



Gas cylinder Rules

1. Cylinders used for permanent gases, high-pressure liquefiable gases and all toxic and corrosive gases.

(a) The cylinder shall be subjected to hydrostatic IS 5844, the test pressure applied to the cylinder be retained for a period not less than 30 seconds.

(b) The permanent stretch suffered by the cylinder due to application of that pressure shall not exceed the limit namely.

(!) Cylinder below 20 lit water capacity for non – corrosive gases – 10%
of total stretch suffered
during the test

(!!) In Other Gases - 10% of stretch suffered
During the test or 1/5000th on the
Original volume of the

Cylinder with ever in less.

2. Low-pressure non – corrosive liquefiable gases.

(a) The cylinder shall be subjected to hydrostatic test or as per IS 5884 by non – jacket method and the volume change need not be measured.

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

3. As soon as the test completed the cylinder shall be thoroughly cleaned, dried internally and stamped on the neck 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.

Valves

They shall comply in respect industrial gas Cylinder IS 3224 in respect of medical gas cylinder IS 3745 Breathing apparatus IS 7302 for LPG IS 8776



Valves of flammable gases shall have a safety release which bursts at a pressure between 200 to 220 kg/cm².

Valves of flammable gases not listed in IS 3224 shall have left handed screw outlet.

Safety Relief Devices

Cylinder if fitted with safety relief device in their bodies is in accordance with IS 5903.

Cylinder with poisonous gases shall not be provided any safety device.

Safety Report U/ RIO

- (1) Under this rule occupier shall not undertake any industrial activity to which this rule applies unless he has prepared a safety report on that industrial activity containing the information specified in schedule 8 and has sent a copy of that report to the concerned authority at least 90 days before commencing that activity.
- (2) In the case of a new industrial activity which an occupier commences or any modification has been made within 6 months after coming into operation.
It shall be sufficient if the occupier sends to the concerned authority a copy of the report required within 90 days after the date of coming into operation of these rules.
- (3) In case of an existing industrial activity the occupier shall prepare a safety report in consultation with the concerned authority and submit the same within one year from the date of the commencement of the MSIHC rules to the concerned authority.
- (4) The concerned authority if it deems fit issue improvement notice under rule 19 within 45 days of the submission of the said report.

Updating Of Reports U/R 11

The occupier shall not make any modification to the industrial activity to which safety report relates which could materially affect the report.



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He has to make a further report regarding modification and has sent a copy of the report to the concerned authority at least 90 days before the modification.

Where industrial activity is continuing the occupier within 3 years of the date of last year make a further report which shall have new technical knowledge which has affected the particulars of previous report relating to safety and hazard assessment and shall within 30 days send a copy to the concerned authority.

U/R 12

After the commencement of the MSIHC rules the occupier has sent a safety report relating to an industrial activity to the concerned authority, he may serve a notice to the occupation require him to provide such additional information and the occupation has to send information within 90 days.

Safety Audit

- (1) After the commencement of the MSI HC rules the occupier of both the new and existing industrial activity shall carryout an independent safety audit of the respective industrial activities with the help of an expert not associates with such industrial activities.
- (2) The occupier shall forward a copy of the auditors report along with his comment to the concerned authority within 30 days after the completion of such audit.
- (3) The occupier shall update the safety audit report on a year by conducting a fresh safety audit and forward a copy of it with his comments these on within 30 days to the concerned authority.

The concerned authority may issue improvement notice under rule 19 within 45 days of the submission of the said report.

Safety Measure Of Gas Cylinders

The important safety measures are

- Do not change the colour the cylinder
- Do not fill any gas other than the one it contains
- No flammable material should be stored near cylinder area



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- No oil or lubricant should be used on the valves or fittings of cylinder
- No cylinder shall be subjected to any heat treatment or exposed to high temp or to the sun
- Cylinders should not be dropped or permitted to strike one another
- Lifting magnet should never be used to handle the cylinder
- Rope or sling not to be used
- Empty cylinder should be segregated from filled ones
- Protecting cap should be placed properly
- Do not tamper with safety device in valve cylinder
- Trolley and cradles be used when moving the cylinders
- Cylinders shall not be allowed to fall upon one another
- Cylinder always be secured that they cannot roll
- Cylinder shall be stored in a coll, dry, well ventilated area
- The storage room shall be of fire resistant construction
- Cylinder containing flammable gases and toxic gases shall be kept separated from each other
- Cylinder shall not be stored which will causes them to corrode
- All electrical installations shall be a flame proof construction
- No person shall smoke & no fire shall be allowed at any time.
- Cylinder containing compressed gases shall its valves securely closed to prevent leakage
- In case of leak in the valve, it shall be removed to an open space where, least dangerous to he life and property