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OXY VAC India Works
Designing a Customized Solution for Gas Industries



**GAS
CYLINDER
HYDRO
TESTING
EQUIPMENT**



Important

This Equipment should be operated & maintained only by technicians who are suitably trained, experienced with Industrial gas filling plant and fully conversant with the specifications.

In pursuing a policy of continuous improvement, the company reserves the right to alter the specification of any product without prior notification

Description

General

Oxyvac is the Indigenous Manufacturer of Cylinder Hydro test Equipment for Different Range of Industrial Gas Cylinders

A hydrostatic test is a way in which pressure vessels such as pipelines, plumbing, gas cylinders, boilers and fuel tanks can be tested for strength and leaks. The test involves filling the vessel or pipe system with a liquid, usually water, which may be dyed to aid in visual leak detection, and pressurization of the vessel to the specified test pressure

It is specially design and manufacture Hydro test Equipment to supply client in complete compliance with industry standards using best quality materials. Prior to supply and installation stringently tested on standard quality parameters

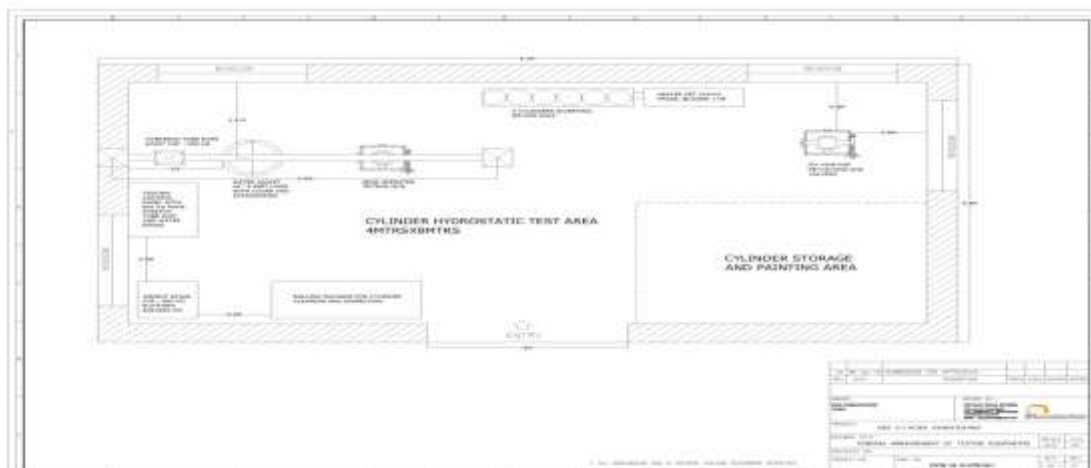
All the components and equipments are meeting the Technical Standards/Specifications.

Features:

- Robust construction
- Smooth operation
- Longer service life
- Elevated durability

Item Description	Hydro testing Plant equipment
Application	Gas Cylinder Hydro test
Design Codes	IS 5844, ASME B31.8, ASME Sec. VIII Div.1, EN and PESO GCR rules 2016
Design Life	10Years
Material of Construction	SS304/SS316/BRASS/COPPER250-
MAWP	350 BAR

The GA of the Gas Cylinder Hydro testing Station is shown in Fig.



TYPES OF HYDRO TESTING PLANT EQUIPMENT

- (A) Water Jacket Method for Seamless Gas Cylinders-High pressure
(Argon/Nitrogen/Oxygen/CNG/Hydrogen/CO2/Helium/Gas Mixture)
- (B) External Method for Welded Gas Cylinders-Low pressure
(Chlorine Toners/Ammonia/LPG)

Main Equipment

(01) TESTING PANEL WITH WATER JACKET

Complete Testing Panel with inbuilt Hydrostatic Pressure Testing Pump, Electric Motor, on/off switches, Glass Burettes, high-pressure bleed valves, Pressure Gauges and inbuilt pipelines for testing vessels as per direct expansion Test Method or Water jacket test method

Includes:-

- ① Enamel Painted Steel Cabinet
- ① Soft Seated Check Valves
- ① Pressure Pulsation Dampener
- ① Two 1000 ml Burette Tubes (standard)
- ① Valves -Tubing - Hoses To Complete System
- ① High /Low-Pressure Bleed Valves and Safety Relief valves
- ① 2 Nos. of Class 3A, 1/4% Accuracy Pressure Gauges of 6" Diameter
- ① Pressure switch for desired pressure pump stop



(02) RUMBLING MACHINE

Complete set of rumbling machine motorized, Cylinder external and internal cleaning purpose and can be use in cylinder wall inspection and visual inspection.

Includes:-

- ① 0.5 HP Gear operated motor
- ① Multi cylinder rolling machine can use to Gas mixing equipment to roll cylinders



(03) HEATER BLOWER SET WITH DRYING RACK

Complete set of Heater Blower set with 6 cylinders Rack to drying cylinders after hydro test

Includes:-

- ① Inverter Rack powder coated made from heavy gauges box sections and supported with channel and Angles.
- ② Temperature control panel 12 KW-3 phase with use of Siemens contactor, Switches suitable for Motor rating for indoor installation in 3 phase 50Hz electrical supply with the provision of Earthing Lugs.



(04) GEAR OPERATED VICE-FIX VICE

Complete set Cylinder Water Pouring and Decanting Tilting vice-Manual Gear Operated for Gas cylinders under tests up to 360 bar Gas cylinders



CYLINDER HYDROSTATIC STRETCH TESTING PROCEDURE AS PER IS : 5844

1. Cylinder forward to the test station for testing take to Degassing area & have first empty of their contents and then label as Empty.
2. Unvalve the cylinder taking care of threads. The valve should be examined, Recondition as necessary.
3. Cylinder thoroughly clean by washing out with Water. Where the interior of the cylinder is affected by rust or foreign matter it shall be cleaned by Rotary wire brushing.
4. After cleaning cylinder visually examine externally and as far as practicable internally for surface defect in accordance with IS.
 - For internally examine use the Boroscope, extra-low voltage lamp of 12 V and measure the wall thickness of cylinder by Ultrasonic Thickness Tester, The wall thickness should be within 90% of minimum wall thickness of Cylinders.
5. Weight the cylinder, the weight loss should be within 5% of stamped Tare weight.
6. Fill the cylinder with water and weight it again. This is requiring only for older cylinders where water capacity is not stamped. The difference of check on water capacity of cylinders.
7. Place the cylinder in the test Vice, Fill it with water, Fit test plug adopter and connect high pressure tubing to test pump.
8. Pump water into cylinder till the pressure rise to 05 kg/cm².
9. Open Air release valve and ensure that air is completely released. Close air release valve.
10. Set water level in the Glass tube of Stretch Board and Note down in test sheet. [C1].
11. Rise pressure by pumping to the require Test Pressure of cylinder. Hold the pressure for at least 30 seconds and examine for leakage.
12. Note the RISE of water in the glass tube of the stretch board and enter details in test sheet. [C2].
13. Release pressurized water level in glass tube and note details in test sheet. [C3].
14. Release Vice clamps, Remove cylinder from Vice and drain cylinder.
15. Put cylinder upside down on the drying rack of internal drying.
16. After drying cylinder clearly stamp on the neck and with marks and figure indicating the agency and the date of Test.
17. Cylinder internally clean by compressed air and check the threads with Gauges prior to fitting valve.
18. After checking of threads, Teflon tape wound on valve threads, valve fit on cylinder and tight with torque wrench to the require torque.
19. Cylinder surface paint as per color code of Gas [IS: 4379].
20. Cylinder testing datasheet forward to Record making.
21. Tested Cylinder put in Dispatch area.