

(2) All markings on the cylinder shall be defaced before it is destroyed.

(3) History sheets or records of such cylinders shall be closed and kept on record for a period of two years and reports of the details of closed history sheets or records shall be sent to the Chief Controller, in writing, on the 1<sup>st</sup> of 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.

(5) A cylinder due for condemnation as per sub-rules (1) to (4) shall be destroyed by the cylinder testing station.

#### CHAPTER V DISSOLVED ACETYLENE GAS CYLINDERS

**37. Additional requirements for dissolved acetylene cylinders.-** The dissolved acetylene gas cylinder shall comply with following additional 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 ninety two percent and in no case shall be less than seventy five percent.

(iii) Any solvent used shall not be capable of chemical reaction 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 quantity of acetone including the gas in solution shall be such that the cylinder meets the requirements of additional tests specified in IS: 7312.

(v) The valves of the cylinders shall not contain more than seventy percent copper in their composition.

(vi) The pressure in the cylinder shall not exceed 16 kgf/cm<sup>2</sup> at a temperature of 15°C.

(vii) Every cylinder shall before being filled with porous mass be tested by hydrostatic pressure to a pressure of not less than 60 kgf/cm<sup>2</sup>. This pressure may be reduced to 53 kgf/cm<sup>2</sup> if the cylinder is fitted with fusible plug. No cylinder which shows a permanent stretch in excess of 7-1/2 percent of the total stretch suffered during hydrostatic stretch test shall be allowed.

(viii) The safety relief device if fitted shall operate at a pressure of 53 kgf/cm<sup>2</sup> or at a temperature of 100°C + 4°C / - 2°C.

(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 manufacturer;
- (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 and porosity percentage;
- (i) tare weight (inclusive of valve);
- (j) inspector's official mark;
- (k) maximum gas capacity.

Explanation: Acetylene cylinders are designed for a specified charge of acetylene, the quantity of the gas is determined in relation to the nominal quantity of the solvent. Complying with the appropriate ratio of gas and quantity of the solvent is one of the conditions for the safe operation of the cylinder. Excess solvent may result to a hydraulically full cylinder that, when subjected to temperature increase, can develop extremely high internal pressures. Shortage of the solvent will result in the cylinder becoming less resistant against decomposition due to flashback. Solvent replenishing of the acetylene cylinders is therefore essential and this operation shall therefore be carried out with due care before refilling of the cylinders with acetylene gas.

**38. Restriction on filling of dissolved acetylene in 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 requirements of these rules.

**39. Examination of dissolved acetylene cylinders before filling.- (1)** Whenever a cylinder is charged with acetylene, it shall be subjected to a thorough visual examination in accordance with IS:8433,

(2) If the history of cylinder shows that it has not been subjected to an examination under sub-rule (1) within the previous two years, the valve shall be removed and the conditions of the porous substance at the neck of the cylinder shall be ascertained at that time:

Provided that the period of periodical examination shall be one year in case the cylinders are filled with loose porous mass.

**40. 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 or Controller.

**41. Record of dissolved acetylene cylinders.- (1)** Each firm charging acetylene in cylinders shall keep a record of every cylinder charged by it and this record shall give the following information, namely: -

(a) for each charge,-

- (i) the date of charging of the cylinder;
- (ii) the empty cylinder weight without gas;
- (iii) the weight of solvent charged before gas charging;
- (iv) full weight of the cylinder;

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

(c) the dates on which the cylinder has been thoroughly examined as provided in rule 39, the results of each such examination 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.

(2) The record shall be open for inspection of the Chief Controller or the Controller of Explosives.

**42. Labeling 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;
- (b) weight of gas filled;
- (c) full cylinder weight;
- (d) the name of the company filling the gas on the last date of the filling.

## CHAPTER VI

## FILLING AND POSSESSION

**43. Licence for filling and possession.-** (1) No person shall fill any cylinder with compressed gas and no cylinder filled with compressed gas shall be possessed by anyone 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.

**44. No licence needed for possession in certain cases.-** Notwithstanding anything contained in rule 43, licence shall not be necessary for-

- (a) 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;
- (b) possession of cylinders for own use and not meant for sale or trading filled with,-
  - (i) any flammable and non-toxic gas when the total number of cylinders containing such gas does not exceed twenty five or the total weight of gas does not exceed 200 kg., whichever is less, at a time;
  - (ii) any non-flammable non-toxic gas when the total number of such cylinders does not exceed two hundred at a time;
  - (iii) any toxic gas when the total quantity of such cylinders does not exceed five at a time;
  - (iv) acetylene gas contained in cylinder in dissolved state when the total quantity of such cylinder does not exceed twenty five at a time.
- (c) The provisions of sub-clause 44(b) shall not be applicable for liquefied petroleum gas when the total quantity of gas does not exceed 100 kg at a time for own use, distribution or sale from a sales room belonging to the dealer or distributor of respective oil marketing company.

Notwithstanding anything contained in rule 43, licence shall not be obligatory for working places where LPG cylinders are directly connected to the manifold, but the requirements of IS :6044 Part-1 shall be complied with such manifold installations and shall be constructed adapting the sound engineering practices and the quantity of the LPG at any point of the time shall not exceed the limits prescribed in IS-6044 Part-1;

**45 . Restriction on filling.-** No person shall fill any cylinder with any compressed gas unless such a cylinder and its valve or other fittings -

- (a) are of approved type and standard as per rule 3 and has been specifically approved for filling by the Chief Controller;
- (b) have passed the examination and test specified in rule 35; and
- (c) conform to the provisions of rules 4,5,6,7 and 8.

**46. Working pressure and filling ratio.-** (1) The working or internal pressure in any cylinder charged with a permanent gas shall not exceed the multiplication factor of the test pressure prescribed in cylinder manufacturing code.

(2) The cylinder charged with liquefiable gases shall not be filled in excess of the filling ratios specified in IS: 3710 for low pressure liquefiable gases and IS: 15975 for high pressure liquefiable gases or any other code accepted by Chief Controller.

**47. Prior approval of specification and plan 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 Controller or Controller authorised by Chief Controller-

- (a) specification and plan drawn to scale in triplicate clearly indicating —
  - (i) the manner in which the provisions prescribed in these rules shall be complied with;
  - (ii) the premises proposed to be licensed, the area of which shall be distinctly coloured or otherwise marked;
  - (iii) the surrounding area lying within 100 metres of the edge of all facilities which are proposed to be licensed;
- (b) a scrutiny fee of as specified in Schedule V.

- (2) If the Chief Controller or Controller after scrutiny of the specification and plan and after making such inquiries as considered necessary, 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 of each of the specification and plan signed by him conveying his sanction subject to such conditions as may be specified.

**48. No Objection Certificate.-** (1) An applicant for a licence in Form “F” for storage of flammable, toxic or corrosive gases for the purpose of sale or trading and not for own use, shall apply to the District Authority with two copies of site plan showing the location of the premises proposed to be licensed under these rules.

- (2) An applicant for licence in Form “G”, for CNG dispensing station, shall apply to the District Authority with two copies of site plan showing the location of the premises proposed to be licensed under these rules.

The District Authority, if satisfied, shall grant no objection certificate to the applicant receiving a licence for the above purpose at the site proposed, and shall forward it to the Chief Controller or Controller with his application.

- (3) The requirement of “No Objection Certificate” under sub rule (1) shall not be applicable for a licence in form “F” for storage of flammable, toxic or corrosive gases forming part of cylinder filling plant.

- (4) Every certificate issued by the district authority under sub-rule (1) and (2) shall be accompanied by a copy of the plan of the proposed site duly endorsed by him under official seal.

- (5) The Chief Controller or Controller may refer an application not accompanied by a certificate granted under sub-rule (1) and (2) to the District Authority for its observation.

- (6) If the District Authority, either on a reference being made to him or otherwise, intimate to the Chief Controller or Controller that any licence which has been applied for should not be in his opinion, granted, such licence shall not be issued without the sanction of the Central Government.

**49. Application for licence or approval.-** (1) A person intending to obtain or renew a licence or approval under these rules shall submit an application, in writing, to the Chief Controller or Controller,-

(a) in Form 'B' along with following document for a licence prescribed in sub-rule (1) of rule 51; and

(b) in Form 'C' along with following document for a licence prescribed in sub-rule (2) of rule 51.

- (2) The following documents shall be submitted in duplicate to the licensing authority for grant of approval for manufacture of cylinder, valve and LPG regulator namely:-

- (i) fee as per Schedule V;
- (ii) application in Schedule III for the manufacture of cylinders, valves and LPG regulators along with all the relevant documents;
- (iii) the ISO accreditation or equivalent certificate issued by any nationally or internationally recognised agency within a period of one year from the date of approval;
- (iv) list of relevant code, specification and technical literature available;
- (v) ownership proof for legal and physical possession of the land, where such facilities are proposed to be set up;
- (vi) detailed report on manufacturer, inspection and testing proposed to be followed;
- (vii) design drawing scheme of manufacture and testing of cylinder, valve and, regulator proposed to be manufactured duly vetted by Bureau of Indian Standard or any other recognised third party inspection agency; and
- (viii) organisational set up of the applicant with specific reference to qualifications and experience of the personnel engaged in the manufacture of cylinder, valve and LPG regulator;

- (3) The following documents shall be submitted in duplicate to the licensing authority for grant of approval for cylinder testing station and hot repair of LPG or welded cylinders, namely:-

- (i) fee as per Schedule V;
- (ii) ownership proof for legal and physical possession of the land, where such facilities are proposed to be set up;
- (iii) applicant's name and full address with telephone numbers and E-mail address;
- (iv) proposed location of cylinder testing station or hot repairing facilities;
- (v) six copies of each site and layout plan showing the area for degassing in case of flammable gas cylinder testing station and details of neutralisation facilities in case of toxic gas cylinder testing and location of various testing equipments in the cylinder testing shop;
- (vi) specification or code proposed to be adopted for the testing and examination of cylinder or hot repair of LPG or welded cylinder;



- (vii) organisational set up of the applicant with specific reference to qualification and experience of the personnel engaged in the testing of cylinder or hot repair of cylinder.
- (viii) quality control check or test carried out at each stage of testing and examination of cylinders or hot repair of LPG or welded cylinder;
- (ix) details of template or gauge provided to check or test;
- (x) steps taken to check the accuracy of testing and checking equipment and frequency of such checking;
- (xi) equipment available for carrying out non-destructive examination such as Gama ray or X-ray equipment, viewer, etc., for radiographic examination, ultrasonic flaw detector, equipments for dye penetration and magnetic particle tests, etc;
- (xii) proforma of the record and certificate for various test carried out by the cylinder testing station or hot repairing shop;
- (xiii) the ISO accreditation certificate issued by any nationally or internationally recognised agency within a period of one year from the date of approval; and
- (xiv) list of relevant code, specification and technical literature available;

**50. Grant of licence or approval.-** (1) A licence or approval, as the case may be, under these rules may be granted by the Chief Controller or Controller on payment of the fee specified in Schedule V.

- (2) A licence or approval under sub-rule (1) shall be granted if the provisions of these rules are complied with by the applicant.
- (3) Every licence or approval granted under these rules shall be subject to the conditions specified therein.
- (4) When the licensing authority grants a licence in Form 'E', 'F' or 'G', after conducting inspection of the premises to ensure conformity of the premises to the provisions of the Act and these rules, the authority shall endorse the licence and from the date of such endorsement, the licence shall come into force.
- (5) If the licensing authority observes on inspection, that the premises do not conform to the provision of the Act and rules and not fit for endorsement, he shall communicate to the licensee, his direction for rectification of deficiency; or reasons for not endorsement of the licence or reasons for suspension and revocation of the licence, as the case may be.

**51. Period for which licence may be granted or renewed.-** (1) A licence in Form 'D' for the import of cylinder filled or intended to be filled with compressed gas, valve and LPG regulator 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', 'F' or 'G' for filling or storage of compressed gases granted or renewed under rules shall remain in force till the 30th day of September of the year up to which the licence is granted or renewed subject to a maximum of ten years.
- (3) Notwithstanding anything contained in sub-rule (2), the Chief Controller or Controller authorised by Chief Controller, where he is satisfied that a licence is required for a specific work which is not likely to last up to the 30<sup>th</sup> day of September 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.

**52. Particulars of licence or approval.-** (1) Every licence or approval granted under these rules shall be subject to the conditions 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 or 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 or Controller.

**53. Prior approval necessary for alteration in the licensed premises.-**(1) No alteration shall be carried out in the licensed premises until the plan showing such alteration has been approved in writing by the Chief Controller or Controller authorised by Chief Controller.

- (2) A person wishing to carry out any alteration in the licensed premises shall submit to the Chief Controller or Controller-
  - (a) three copies of a properly drawn plan to scale, of the licensed premises showing in distinct colours the proposed alterations and the reason thereof;
  - (b) scrutiny fee as per Schedule V.

- (3) If the Chief Controller or 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 be carried 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 may be specified.
- (4) The holder of the licence shall apply to the Chief Controller or Controller for the amendment of the licence as soon as the sanctioned alteration has been carried out.
- (5) No addition or alteration carried out in the licensed premises sanctioned by the Chief Controller or Controller shall be brought into use unless the licence is received by the licensee duly amended.

**54. Amendment and transfer of licence or approval.-** (1) Any licence or approval granted under these rules may be amended or transferred by the Chief Controller or Controller authorised by the Chief Controller.

- (2) The fee for amendment of a licence shall be as per Schedule V 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 licence amended shall submit to the Chief Controller or Controller-
  - (i) an application duly filled in and signed in Form 'B' if the licence has been granted in Form 'D' and in Form 'C' if the licence has been granted in Form 'E', 'F' or 'G';
  - (ii) the licence sought to be amended together with the approved plans attached to it;
  - (iii) where any alterations in the licensed premises have been carried out, three copies of the properly drawn plans showing the alterations sanctioned under rule 53 by the Chief Controller or Controller;
  - (iv) fee for the amendment of the licence as specified in sub-rule(2) of Rule 65.
- (4) The holder of a licence in form 'E', 'F' or 'G' may, at any time before the expiry of the licence, apply to the licensing authority to transfer the licence to another person and every application for such transfer of a licence shall be accompanied with -
  - (i) a letter signed by the holder of the licence indicating the full name and postal address of the person to whom he intends to transfer the licence and give complete possession of the licensed premises;
  - (ii) the licence sought to be transferred together with the approved plan or plans attached to it;
  - (iii) an application in Form 'C' duly filled and signed by the person to whom the licence is sought to be transferred; and
  - (iv) fee as per schedule V in the manner prescribed in rule 65.

**55. Renewal of licence or revalidation of approval.-** (1) A licence or approval may be renewed or the validity may be extended by the Chief Controller or Controller.

- (2) Every licence granted in Form 'E' and 'F' and 'G' under these rules, may be renewed for a maximum period of ten years at a time 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 or approval, which has been renewed for more than one year, is surrendered before its expiry, the renewal fee paid for the un-expired portion of the licence shall be refunded to the licensee provided that no refund of renewal fee shall be made for the year during which the Chief Controller or Controller receives the renewed licence for surrender.
- (4) Every application for the renewal of a licence or approval shall be accompanied by the licence or approval, which is to be renewed together with or without approved plans attached to the licence, and the renewal fee.
- (5) Every application for the renewal of a licence or revalidation of approval shall be made so as to reach the licensing authority on or 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 or 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 or approval is refused, the fee paid shall be refunded to the licensee after deducting there from the proportionate fee for the period beginning from the date from which the licence or approval was to be renewed up to the date on which renewal thereof is refused.
- (7) The same fee shall be charged for the renewal of a licence or approval for every twelve months for the grant of such renewal: Provided that-
  - (a) if the application with accompaniments required under sub-rule (4) is not received within the time specified in sub-rule (5) but received not later than three months the licence or approval shall be renewed or revalidated only on payment of a fee amounting to twice the fee ordinarily payable;

(b) if such an application with accompaniments is received by the Chief Controller or Controller after three months from the date of expiry but not later than one year from the date of expiry, the licence or approval may, without prejudice to any other action that may be taken in this behalf, be renewed or revalidated on payment of late fee at the rate of one year licence or approval fee for every delay of three months or part thereof:

Provided further that in the case of an application for the renewal or validity extension of a licence or approval for a period of more than one year at a time, the fee prescribed under the first proviso, if payable shall be paid only for the first year of renewal.

- (8) No licence or approval shall be renewed or revalidated if the application for renewal or revalidation is received by the Chief Controller or Controller after one year of the date of its expiry.
- (9) Renewal or validity extension of approval granted for cylinder manufacturing unit, valve manufacturing units and LPG regulator manufacturing unit, cylinder testing station, hot repair or reconditioning station for LPG and other welded cylinder shall be done for a maximum period of ten years on submission of following documents on or before expiry of approval, namely:-
- (i) renewal or revalidation application or request on company letter head duly signed by director or occupier or authorised signatory of the company;
  - (ii) payment of the renewal or revalidation fees as prescribed in Schedule V;
  - (iii) manufacture report or testing record or repairing records for entire period of validity of approval, valid ISO accreditation certificate issued by any Nationally and Internationally accredited agency for the entire period of validity of the approval before the expiry of the approval;
  - (iv) an undertaking signed by director or occupier or authorised signatory of the company to the effect that there is no change in the organisational set up and technical manpower during the period of validity of approval;
  - (v) original approval copy; and
  - (vi) any other documents as specified by the Chief Controller.
- (10) The same fee shall be charged for the renewal or validity extension of approval for every twelve months for the grant of such renewal or validity extension.
- (11) The validity of approval granted for cylinder manufacturing unit, valve manufacturing unit and LPG regulator manufacturing unit, cylinder testing station, hot repair or reconditioning station of LPG and other welded cylinder, shall be effective from the date of issue of approval.

**56. Refusal of licence or approval.-** (1) The Chief Controller or Controller refusing to grant, amend, renew or transfer a licence or approval shall communicate the reasons thereof to the applicant.

- (2) The applicant or licensee shall be given an opportunity of being heard before any refusal of licence or approval as the case may be.

**57. Suspension and cancellation of licence or approval.-** (1) Every licence or approval granted under these rules shall be liable to be suspended or cancelled by an order of the licensing authority for any contravention of the provisions of the Act or rules framed there under or of any condition contained in such licence, or by an order of the Central Government, if at any time the continuance of the licence in the hands of the licensee is deemed objectionable:

- (2) Before passing an order suspending or cancelling a licence or approval under sub-rule (1),
- (a) the holder of the licence or approval shall be given an opportunity of being heard;
  - (b) the maximum period of suspension under sub-rule (1) shall not exceed three months; and
  - (c) the suspension of a licence or approval shall not debar the holder of the licence from applying for its renewal in accordance with the provisions of rule 55.
- (3) Notwithstanding anything contained in sub-rule (1) an opportunity of being heard may not be given to the holder of a licence or approval before his licence or approval is suspended or cancelled in cases-
- (a) where the licence is suspended by the licensing authority 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 approval or in his opinion such violation is likely to cause imminent danger to the public:

Provided that where a licence or approval is so suspended, the licensing authority shall give the holder of the licence or approval an opportunity of being heard before the order of suspension is confirmed;

- (b) where the licence or approval is suspended or cancelled by the Central Government, if the Government considers that in the public interest or in the interest of the security of the State such opportunity should not be given.
- (4) The Chief Controller or Controller or the Central Government suspending or cancelling a licence under sub-rule (1), shall communicate the reasons thereof to the applicant except when the licence or approval is suspended under sub-rule (2).
- 58. Procedure on expiration, suspension or cancellation of licence or approval.-** A person licensed to fill or store compressed gas shall, on the expiration, suspension or cancellation of such licence, forthwith give notice to the Chief Controller or Controller of the nature and quantity of compressed gas in his possession and shall comply with the directions which the Chief Controller or Controller may give in regard to its disposal.
- 59. 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 and to the Chief Controller against any order passed by the Controller.
- (2) Every appeal shall be in writing and accompanied by a copy of the order appealed against and shall be presented within sixty days of the order passed along with fee as per Schedule V.
- 60. Procedure on death or disability of licensee.-** If a licensee dies or becomes insolvent or mentally incapable or is otherwise disabled, the person carrying on the business or legal heir of such licensee shall not be liable to any penalty or 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 or approval or transfer of the existing licence or approval in his own name:
- Provided that nothing in this rule shall be deemed to authorise the exercise of any power under this rule by any person after the expiry of the period of the licence or approval.
- 61. Loss of licence or approval.-** Where a licence or approval granted under these rules is lost or accidentally destroyed, a duplicate copy of the licence 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 as per Schedule V.
- 62. Production of licence or approval on demand.-** (1) Every person holding or acting under a licence or approval granted under these rules shall produce it, or an authenticated copy of it, at the place to which the licence or approval applies, when called upon to do so by any of the officers specified in rule 71.
- (2) Copies of any licence or approval may, for the purposes of this rule, be authenticated by the authority, which granted the licence or approval—
- (a) on payment of a fee as per Schedule-V in the manner prescribed in rule 65 for each authenticated copy; and
- (b) on the submission of a copy of the plan identical with the approved plan attached to the licence or approval.
- 63. Procedure on report of infringement.-** The District Authority shall inform the Chief Controller or Controller of the action taken by him on any report of infringement of the Act or of these rules, which the Chief Controller or Controller may make to him.
- 64. 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 these rules shall be deemed to affect the power of executive control of the Chief Controller over the officers subordinate to him.
- 65. Licence fee and fee other than licence fee.-** (1) The Central Government may, by notification in the Official Gazette, revise the fee as specified in Schedule V from time to time.
- (2) All fee payable under these rules shall be paid through crossed demand draft drawn on any Nationalised or Scheduled Bank in favour of the Chief Controller of Explosives or Controller of Explosives payable at respective places, as the case may be or by online payment where such facility is provided.

#### CHAPTER VII

- 66. Power to exempt.-** If the Chief Controller is satisfied that in respect of any cylinder 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 modification for such period and under such condition as he may think fit and such order may be revoked at any time:

Provided that the reasons for such suspension or modification shall be recorded in writing.

## CHAPTER VIII ACCIDENTS AND INQUIRIES

**67. Notice of accident** – (1) The notice of an accident required to be given under sub-section (1) of section 8 of the Act shall be given forthwith -

(a) to the Chief Controller or Controller under whose jurisdiction the area falls by Fax, e-mail followed by a letter giving particulars of the occurrence within twelve hours;

(b) to the District Authority concerned;

(c) to the officer-in-charge of the nearest Police Station by the quickest mode of communication.

(2) Pending the visit of the Chief Controller or Controller or until instruction is received from the Chief Controller or Controller that he does not wish to make any further investigation or inquiry, all wreckage and debris shall be left untouched except insofar 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 railway or road for the restoration of through communication or traffic.

**68. Inquiry into accident.**- (1) Whenever as per subsection (1) of Section 9 of the Act

a District Magistrate or a Commissioner of Police or a Magistrate subordinate to a District Magistrate (hereinafter in this rule referred to as the Magistrate) holds an inquiry under subsection (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 or 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-rule (1) take evidence to identify the 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 enquiry of any neglect as having caused or contributed to the explosion or accident or of any defect in or about or in connection with any installation or any vehicle appearing to the Magistrate to require a remedy and the Chief Controller or the officer nominated by him is not present at the enquiry, the Magistrate shall send to the Chief Controller notice in writing of the neglect or defect.

**69. Inquiry into more serious accident.**- (1) Whenever an inquiry is held under section 9A of the Act, the person holding such inquiry shall hold the same in open court in such manner and under such conditions as they may think most effectual for ascertaining the causes and circumstances of the 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 witnesses 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 Magistrate, 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 sub-rule (2) of rule 69 shall be deemed to be part of the expenses of the Petroleum and Explosives Safety Organisation in executing the provisions of the Act.

## CHAPTER IX

### POWERS

**70. Dangerous practices.**- (1) If in any matter which is not provided for by any express provision of, or condition of a licence granted under these rules, the Controller 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 specified in the order for compliance with it.

(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 committed a breach of this rule.

**71. 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.

**TABLE**

<b>Officers</b>	<b>Area</b>
(1)	(2)
1. The Chief Controller or Controller	The whole of India
2. All District Magistrate	Their respective Districts
3. All Magistrates subordinate to the District Magistrate	Their respective jurisdiction
4. The Commissioner of Police and all Police Officers of rank not below that of Sub Inspector	Their respective jurisdiction

(2) The power of removal and destruction under clause (d) of sub-section (1) of section 7 of the Act shall not be exercised by any Magistrate or Police Officer except in accordance with the instructions of the Chief Controller or Controller.

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

**72. Protection of action taken in good faith.-** (1) No suit, prosecution or other legal proceeding shall lie against the Central Government or Chief Controller or Controller for anything which is in good faith done or intended to be done in pursuance of these rules.

(2) No suit or other legal proceeding shall lie against the Central Government or Chief Controller or Controller for any damage caused or likely to be caused by anything which is in good faith done or intended to be done in pursuance of these rules.

**73. Repeal and Savings: -** (1) The Gas Cylinders Rules, 2004 is hereby repealed.

(2) Notwithstanding such repeal-

(a) all licenses or approvals granted or renewed under the said rules and all fees imposed or levied shall be, deemed to have been granted, renewed or imposed or levied, as the case may be under the corresponding provisions of these rules; and

(b) all approvals given and all powers conferred by or under any notification or rule shall, so far as they are consistent with the Act and these rules be deemed to have been given or conferred by or under these rules.

### **SCHEDULE I**

[See rule 3(1)]

#### **TYPES AND STANDARDS OF CYLINDERS OR VALVES AND LPG REGULATORS**

##### **A. CYLINDERS AND CONTAINERS**

##### **1. INDIAN ORIGIN**

(a) **Cylinders.-** Welded low carbon steel cylinders for low pressure liquefiable gases manufactured to IS:3196 Part 1, Part 2 & Part 4, IS:7142, auto LPG containers to IS:14899, DA cylinders to IS:7312 Cryogenic containers manufactured to EN-1251, EN 13458, ASME SEC VIII Div I and AD 2000 MB composite cylinders manufactured to EN-14427, IS0-11119-3 and EN -12245 or any other specification accepted by the Chief Controller certified by Bureau of Indian Standards or any other inspection authority approved by the Chief Controller.

Seamless Aluminum Alloy cylinder manufactured to ISO 7866 & IS 15660 by M/s. Luxfer Uttam India Pvt. Ltd., Faridabad certified by Bureau of Indian Standards or any other inspection authority approved by Chief Controller. Aluminum cylinder conforming to BS; 5045:Pt.3, ISO 7866 or EN equivalent specification. Seamless steel cylinders manufactured to IS: 7285 and CNG On-board cylinders manufactured to IS-15490 by M/s. Bharat Pumps & Compressors

Limited, Naini, Allahabad, M/s. Everest Kanto Cylinders Limited, Mumbai/(manufacturing unit at Tarapur, Aurangabad, Maharashtra, Kuchh in Gujarat and M/s .Maruti Koatsu Cylinders Limited, Halol, Gujarat ,M/S Rama Cyliders Pvt Ltd Kutchh ,Gujarat ,M/S Redson Industries Pvt Ltd AP ,M/S Sarju Impex Bharuch ,Gujarat M/S Euro

Cylinders ,M/s Lizer Cylinders kutchh , Gujarat---,M/S Shahuwala High Pressure Cylinders Vishakhapatnam, AP, M/S Confidence Petroleum India Ltd Vishakhapatnam, AP ,M/S Associate High Pressure Technologies Pvt Ltd Kutchh, Gujarat,M/S Nitin Cylinders Ltd Mumbai, M/S Jay Fe Cylinders Delhi, M/S Shaba Cylinders Pvt Ltd Ujjain M P ,Jumbo cylinders manufactured by M/S Everest Kanto Cylinders Limited manufactured to ISO-11120 certified by Bureau of Indian Standards or any other inspection authority approved by Chief Controller

(b) **Containers.-** Tonners or containers manufactured to BS:1500, ASME Section VIII Division 1, IS:2825 by M/s. Asco Industrial Corporation, New Delhi, M/s. Indian Sugar and General Engg. Corporation, Yamunagar, M/s. Anup Engineering Ltd., Ahmedabad, M/s. Kosan Metal Products Pvt. Ltd., Mumbai, M/s. Meenakshi Associated Pvt. Ltd., Surajpur Dist. Ghaziabad, M/s. Titanium Equipment and Anode Manufacturing Co. Ltd., Chennai, M/s. Expo Gas Containers Ltd., Mumbai, and certified by an inspection authority approved by Chief Controller

## 2. AUSTRIAN ORIGIN

(a) Cylinders conforming to BS:5045:Part 1:1982 for Halon-130I and FM 200 gas service as per approved drawings manufactured by M/s. Worthington Heiser Cylinders Gmbh, Austria – Inspected and certified by Bureau Veritas.

(b) Cylinders conforming to BS: 5045: PartI: 1982 for permanent and liquefiable gases as per approved drawings manufactured by M/s. Worthington Heiser Cylinders Gmbh, Austria-inspected and certified by Bureau Veritas.

(c) Seamless steel cylinders for CNG gas on-board service to ISO:11439-2000 specification, having working pressure 200 Bar and test pressure 335 Bar manufactured by M/s. Worthington Cylinders GmbH, Austria certified by M/s. Bureau Veritas as per approved drawings.

(d) Cylinders conforming to EN:1964:1/ISO:9809-1 & EN: 1964:2/ISO:9809-2 for permanent and liquefiable gases as per approved drawings, manufactured by M/s. Worthington Heiser Cylinders Gmbh, Austria-inspected and certified by Bureau Veritas.

## 3. ARGENTINA ORIGIN

Seamless steel cylinders for CNG gas on-board service to ISO:11439-2000 having working pressure 200 Bar and test pressure 335 Bar manufactured by M/s. Argentoil S.A., Argentina certified by M/s. Bureau Veritas as per approved drawing

## 4. CHINESE ORIGIN

(a) Seamless steel cylinders for high pressure gas cylinders conforming to IS:7285(Part1)2004, IS:7285(Part2)2004 & ISO:9809-1 specification manufactured by M/s. Beijing Tianhai Industry Co. Ltd., Beijing, China - inspected and certified by Lloyds Register as per approved drawings.

(b) Seamless steel cylinders for high pressure gas cylinders conforming to IS:7285 (Part2)2004 and ISO 9809-1 specification manufactured by M/s. Zhejiang Jindun Pressure Vessel Company Ltd China - inspected and certified by M/s Bureau Veritas –Certified by BIS as per approved drawings.

(c) Seamless steel cylinders for high pressure gas cylinders conforming to ISO: 9801-3 specification manufactured by M/s. Zhejiang Jindun Pressure Vessel Company Ltd China - inspected and certified by M/s Bureau Veritas.

## 5. ITALIAN ORIGIN

(a) Seamless steel cylinders for permanent gases (Air/Oxygen) conforming to BS: 5045: Part 1:1982 manufactured by M/s. Faber Industries S.P.A., Italy – inspected and certified by Lloyd's as per approved drawings.

(b) Seamless steel cylinders for compressed and liquefiable gases conforming to DOT: 3AA specification having water capacity 80.0 ltrs. & 120 ltrs. Working pressure 79 Bar and test pressure 132 Bar, manufactured by M/s. Faber Industries S.P.A., Italy- inspected and certified by M/s. Lloyd's as per approved drawings.

(c) Seamless steel cylinders for CNG gas on-board service to ISO: 11439 having working pressure 200 Bar and test pressure 335 Bar manufactured by M/s. Faber Industries, S.p.a., Italy, certified by M/s. Lloyd's as per approved drawings.

## 6. SPAIN ORIGIN

Seamless steel cylinders for FM-200 gas service conforming to BS: 5045 Part 1 manufactured by M/s. Products Tubulares, s.a., inspected and certified by M/s. Lloyd's, as per approved drawings.

## 7. JAPAN ORIGIN

(a) Steel cylinders manufactured by M/s Showa Koatsu Kogyo Co. Ltd.—inspected and certified by Company's own Inspector or KHK or Lloyd' or Bureau Veritas conforming to specifications DOT:3AA:1800

and above, JIS:B:8241 relating to Manganese Steel for permanent gases and DOT:3A/DOT:3AA for liquefiable gases as per approved drawings.

(b) Steel cylinders manufactured by Kanto Koatsu –Yoki manufacturing Co. Ltd.- inspected and certified by company's own inspector or KHK or Bureau Veritas conforming to High Pressure Gas Safety Law Japan as per approved drawing.

#### 8. POLISH ORIGIN

Auto LPG containers manufactured by M/s Stako, Poland made to ECE-R-67-01 specification, inspected and certified by Institute of Transport Technical Supervision as per approved drawings.

#### 9. U.K. ORIGIN

- (a) Aluminum alloy cylinders conforming to BS: 5045:Pt. 3 or EN equivalent specification manufactured by M/s. Luxfer Gas Cylinders, UK – inspected and certified by Lloyd's or British Inspecting Engineers Ltd. as per approved drawings.
- (b) Seamless steel cylinders for permanent and Liquefiable gases conforming to BS:5045:Part I manufactured by M/s. UEF Chesterfield Cylinders, UK – inspected and certified by Lloyd's or Bureau Veritas or British Inspecting Engineering Ltd., or any other appropriate authority as per approved drawings.
- (c) Seamless steel cylinders for permanent and liquefiable gases conforming to DOT: 3T specification manufactured by UEF Chesterfield Cylinders UD – inspected and certified by British Inspecting Engineers Ltd., as per approved drawings.
- (d) Seamless steel cylinders for FM-200 gas service conforming to DOT:4BA:500 specification manufactured by M/s. Fike Protection & Systems, U.K., having water capacity 650 pounds, filling ratio 1.04 super pressurised with Nitrogen at 19.72 Bar as per approved drawing.
- (e) Seamless steel cylinders for CNG gas on-board service to BS:5045-1982 Part 1 having working pressure 200 Bar and test pressure 344 Bar manufactured by M/s. UEF Chesterfield Cylinder, Derbyshire, UK certified by M/s. British Inspection Engineers Limited as per approved drawings.
- (f) Carbon Composite cylinders (accessory to breathing apparatus) conforming to EN: 12245 Specification manufactured by M/s Dragger Safety UK Limited, inspected and tested by M/s Lloyd's Register as per approved drawings.

#### 10. USA Origin

- (a) Steel cylinders – inspected and certified by appropriate authority, conforming to specifications DOT: 3A/3AA for permanent and liquefiable gases manufactured by (1) M/s. Norris Cylinder Co., (2) M/s. Taylor Wharton Co., (3) M/s. Worthington Cylinder Co., (4) M/s. Norris Industries, (6) M/s. Harris Burg Steel Co. and (7) M/s. Pressed Steel Tank Co., as per approved drawings.

Aluminum alloy cylinders conforming to DOT: 3AL Specification manufactured by M/s. Luxfer Gas Cylinders, USA - inspected and certified by authorised Testing Inc. or Arrowhead Inc. as per approved drawings. 1) Seamless Aluminum Alloy cylinder manufactured to ISO 7866 M/s. Luxfer Gas Cylinders, France certified and inspected by M/s. Aparagaz, Belgium as per approved drawings.

Carbon composite aluminum lined gas cylinders conforming to EN 12245 Manufactured by Luxfer Gas Cylinders, France certified and inspected by M/s. Apragaz, Belgium as per approved drawings. Carbon Composite Aluminum lined gas cylinders conforming to HSE-AL-FW2/EN 12245/DOT-CFFC Manufactured by M/s. Luxfer Gas Cylinder USA, inspected and certified by M/s. Authorized testing Inc. or Arrowhead Inc. as per approved drawings.

- (b) Aluminum lined fully wrapped, carbon fiber composite type 3 CNG cylinders conforming to ISO:11439/ECE-R-110, EC 79, EN:12245-2009 manufactured by M/s. Luxfer Gas Cylinders GMBH inspected and certified by M/s. TUV Nord.
- (c) Tube cylinders conforming to ISO: 11120-1999 manufactured by M/s CP industries, inspected and certified by British inspecting Engineers Ltd as per approved drawing.
- (d) Carbon fiber reinforced plastic full composite cylinders conforming to DOT-SP 10945-2216 manufactured by Structural Composite Industries, inspected and certified by M/s TH Cochrane Laboratories Ltd. To be used for water mist fire fighting system as per approved drawing.
- (e) Fully wrapped carbon composite aluminum lined CNG cylinders conforming to ANSI NGV2-2000 Type 3&FMB SS304 specification manufactured by M/s Luxfer Gas Cylinders ,inspected and certified by M/s Authorised Testing Inc ./Arrowhead Industrial Services Inc., as per approved drawing.



**11. GERMAN ORIGIN**

(a) Seamless steel cylinders for permanent and liquefiable gas service conforming to BS:5045/1/CM/S & DOT:3AA manufactured by M/s. Mannesmann Cylinders Systems GmbH, Germany – inspected and certified by Lloyd's or TUV or any other authority as per approved drawings.

(b) Aluminum lined fully wrapped carbon fibre composite type 3 CNG cylinders conforming to ISO: 11439/ECER-110, EN: 12245-2009 manufactured by M/s Dynetek Europe GmbH, inspected and certified by M/s TUV Norde.

**12. NORWAY ORIGIN**

Fully wrapped all composite LPG cylinders conforming to EN: 12245-2002/ manufactured by M/S Ragasco A.S Norway, inspected and certified by TUV as per approved drawings.

**13. SWEDEN ORIGIN**

Fully wrapped all composite LPG cylinders conforming to EN: 12245-2002 manufactured by M/s Composite Scandinavia AB, inspected and certified by M/s Inspecta Sweden AB, Stockholm/Det Norske Veritas as per approved drawings.

**B. VALVES****1. Indian origin**

LPG valves and regulators manufactured to IS:8776, IS:8737, IS:9798, multi function valve to IS:15100, valves in respect of medical gas cylinder to IS:3745 and valves in respect of cylinders used with breathing apparatus to IS:7302, certified by Bureau of Indian Standards and approved by the Chief Controller.

Valves in respect of industrial gas cylinder including CNG manufactured to IS: 3224 and certified by BIS or an inspection agency approved by Chief Controller.

**2. Italian origin**

CNG valve Model 119, 198/1, 120, VAL-B-305, VAL-B-323, VAL-B-315 manufactured by M/s. EMER S.r.l., Italy inspected and certified by Bureau Veritas OMB Saleri SPA Italy.

Multi function valve Model MULTIVALVOLA BRC EUROPA manufactured by M/s. M.T.M. s.r.l., Italy, Model No. EMER s.r.l. tipo E-67-01, EMER LANDI RENZO manufactured by Emer, s.r.l., Italy, Model MV-305 manufactured by M/s. Lovato S.p.a., Italy. Model OMVL, Tomesetto Achile, Borel GPL Grenoble, G.M.S. manufactured by M/s. Tomasetto Achile, Italy to specification ECE-R-67-01 with set pressure 2.2 MPa as per approved drawings. Residual pressure valve model VGE 3RAR 005-P1230 manufactured by Pergola S.R.L Con Socio Cavanga HP Division Italy conforming to ISO-10297 and ISO-15996.

**Note:** "approved" means approved by Chief Controller.

**Note:** An updated list of all the approvals is available on website <http://peso.gov.in>

**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. Manufactured for .....
6. Location for .....
7. Quantity .....
8. Serial Nos. from....to . .... inclusive
9. Specification to which the cylinders are manufactured.....

10. Size... mm. outside diameter 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<sup>2</sup> at 15°C or 65°C as the case may be
  16. Hydrostatic test or hydrostatic stretch test pressure in kg/cm<sup>2</sup>.
  17. Record of Hydrostatic test or Hydrostatic stretch test with date of test, in respect of each cylinder.....
  18. Pneumatic test pressure in kg/cm<sup>2</sup>.....
  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 certificate to be obtained from the Inspecting Authority in respect of valve manufactured in accordance with the approved design and specification or Code shall include the following particulars, namely:
1. Manufactured by .....
  2. Location at .....
  3. Manufactured for .....
  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. Date and signature with stamp of the inspecting authority .....

### SCHEDULE III

[See rule 3(3)]

#### PARTICULARS TO BE SUBMITTED BY PERSON DESIRING TO MANUFACTURE CYLINDERS, VALVES AND OTHER FITTINGS

1. Applicant's name and full address with telephone No(s). and e-mail address
2. Whether the applicant has manufactured any pressure vessel/cylinder/container/valve, if yes-
  - (i) Date from which such container/valves were manufactured.

- (ii) For whom the container/valves were fabricated and their approximate numbers.
- (iii) Details of the containers/valves manufactured.
3. Specification/Codes proposed to be adopted for the manufacture of cylinders/containers/valves.
4. Organizational set up of the applicant with specific reference to qualifications and experience of the personnel engaged in the manufacture of cylinders/containers/valves.
5. Organizational set up of the inspecting personnel engaged by the applicant.
6. Process of manufacture of cylinders/containers/valves, beginning with raw material and ending with the finished cylinders/containers/valves.
7. Quality control checks/tests carried out at each stage of manufacture of cylinders/containers/valves.
8. (i) Details of the equipment installed for chemical analysis and mechanical tests.
- (ii) Details of templates/gauges provided to check/test.
- (iii) Steps taken to check the accuracy of testing and checking equipment and frequency of such checking.
9. Equipment available for carrying out non-destructive examination such as Gama Ray/X-ray equipment, viewer, etc. for radiographic examination, ultrasonic flaw detector, equipments for dye penetration and magnetic particle tests, etc.
10. List of machinery provided for manufacturing cylinders/containers/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.
13. Whether the manufacturing unit has been certified under ISO or equivalent certification, (if so, documentary evidence thereof to be attached)
14. List of relevant codes, specifications and technical literature available

Signature -----

Date:

Place:

Name and designation

#### SCHEDULE IV

[See rule 35]

##### A. FACILITIES REQUIRED FOR CYLINDER TESTING STATIONS

Cylinder degassing and valve opening platform of size minimum 3x3 m having arrangement of water and cold flaring. Industrial type fencing of 2.0 m height shall be provided all around the cylinder degassing and valve opening platform at a distance of min 15 m for CNG or Hydrogen or any other flammable gas except LPG. Cylinder degassing and valve opening platform for LPG shall observe minimum 30.0 m clearance all around. Maximum 1.2 m wide entry gate to ensure that truck loaded with the cylinders shall not go inside the degassing area. Cemented pathway of 1.2 m width approaching up to the cylinder degassing and valve opening platform shall be provided for easy and safe movement of the cylinders. Maximum five cylinders shall be degassed at a time. The cold flaring shall be done through a vent stack of height not less than 6.0 Meters.

##### 1. Management:

**1.1 General requirement.** — The personnel, equipments, inspection procedures, recording organisation shall be adequate and the test station will be operated with safe operating conditions. 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 responsibilities 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 employed shall, however, be related 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 inspection, test methods, equipment, test requirements, and recording of test results, and he shall have appropriate technical qualification in Mechanical or Chemical Engineering. He shall also be conversant with the codes, specifications 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 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 cleaning, inspection, testing and painting of cylinder as required under these rules and shall contain-

(i) one set of these rules, codes, specifications or regulations applying to the cylinders, which the test station is authorised to test. All these rules, codes, specifications and/or regulations shall be maintained with all current amendments.

(ii) hydrostatic test apparatus comprising pressurising equipment, pressure gauge and volumetric measuring equipment in accordance with IS:5844-hydrostatic stretch testing of compressed gas cylinders and the apparatus shall be equipped with at least two 15cm

diameter (minimum) working pressure gauges one being used as test gauge and other as master gauge.

Note : Cryogenic container shall be tested pneumatically at 1.1 times of the design pressure or as per the code accepted by the Chief Controller.

(iii) non-destructive testing facilities like ultrasonic flaw detection with gauging measurement, acoustic emission techniques, etc. for detection of stress corrosion cracks or fatigue cracks developed during the service.

(iv) dead-weight pressure gauge tester of appropriate pressure range or a master pressure gauge of 15cm minimum diameter covering the appropriate pressure range.

(v) boroscope, extra-low voltage lamps to permit adequate internal viewing of cylinder and other lamp necessary for close examination of external surfaces.

(vi) straight edge, template, miscellaneous tool and gauges for measurement.

(vii) weighing equipment, where applicable.

(viii) one set of standard test weight for the weighing machine, stamped by the relevant statutory authority.

(ix) Adequate cylinder handling equipment.

(x) Adequate cylinder draining equipment.

(xi) Facilities for internal drying cylinders.

(xii) Marking and stamping equipment.

(xiii) Facilities for capturing photograph of the cylinder identification details.

(xiv) Hardness testing tools.

(xv) Painting booth fitted with exhaust fan of suitable capacity and draft.

**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 1/20,000 of its total capacity.

(ii) weighing equipment error not greater than +0.1 per cent.

(iii) Working pressure gauge error not greater than 1 per cent of the pressure.

(iv) Master 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 -one month.

(ii) Master pressure gauge- six months.

- (iii) Weighing equipment-checked by test weight daily when in service.
- (iv) Test weights – two years.

3 **Working conditions.** -Working conditions for the test stations shall be conducive to accurate and safe inspection and testing of gas cylinders. The test station shall comply with the following conditions:-

- (i) It shall have good lighting to permit ready external examination 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. **Quality management system.** - The quality management system of a cylinder testing station for seamless steel or composite cylinder shall be got duly certified under ISO Standards from Bureau of Indian Standards or any other internationally reputed agency.

#### B. Testing of cylinders

**1. Condition of cylinders for test.**- Cylinders forwarded to the test station for testing shall have first been emptied of their contents and then labeled as 'empty'. Irrespective 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 contaminated by poisonous or obnoxious substances, shall be emptied only by test stations properly equipped and experienced to handle the particular gas or substance. Such cylinders shall be clearly labeled 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 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 "obstructed". 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.
- (iii) Should the valve be obstructed the contents of the cylinder shall be released in safe manner as stated in (i) above work on cylinders containing combustible gases shall be carried out in the open air in the degassing area.

Note.- A suitable method of dealing with a valve in which the spindle cannot be removed is to drill a 1/16<sup>th</sup> in (1.6 mm) diameter hole with a hand drill through the valve body to the gas passage below the spindle seating. 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 personal protective equipments (PPE).

#### 2. Inspection of cylinders before carrying out hydrostatic/hydrostatic stretch test —

(1) Prior to carrying out 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) Shot blasting, rotary wire brushing;
- (b) Burn out treatment carried out in a furnace at a temperature not exceeding 300°C 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 externally and as far as practicable internally for surface defect in accordance with the IS:5845, IS:8451, IS:13258, ISO:11623 as the case may be, or any other Code approved in writing by the Chief Controller.

(3) The cryogenic containers shall be pneumatically tested at test pressure 1.1 times to the design pressure

#### 3. Hydrostatic or hydrostatic stretch test or proof pressure 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 cylinder shall be retained for a period of not less than 30 seconds.
- (ii) The permanent stretch suffered by the cylinder due to application of test pressure shall not exceed 10% of the total stretch Suffered during the test.

(iii) Any reduction in pressure noticed during the retention of 30 seconds or any leakage, visible bulge or deformation should be treated as case of failure in the test.

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

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

(ii) The test pressure shall be retained for a period of not less than 30 seconds. Any reduction in pressure noticed during this retention period or any leakage, visible bulge or deformation shall be treated as case of failure in the test.

(3) As soon as the test is completed, the cylinder shall be thoroughly 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.

4. 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 and which cannot be repaired in accordance with rule 11 & 12 shall be reported to the owner of the cylinder and shall be destroyed by rendering the cylinder unusable as provided under rule 36.

5. **Records of test.**—Complete records 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/cylinder serial number.
- (c) The specification to which the cylinder conforms.
- (d) Date of original hydrostatic/hydrostatic stretch test.
- (e) Test reports and certificates furnished by the manufacturer, 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 cylinder and actual tare weight.
- (k) Condition of cylinder shell.
- (l) Name of gas.
- (m) Type of valve fitted, and
- (n) Remarks, if any.

Note: (1) The above particulars shall form the history card or record for each cylinder and all changes from time to time shall be indicated therein.

(2) The test station shall adopt procedures, which fully comply with the requirements of these rules and guidelines issued by Chief Controller from time to time.

6. **Validity of cylinder testing station and hot repair or reconditioning approvals of LPG and welded cylinders.**—Approval for cylinder testing & hot repair or reconditioning of LPG and welded cylinders shall be granted initially for a period of one year, which may be further extended for a maximum period up to ten years on production of valid ISO accreditation Certificate duly issued by any Nationally or Internationally accredited agency and record of test for the cylinders tested or hot repaired during the present validity and scrutiny fee as prescribed in Schedule V.



4	G	To dispense CNG as automotive fuel from a mother station, daughter station or a CNG online station	Chief Controller	To dispense CNG as automotive fuel from a mother station, daughter station or a CNG online station	10000
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**B. FEES OTHER THAN LICENCE FEES**

Sl. No.	Purpose	Fees (Proposed)	Rupees (Proposed)
1	Issue of filling permission under clause B of sub-rule (1) of rule 3	Scrutiny fee for the first 100 nos. of cylinders or part thereof. Exceeding 100 nos. of cylinders Rs.2000/- for every additional 500 cylinders or part thereof Note : Fee applicable for the cylinders filled and meant for export purpose irrespective of the nos of cylinder, scrutiny fee Only	1000  1000
2	Approval of design for manufacture of cylinder or valve or LPG regulators under sub-rule (3) of rule 3	(a) Scrutiny fee for grant of manufacturing unit approval, with one year validity fee for the first time  (b) For subsequent approval of new design (c) For subsequent approval of any change in design (d) Annual fee for renewal of cylinder, valve and LPG, regulator manufacturing units.	10000  2000 1000  2000
	Approval of design for manufacture of cylinder, valve, LPG regulator under sub rule 3(4) by foreign manufacturer	(a) Scrutiny fee for grant of approval for manufacturing unit with one year validity fee for the first time. (b) For subsequent approval of new design (c) For subsequent approval of any change in design (d) Annual fees for renewal of cylinders, valves and, regulators manufacturing units.	6,50,000 65000  13000  32500
3	Conversion of cylinder under sub-rule (2) of rule 28	Scrutiny fee for the first 10 nos. of cylinders or part thereof. Exceeding 10 nos. of cylinders Rs. 1000/- for every 100 numbers of Cylinders	400
4	Approval of cylinder testing station under rule 35 and hot repair of welded or brazed cylinder under rule 12	Scrutiny fee with one year validity fee for the first time Annual renewal fee for cylinder testing or hot repair approval.	10000 2000
5	Prior approval of specifications and plans under rule 47 or 53	Scrutiny fee	1000
6	Amendment of licence under rule 54	Scrutiny fee	1000
7	Issue of duplicate copy of licence under rule 61	Scrutiny fee	1000
8	Issue of authenticated copy of licence under rule 62	Scrutiny fee	1000





2. Particulars of storage licence (Not applicable for Valves and LPG regulators) held by:
    - (i) Storage licence number or approval number issued by the Chief Controller/Controller:
    - (ii) Renewed/valid up to:
    - (iii) Capacity of the storage as per above licence:
    - (iv) Address for storage of Cylinders:
  
  3. Description of the cylinders/Valves and LPG regulators to be imported:
    - (i) Number of Cylinders/Valves/LPG regulators:
    - (ii) Specification of cylinders/Valves/LPG regulators:
    - (iii) Name of the Manufacturer:
    - (iv) Inspected and tested by:
    - (v) Specification of the valves fitted to the cylinders:
    - (vi)\*Filled with (in case of cylinders only) \_\_\_\_  
(True chemical name of the gas)
    - (vii)\*Filling pressure at 15 C if filled with permanent gas or dissolved acetylene:
    - (viii) \*Filling ratio, if filled with a liquefiable gas (in case of cylinders only)
    - (ix) Date of last hydraulic test in case of cylinders:
    - (x) Rotation numbers of cylinders/Sr. no. of valves/LPG regulators:
  
  4. Name of the sea port/airport where cylinders/valves/LPG regulators are proposed to be imported:
  
  5. Remarks:
- Date of application:

Signature of Applicant

Note:—

1. Particulars marked with\* are not required to be furnished if empty cylinders are desired to be imported.
2. Manufacturers test and inspection certificates complete in all respects pertaining to each lot of cylinders valves shall accompany this application.
3. In case cylinders are desired to be imported duly filled with gas, filler certificates in respect of sub-items (vi), (vii) and (viii) of items shall be furnished.

### FORM C

(See Rules 49, 54 and 55)

#### **Application for the grant/amendment/renewal/ duplicate copy of a licence to fill and/or store compressed gas/es in cylinders:**

Documents listed overleaf must be enclosed with this application, if it is for the grant of a licence in Forms 'E', 'F' & 'G'.

- 
1. Applicant's details:
    - (i) Name in which licence required \*\* -----
    - (ii) Applicant's full postal address with PIN Code -----
    - (iii) Applicant's telephone/mobile numbers: -----
    - (iv) Applicant's email ID: -----
  
  2. Location of the premises where compressed gas/es are to be filled and stored:
    - (i) Survey No./plot number : -----
    - (ii) Town or village: -----
    - (iii) District: -----
    - (iv) State: -----

- (v) PIN Code: -----  
 (vi) Telephone numbers: -----

3 Name and Nature of each compressed gas proposed to be filled/stored:

Type of the Gas	Name of the gas	No. of filling points	Numbers of the filled cylinders/Kgs of gas/es proposed to be stored.
(i) Toxic			
(ii) non-toxic and non-flammable			
(iii) non-toxic and flammable			
(iv) dissolved acetylene gas			
(v) non-toxic and flammable liquefiable gas other than LPG or			
(vi) liquefied petroleum gas:			

4. Name and Nature of each compressed gas already filled/stored (applicable in case of amendment):

Type of the Gas	Name of the gas	No. of filling points	Numbers of the filled cylinders/Kgs of gas/es proposed to be stored.
(i) Toxic			
(ii) non-toxic and non-flammable			
(iii) non-toxic and flammable			
(iv) dissolved acetylene gas			
(v) non-toxic and flammable liquefiable gas other than LPG or			
(vi) liquefied petroleum gas:			

5. Number of the licence/s held for the Premises (not applicable in new case) -----  
 6. Particulars of NOC issued by District Authority where applicable  
 7. Particulars of CNG Dispensers/ Cascade & Compressors .....

(In case of Form 'G' licence)

Note: In the case of application for grant or amendment of licence in Form 'G', particulars of the compressor, CNG cylinder cascades, CNG dispensers, etc. shall also be furnished.

I hereby declare that the statements made above have been checked up by me and are true and I undertake to abide by the norms and conditions of the licence, which will be granted to me.

Date of application

Signature and designation of the applicant

\*\*Where the application is made on behalf of a company, the name & address of the company and the name of the Director/ Partner/ Manager of the company should be given and the application should be signed by him. Every change in the name of the Director/ Partner / Manager shall be forthwith intimated to and his specimen signature filed with licensing authority.

DOCUMENTS REQUIRED TO BE SUBMITTED WITH THIS APPLICATION FOR A LICENCE IN FORM 'E', 'F' & 'G'

- (i) Four copies of specifications and plans approved under rule 47  
 (NOT REQUIRED FOR RENEWAL OF A LICENCE WITHOUT AMENDMENTS)  
 (ii) Licence together with approved plans and specifications attached thereto.  
 (NOT REQUIRED FOR THE FIRST GRANT OF A LICENCE)

- (iii) Requisite amount of licence fee for the grant, amendment or renewal of a licence paid in the manner specified in Rule 65.
- (iv) Documentary evidence in support of legal physical possession of the premises proposed to be licensed, copies of lease agreement, partnership deed/ memorandum and article of association, approval/ clearance/ permit as applicable from the Local Administration etc.
- (v) An undertaking stating that all necessary clearances from revenue, fire, local administration, etc. have been obtained and the construction of the premises has been completed as per approved plan complying with all relevant requirements under these rules.
- (vi) No Objection Certificate from the District Authority under rule 48 in the case of application for licence in Form F for storage of flammable, Toxic and/ or corrosive gases for the purpose of sale /trade or Form 'G'
- (vii) HAZOP Study or Disaster Management Plan in case of toxic and/or corrosive or flammable gases.
- (viii) SOP regarding toxic gas handling.
- (ix) Documents required to be submitted for renewal of cylinder manufacturing permission, valve manufacturing permission, LPG regulator manufacturing permission, cylinder testing permission and hot repairing permission-
  - (a) Renewal fees as prescribed in Schedule V
  - (b) An undertaking duly signed by director or authorised signatory of the company to effect that there are no changes in the organizational set up, plant machinery and manpower.
  - (c) Performance report for the period of last validity of the permission.
  - (d) Copy of valid ISO Certificate duly issued by BIS or any other accredited agency.
  - (e) Compliance of any other condition, if any imposed by the approving authority at the time of grant/ renewal of the approvals.

#### FORM D

(See rules 50, 51 and 54)

#### Licence to import Gas Cylinders, Valves and LPG regulators by Sea

No. \_\_\_\_\_ Fee Rs

Licence is hereby granted to M/s ..... to import by sea at any one time cylinders, valves, LPG regulators of the description given below at the port..... for consignment to ..... subject to the provisions of the Explosives Act, 1884 and the rules framed there under and to the conditions on the back of this licence.

The licence shall remain in force till the.....20 .....

Date ..... Chief Controller of Explosives

#### Description of the Cylinders/ Valves, LPG regulators

1. Number of cylinders/valves/LPG regulators
2. Specification of cylinders (Code),
  - (a) W.C.
  - (b) W.P.
  - (c) T.P.
3. Manufactured by.
4. Inspected and tested by.
5. Specifications of the valves fitted to the cylinders.
6. Filled with.....
 

(True chemical name of the gas)
7. Filling pressure at 15°C, if filled with permanent gas or dissolved acetylene.

8. Filling ratio, if filled with a liquefiable gas.
9. Date of last hydraulic stretch test.
10. Rotation numbers of cylinders.

The licence liable to be cancelled if the cylinders do not conform to the description given in the body of the licence and for contravention of any of the rules and conditions under which this licence is granted and the holder of the licence is also punishable as provided for under Section 9B of the Explosives Act, 1884.

#### Conditions of Licence

1. This licence shall become void after the expiry of the period mentioned therein.
2. Filled cylinders on becoming empty shall not be refilled with any gas except after obtaining prior concurrence of the licensing authority.
3. The licensee shall make prior arrangements for expeditious removal of the filled cylinders from the port of importation to authorized premises.

#### FORM E

(See rules 50, 51 and 54)

#### Licence to fill compressed gas in cylinder

Licence No .....Fee Rs.....

Licence is hereby granted to ..... valid only for the filling of cylinders with compressed gas in the licensed premises described below and shown in the plan No ..... dated .....subject to the provisions of the Explosives Act, 1884 (4 of 1884) and the rules made there under and to the further conditions of this licence.

The licence shall remain in force up to 30<sup>th</sup> day of September, 20 the ..... 20

Chief Controller/Controller of Explosives

#### Description and location of the licensed premises

The licensed premises, the layout boundaries and other particulars of which are shown in the attached approved plan No. .... dated..... are situated at ..... and consist of ..... for filling of the gas(es) in cylinders as described hereunder:

Type of gas

- ( a ) Toxic
- ( b ) non-toxic and non-flammable
- ( c ) non-toxic and flammable
- ( d ) dissolved acetylene gas
- ( e ) non-toxic and flammable liquefiable gas other than LPG.
- ( f ) Liquefied petroleum gas

and is situated at.....

(Plot number) (Name of Street) (village or town) (Police Station) (District)

#### Space for Endorsement of Renewals

This licence should be renewable without any concession in fee for ten years in the absence of contraventions of Explosives Act, 1884 or Gas Cylinders Rules, 2016, framed there under or of the conditions of the this licence.	Date of renewal	Date of expiry	Signature and office stamp of the licensing authority

The licence liable to be cancelled if the cylinders do not conform to the description given in the body of the licence and for contravention of any of the rules and conditions under which this licence is granted and the holder of the licence is also punishable as provided for under section 9B of the Explosives Act, 1884.

#### CONDITIONS

- (A) 1. The licensed premises shall not be used for any purpose other than filling compressed gas into cylinders and keeping thereof for the time being and for the purpose connected therewith.
2. No cylinder shall be filled with any compressed gas unless-
- (i) such cylinder has been approved in writing by the Chief Controller for filling;
  - (ii) the cylinder has been examined and tested as required under the relevant rules.
3. Before filling, every cylinder with its valve and other fittings shall be carefully examined to ensure that it complies in all respects with the relevant provisions of the rules before it is passed for filling.
4. No cylinder shall be filled with any compressed gas in excess of the design working pressure and the filling ratio prescribed under the rule.
5. Where it becomes necessary to change the valve and other fittings of the cylinder, a check shall be maintained on the tare weight originally stamped on the cylinder and necessary corrections made for any variation.
6. No cylinder, which is not painted with appropriate colour, as prescribed in the rules shall be filled with any compressed gas.
7. Compressing and filling apparatus for any gas shall be wholly distinct from and unconnected with the compressing and filling apparatus for any other gas.
8. No cylinder shall be filled with any compressed gas between the hours of sunset and sunrise except in the manner and under such other condition(s) specially endorsed on the licence.
- Provided that this shall not be applicable to non toxic non flammable gas filling plants with lighting or illumination conforming to IS: 6665 Code of practice for industrial lighting.
9. All electrical equipment such as motors, switches, starters, etc., installed in the premises used for compressing and filling of flammable gases shall be of flameproof construction conforming to IS :2148./IEC 60079(in lieu of IS 2148)
10. No artificial light capable of igniting flammable vapour or gas, mobile phones, etc. shall at any time be present at the premises during the filling of any compressed gas in cylinder and no person engaged in such filling shall smoke.
11. Every person managing or employed on or in connection with the licensed premises shall abstain from any act whatsoever which tends to cause fire or explosion and which is not reasonably necessary and to the best of his ability, shall prevent any other person from doing such act.
12. The licensee shall provide at the licensed premises a minimum of two portable foam type or dry chemical type fire extinguishers of 10 kg. each BIS marked or approved which shall be kept ready at a convenient location for immediate use in the event of any fire in addition to other fire fighting or other mitigating facilities required for flammable or toxic gases.
13. All filling operations shall be supervised under the direct supervision of a competent person.
14. The licensed premises used for compressing and filling of liquefied petroleum gas shall at all time maintain a clear safety zone prescribed in OISD Standards 169 and 144 as the case may be, all round from any building, public place, public road or any adjoining property which may be built upon.
15. The licensed premises shall be constructed of non-flammable materials and adequately ventilated.
16. Any accident, fire, explosion or untoward incident occurred within the licensed premises shall be immediately reported to the Chief Controller, Controller, District Magistrate and the Officer-in-Charge of the nearest Police Station and by quickest mode of communication.
17. Free access to the licensed premises shall be given at all reasonable time to any of the officers listed in Rule 71 and every facility shall be afforded to such officer for ascertaining that the rules and the conditions of this licence are duly observed.

**(B) Additional requirements for dissolved acetylene cylinder filling and storage plants:-**

1. Safety devices shall be provided in the acetylene cylinder filling and storage plants to ensure that the pressure, temperature and flow levels are maintained within safe limits.

2. The equipments shall be designed, operated and maintained in such a way that during normal operation air or oxygen entry to the equipments is prevented, under pressure shall be prevented, air acetylene mixtures shall be safely eliminated by purging and excessive rise in temperature and pressure is prevented.
3. Regulators shall conform to ISO-7291 and high pressure hoses shall conform to ISO-14113. Hoses for high pressure acetylene shall have burst pressure not less than 1000 bar (100 MPa).
4. Flame arrestors or shut off devices shall be provided on all the strategic locations in the plant to arrest both ignition and the gas flow.
5. Although the pressure in the filling manifolds may be 25 bar but while designing the manifolds possibility of acetylene decomposition and detonation resistance shall also be taken into the account.
6. An efficient fire Protection System, Deluge system and Emergency response system for dissolved acetylene cylinder filling and storage plants shall be provided.
7. Carbon Dioxide fire extinguishers shall not be used for extinguishing flammable gas fires due to the risk of static electricity generation. Dry Chemical Powder type fire extinguishers shall be installed at all the strategic locations in the acetylene filling and storage plant.
8. Acetylene plants shall be equipped with emergency procedures for Calcium Carbide storage and transportation, Carbide fires, Carbide lime spillage and hot acetylene cylinder.
9. Spray of cooling water over the hot cylinder shall be continued for a sustained period of time till acetylene cylinder is attaining cool.

**Safety distance table for acetylene plant**

From	To	Distance in Meter
Acetylene plant	Factory boundary wall, buildings adjacent properties, office building etc.	15
Acetylene plant	Pressure vessels containing cryogenic liquid storage	15
Acetylene plant	Oxygen manufacturing plant	30
Acetylene plant	Air compressor air intake point	90
Lime sludge drying pits	Boundary wall and acetylene generation unit	9
Acetylene plant	Non flame proof electrical fittings	15

**FORM F**

(See rules 50, 51 and 54)

Licence to store compressed gas in cylinders

Licence No ..... Fee Rs.....

Licence is hereby granted to ..... valid only for the possession of cylinders filled with compressed gas in the licensed premises described below and shown in the plan No. .... dated ..... subject to the provisions of the Explosives Act, 1884 (4 of 1884) and the rules made there under and to the further conditions of this licence.

The licence shall remain in force up to 30th day of September, 20..... Chief Controller/Controller of Explosives

Description and location of the licensed premises

The licensed premises, the layout boundaries and other particulars of which are shown in the attached approved plan No. .... dated ..... are situated at ..... and consist of for possession of the gas contained in cylinders as described hereunder:

Type of gas	Quantity
( a ) toxic .....	
( b ) non-toxic and non-flammable .....	
( c ) Non-toxic and flammable .....	
( d ) Dissolved acetylene gas .....	
( e ) Non-toxic and flammable liquefiable gas other than LPG .....	

(f) Liquefied petroleum gas .....

and is situated at.....

(Survey No/Plot number) (Name of street) (Village or town) (Police Station)

(District)

### Space for Endorsement of Renewals

This licence shall be renewable without any Date of concession in fee for ten years in the absence renewal of contraventions of Explosives Act, 1884 or Gas Cylinders Rules, 2016, framed there under or of the conditions of this licence.

Date of  
expiry

Signature and  
stamp of the  
licensing  
authority

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The licence liable to be cancelled if the cylinders do not conform to the description given in the body of the licence and for contravention of any of the rules and conditions under which this licence is granted and the holder of the licence is also punishable as provided for under Section 9B of the Explosives Act, 1884.

### CONDITIONS

#### 1. Construction details of LPG storage shed

(a) LPG cylinder storage shed shall be constructed from any non flammable material having floor area of minimum 11 square meter for 1000 Kgs of LPG storage. Mastic flooring conforming to IS-1195/1196 shall be provided in the LPG cylinder storage shed .The ventilator area shall be minimum 10 % of the floor area .Minimum safety distances as specified in table given in condition 5a of Form F licence shall be maintained and minimum 1.8 M high brick masonry compound wall shall be provided all around the LPG storage shed maintaining minimum safety distances as specified in condition 5a of form F license. Compound wall gate width shall not be more than 1.2 M. Dedicated LPG cylinder truck parking area in front of LPG cylinder storage shed shall be provided, which shall be surrounded by an industrial type of fencing of minimum 2.0 m height.

(b) The licensed premises shall not be used for any purpose other than for keeping of compressed gas filled in cylinders.

2. Compressed gas cylinders shall be stored only in the storage shed, which shall be constructed of suitable non-flammable materials provided that, when only non-flammable gas filled in cylinder is stored, the beams, rafters, columns, windows and doors may be of wood.

3. The storage shed shall be adequately ventilated near the ground level and near or in the roof. In case the storage shed is used for keeping liquefied petroleum gas cylinder, the ventilators shall be provided with two thickness of fine copper or other non-corroding metal wire gauge of mesh not less than 11 to the linear centimeter.

4. As far as possible, different types of gases should not be stored in the same shed. Where different types of gas cylinder is stored in the same shed, cylinder may be grouped together depending on the nature of the gas contained therein e.g. flammable gas cylinder shall be separated from cylinder containing oxidizing gases by an intervening space of one metre or by a fire resisting partition wall in between them and cylinder containing toxic gases shall be segregated from the cylinder containing non-toxic gases by a suitable partition wall.

5.(a) The following distances shall be kept clear at all times, between any building, public place, public road or any adjoining property which may be built upon and the storage shed used for the storage of liquefied petroleum gas cylinder:

Quantity of compressed gas in Cylinder	Minimum distance to be kept clear
0 -- 101	--
101 -- 2000	3
2001 -- 3000	4
3001 - 4000	5
4001 - 6000	6
6001 -- 8000	7



8001 - 10000	8
10001 -- 12000	9
12001 -- 20000	12
over 20000	15

Provided that the distance specified above may be reduced by the Chief Controller (i) where screen walls are provided or other special precautions taken, or (ii) where there are special circumstances which in the opinion of the Chief Controller would justify such reduction.

(b) Minimum 3.0 m clear safety distances shall be maintained all around toxic gas and flammable gas storage shed other than LPG .An industrial type fencing of height not less than 2.0 M shall be provided all around the cylinder storage shed.

6. Notwithstanding anything contained in condition 6 above, cylinders containing liquefied petroleum gas exceeding 100 Kg. but not exceeding 500 Kg. may be kept in a storage shed forming part of, or attached to a building, provided that it is separated there from by a substantial partition and the only means of access to it is from outside air, such a storage shed shall not be situated under any staircase or near other entrances to, or exits from the rest of the building or other buildings.
7. A shed used for storage of liquefied petroleum gas cylinder shall be surrounded by a suitable brick masonry compound wall of 1.8 meters high with a 1.2 meter wide gate to prevent unauthorized person from having access to the shed and its safety zone.

Note: Suitable space for parking of truck and unloading or loading of cylinders shall be provided by the licensee.

8. Thin wall cylinder shall not be stacked in a horizontal position:

Provided that in case of liquefied petroleum gas cylinders, the following method of stacking may be permitted:-

- (i) filled cylinder shall be stored vertically and not be stacked more than 2 high;
- (ii) empty cylinder if stored vertically, shall not be stacked more than 3 high and; if stored horizontally, shall not be stacked more than 5 high;
- (iii) the pile of the cylinder shall be kept stable by using chocks at the ends;
- (iv) at least 60 centimeter wide gangway, to permit access and maneuvering of cylinders, shall be left between stacks of single or double rows and between stacks and walls,

9. True chemical name(s) of the gases shall be prominently displayed in the storage shed.
10. The storage shed shall be in the charge of a competent person.
11. Any accident, fire, explosion or untoward incident occurred within the licensed premises shall be immediately reported to the Chief Controller, Controller, District Magistrate and the Officer-in-Charge of the nearest Police Station and by quickest mode of communication.
12. Any person storing gas cylinder, when called upon by a notice in writing, to execute any additions, alterations or repairs to the gas cylinders storage shed, which in the opinion of the inspecting authority, are necessary for the safety of the premises, shall execute the said additions, alterations or repairs within such period not being less than one month from the date of receipt of the notice, as may be specified in the notice.
13. No shed used for storage of flammable gases shall be opened and no handling of the gas cylinder shall be permitted between the hours of sunset and sunrise, except where approved electric lighting is exclusively used.
14. The storage shed and the area surrounding it shall at all times be kept clean and free from all flammable materials, waste vegetation and, rubbish.
15. (a) No fire, furnace or other source of heat or light other than flameproof electric light and fittings shall be allowed in the storage shed and within the safety zone required to be maintained under condition 6.  
(b) No person shall smoke in the storage shed or carry matches, fuses, mobile phones or other appliances producing ignition in the premises. Conspicuous 'No smoking signs in Hindi, English and the regional language shall be pasted or hung up at prominent places outside the storage shed.
16. The licensee shall provide at the licensed premises a minimum of two potable foam type or ordinary chemical type fire extinguishers of 10 kg each BIS marked or approved which shall be kept ready at a convenient location for immediate use in the event of any fire in addition to other fire fighting for other mitigating facilities required for flammable or toxic gases.

17. Free access to the licensed premises shall be given at all reasonable times to any of the officers listed in rule 71 and every facility shall be afforded to such officer for ascertaining that the rules and the conditions of this licence are duly observed.

### FORM G

(See rules 50, 51 and 54)

Licence to dispense compressed natural gas or compressed Bio Gas in a CNG/CBG dispensing station as automotive fuel

Licence No .....

Fee Rs

Licence is hereby granted to

..... valid only for filling compressed natural gas in On board CNG/CBG cylinders of vehicle as automotive fuel in the licensed premises described below, subject to the provisions of the Explosives Act, 1884 (4 of 1884) and the Gas Cylinders Rules, 2016 made there-under and to the conditions of this licence.

The licence shall remain in force up to 30<sup>th</sup> day of September, 20

The .....20 .....

Chief Controller of Explosives

#### Description and location of the licensed premises

The licensed premises, the layout boundaries and other particulars of which are shown in the attached approved plan.....No ..... dated ..... are situated at

(Survey No/Plot number) (Name of street) (Village or town) (Police Station) (District)

and consist of (i) ..... number of cascades each containing No. of cylinders with total water capacity of.... KL

(ii) .....number of compressors (iii) number of dispensers and (iv) other facilities .....

#### Space for Endorsement of Renewals

This licence should be renewable without any concession in fee for ten years in the absence of contraventions of Explosives Act, 1884 or Gas Cylinders Rules, 2016 framed there under or of the conditions of the this licence.	Date of renewal	Date of expiry	Signature and office stamp of the licensing

The licence liable to be cancelled if the cylinders do not conform to the description given in the body of the licence and for contravention of any of the rules and conditions under which this licence is granted and the holder of the licence is also punishable as provided for under section 9B of the Explosives Act, 1884.

#### CONDITIONS

- 1(a). If CNG or CBG cascade and compressor is installed on suitable RCC or Steel structure and open to sky then following additional conditions shall also be complied along with all other requirements of the rule-
- (i) Dedicated flooding type fire fighting system for CNG or CBG cascade storage and compressor kept on RCC structure operatable from ground level or automatic shall be provided.
  - (ii) An analysis report showing 4 hours fire resistant rating as per IS-1642-1989 shall be conducted by reputed agency and its report shall be enclosed along with other documents.
  - (iii) Risk analysis report prepared by a reputed engineering agency and its report shall be enclosed along with other documents.
  - (iv) The structural adequacy with respect to the superstructure with reference to static and dynamic load/vibrations on full operation of all the equipment shall be carried out by a reputed structural engineer and its report shall be enclosed along with other documents.
  - (v) A HAZOP study shall be carried out by a reputed engineering firm and its report shall be enclosed along with other documents.
  - (vi) Minimum two stair cases opposite to each other for proper access to the CNG equipment area shall be provided.
  - (vii) CCTV camera shall be provided for close monitoring of the station min retention of minimum 24 Hrs recording.
  - (viii) Emergency stop buttons shall be provided on ground level and roof level.

1(b). Composite CNG dispensing units comprising of storage cylinders, compressor and dispenser integrally shall be of a type approved by the Chief Controller and minimum safety distance of 4.0 m. shall be kept clear all around the stand alone composite CNG dispensing unit and for other safety distances shall be applicable as given in condition 6 of the licence.

1(c). The licensed premises shall be used only for the purpose and facilities it is licensed for.

2. CNG or CBG be dispensed only into those cylinders of motor vehicles, which are approved by the Chief Controller and have passed the periodic statutory tests under these rules conducted by a testing station recognised by the Chief Controller.

3. The CNG or CBG cascades, dispensers, compressor, piping, and other fittings shall be of a design suitable for CNG in conformity to the Gas Cylinders Rules 2016 and safety distances shall be maintained as per table I and II given below.

4. The storage of the cascade of cylinders should be made in a well-ventilated shed having a light roof or canopy with at least one side open. An area of at least 1 meter around the cascade shall be provided within the shed and the same shall be demarcated either by raised platform or by curb wall.

5. In case, the cylinder cascade is mounted on Light Commercial Vehicle, the same shall be made totally immovable by suitable application of brakes and chokes.

6. No cylinder shall be filled with CNG or CBG in excess of the design working pressure.

7. Inter-distances between various equipments, storage cascades, dispensers, etc. installed in CNG or CBG dispensing station shall observe safety distances as per Table IA & B and II

**TABLE I A**  
INTER DISTANCES

From buildings and outer boundaries to gas storage units

Total capacity of gas storage cascade units (in liters)	Minimum distance from buildings and boundaries (in meters)
Up to 4500	2.5
4500 to 10000	4.0
10000 to 100000	10.0

**Table I B**

**Minimum 1.0 m inter distances shall be maintained between two cascades**

Note: - If on the side(s) towards boundary of the installation, the clearance as above is not available, the same may be reduced to 2 meters provided a 4 H-FRR RCC wall of adequate height and length covering the cylinder cascades is constructed at the boundary and adequate clear space is available on the other side of the wall.

**TABLE II**

Inter distances between various facilities in the CNG fueling station

Sl. No.	Distance from (in meters)	CNG /CBG Compressor	CNG /CBG dispensing Unit	Storage Cascade	Outer Boundary wall/ CLF*	MS/ HSD Dispenser	Vent of MS /HSD u/g storage tanks	Filling Point of MS/ HSD
1	CNG /CBG compressor	-	3	2	3	6	6	T-1 (Min-3)
2	CNG /CBG dispensing Unit	3	-	2	4	6	4	-do-
3	Storage cascade	2	2	-	T-1	T-1 (Min-6)	T-1 (Min-4)	-do-
4	Outer boundary wall/CLF*	3	4	T-1	-	6	4	-do-
5	MS/HSD Dispenser	6	6	T-1 (Min-6)	6	-	6	-do-

Sl. No.	Distance from (in meters)	CNG /CBG Compressor	CNG /CBG dispensing Unit	Storage Cascade	Outer Boundary wall/ CLF*	MS/ HSD Dispenser	Vent of MS /HSD u/g storage tanks	Filling Point of MS/ HSD
6	Vent of MS/HSD u/g storage tanks	6	4	T-1 (Min-4)	4	6	-	6
7	Filling point of MS/HSD	T-1 (Min-3)						

\*CLF - Chain Link Fencing.

Note:-

- (i) T-I denotes Table-I.
  - (ii) Distances shown as "-" shall be any distance necessary for operational convenience.
  - (iii) A suitable curbing platform shall be provided curbing platform shall be provided at the base of the dispensing unit to prevent vehicles from coming too near the unit.
  - iv) A CNG or CBG cascade having cylinders of total water capacity not exceeding 4500 liters can be mounted on top of the compressor super structure. The assembly shall observe 3-meter clearance around and also from the dispensing unit and it can be reduced to 2 meter as per Note-I of Table – I.
8. The dispenser for dispensing CNG or CBG shall be of a type approved by the Chief Controller.
  9. The vehicle shall have approved type of CNG kit fitted in accordance with guidelines of the Ministry of Road Transport and Highways, Govt. of India.
  10. No motor vehicle shall be fueled while the engine is running and, where the vehicle is licensed for the conveyance of more than six passengers on hire, while any passenger remains in the vehicle.
  11. Warning signs with the words "STOP VEHICLE", "NO SMOKING", "NO OPEN FLAME PERMITTED", "FLAMMABLE GAS", shall be displayed at dispensing station and compressor areas prominently.
  12. All electrical fittings and equipment such as compressors, motors, switches, starters, etc., installed in the premises used for compressing and filling of CNG shall be of flameproof construction conforming IS 2148/IEC 60079(in lieu of IS2148) approved by the Chief Controller of Explosives.
  13. No alterations or additions shall be carried out to the premises without prior approval of the licensing authority.
  14. Smoking, naked lights, lamps, source of fire, mobile phones or any other implements capable of igniting flammable vapour or gas shall not be allowed inside the premises.
  15. Every person managing or employed on or in connection with the licensed premises shall abstain from any act whatsoever which tends to cause fire or explosion and which is not reasonably necessary and to the best of this ability, shall prevent any other person from doing such act.
  16. The licensee shall provide at the licensed premises the fire fighting facilities at least as per the following scale at different locations:-

Location	Type of extinguishers
Dispensing Unit	1x10 Kg DCP
Compressor (On-line)	1x10 Kg DCP
(mother station	1x70 Kg DCP
CNG storage	1x10 Kg DCP
Cascade refueling area	1x10 Kg DCP
MCC/Electrical installation	1x4.5 Kg CO <sub>2</sub> per 25 Sq. M. floor area

17. The operator and attendant shall be fully conversant and trained with all the facets of the dispensing activities including operations, procedures, maintenance and hazards of CNG or CBG and the risk associated with the handling of the product.
18. The emergency telephone numbers of local fire service, police and the principal marketing company and emergency instructions shall be conspicuously displayed in the licensed premises.
19. If the licensing authority calls upon the holder of a licence by a notice in writing to execute any repairs in the licensed premises which are, in the opinion of such authority, necessary for the safety of the premises, the holder of the licence shall execute the repairs within such period as may be specified in the notice.
20. Free access to the licensed premises shall be given at all reasonable time to any of the officers listed in rule 71 and every facility shall be afforded to such officer for ascertaining that the rules and the conditions of this licence are duly observed.
21. Any accident, fire, explosion or untoward incident occurred within the licensed premises shall be immediately reported to the Chief Controller, Controller, District Magistrate and the Officer-in-Charge of the nearest Police Station by quickest mode of communication.

#### SCHEDULE VI

(See rule 20)

#### TRANSPORT OF CYLINDERS

##### 1. Transport of cylinders by vehicles: —

- (a) The cylinders filled with any compressed gas shall not be transported by a bicycle or any other two wheeled mechanically propelled vehicle.
- (b) The cylinders shall be so transported as not to project in the horizontal plane beyond the sides or ends of the vehicle by which they are transported.
- (c) There shall be no sharp projections on the inside of the vehicle.
- (d) The cylinders shall be adequately secured to prevent their falling off the vehicle and being subjected to rough handling, excessive shocks or local stresses.
- (e) The cylinders transported in vehicles shall be blocked or braced and be so secured to prevent movement, striking each other or falling down.
- (f) The cylinders filled with any compressed gas shall not be transported along with any other article of a highly flammable or corrosive nature.

##### 2. Restriction on transport: —

- (a) The cylinders containing flammable gases shall not be transported along with the cylinder containing any other type of compressed gas.
- (b) The cylinders containing toxic or corrosive gas shall not be transported along with food- stuffs.
- (c) Acetylene cylinders shall not be transported in closed vehicle
- (d) Thin wall cylinders shall not be transported in horizontal position. Notwithstanding anything contained in clause (a) above, DA cylinder not exceeding twenty five in numbers may be transported along with non-toxic non-flammable gases taking due precautions.

##### 3. Loading and unloading for transport: —

- (a) No lifting magnet shall be used in loading or unloading of cylinder filled with any compressed gas.
- (b) Where 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 be used.

##### 4. Protection of valves during transport: —

- (a) Every cylinder containing compressed gas shall, when transported, have its valve protected against damage in the manner provided in sub-rules (b) and (c) unless it is securely packed in a box or crate.
- (b) Where the design of the cylinder does not provide for the valve lying wholly below the level of the body of the cylinder, a stout 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 nowhere in close proximity to any part of the valve or valve body.
- (c) Where metal caps or metal covers are provided, to protect valves fitted to cylinder other than those containing highly toxic gases like Hydrogen Cyanide, Phosgene, Cyanogen, Cyanogen Chloride, it shall be provided with a vent of such size so as to prevent any gas pressure inside the cap or covers.

- (d) The cylinder containing highly toxic gases like Hydrogen Cyanide, Phosgene, Cyanogen, Cyanogen Chloride gases, shall have their valves protected with gas-tight metal caps or covers.
- (e) Nothing in sub-rules (1), (2) and (3) shall apply to cylinders containing oxygen or nitrous oxide for medical purpose having water capacity not exceeding 5 litres.

**5. Leaky cylinders: —**

- (a) No person shall tender or transport any leaky cylinder.
- (b) Any cylinder containing a flammable or toxic gas, which develops 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.

[F.No 3(2)/2014-Expls.]

SHAIENDRA SINGH, Jt. Secy.