

Perse Cylinder

Highest Standard of Safety and Security



Largest manufacturer of LPG cylinders in the Middle East

www.persecylinder.com



INTRODUCTION



The catalogue in your possession illustrates the range of our products under the brand name of "PERSE CYLINDER" co., AFFILIATED TO THE MINISTRY OF OIL (National Iranian Gas co.) which by means of using the most modern equipment and machineries and an advanced production and control Technology, started its operation in 1976 and is still pushing its way forward under the slogan; "HIGHEST Utilizing the highest quality material and employing most advanced machineries together with the conformity of our products precisely with the regulation and tests of INSTITUTE OF STANDARD AND INDUSTRIAL RESEARCH OF IRAN (I.S.I.R.I.) (a member of the international standards organization), gives us the opportunity of presenting such detailed technical specifications of the raw materials and equipment used, given hereunder, as well as enjoying the sales of the major portion of the local market, in competition with other cylinder manufacturers, obviously proves our words and existing fact and merit to compete in the international market with our competitive prices and best quality.

Now, with the hope of your more sincere contacts and cooperation with us for market survey and sales of our products of various types of cylinders we submit our catalogue for your kind studies.

In case more information would be required please do not hesitate to contact us immediately.

Achieving your satisfaction and your relying on our products is aimed by us and that encourages us to continue our activities more eagerly.

RAW MATERIALS

We are bound, by the need for production of liquefied gas cylinders (LPG containers) to the highest international standards, to keep abreast of times and up-to-date technological studies and researches in this field and to utilize the most suitable and highest quality raw material to ensure manufacture of products of superior quality. No attempt is made to remove defect and/or repair the defective material, when any defect in the raw materials is detected, during quality control inspections. Such a practice is generally prohibited by us and we maintain that high quality raw materials guarantee products of superior quality. A point worth mentioning is the fact that the suitability and compatibility of chemical composition and mechanical properties is always taken into consideration in obtaining and provision of the required raw materials.

1. STEEL (CARBON STEEL)

We have learned by experience, scientific development and research, to use martensitic steel made by electric-furnace process as the most significant and the main constituent element of the cylinder. Data contained in the tables appearing here in under, of chemical composition and mechanical properties, manufacture of our products.





A. SHEET AND BANDS: CHEMICAL COMPOSITION

C	SI	MN	P	S
0.2%MAX.	-----	0.3%MIN.	0.04%MAX.	0.04%MAX.

YIELD POINT	TENSILE STRENGTH	ELONGATION	BENDING ANGLE	INSIDE RADIUS
26 KGF/MM ²	41KGF/MM ²	28%	180°	10 TIMES THE THICKNESS

B.ROUNDBARS:

Carbon steel used for the manufacture of valve boss is killed-steel with the following chemical composition made by rolling or forging process:

C	SI	MN	P	S
0.18 - 0.23 %	0.15 - 0.35 %	0.30 - 0.60 %	0.03 -MAX %	0.035 MAX %

2.BRASS

Valve is in turn main constituents elements of a cylinder. By due attention to ensuring greater safety of valves as well as conformity with and implementation of the policies of the Iranian standards and industrial research institute (ISIRI), perse Cylinder company uses valves made of forged brass, inspected and tested under the following conditions:

- To be leak proof under a test pressure of 17.5 bars (No gas leakage)
- No leakage after five days holding time in an atmosphere of 40C.
- No leakage after five ten minutes holding time in a refrigerating liquid at a temperature of -25C.
- No leakage after ten minutes holding time in hot water at a temperature of 60+ 5C.
- Safety relief valve should open at a pressure of 26+ 1bars.



INSPECTION AND TESTING OF RAW MATERIALS AND PRODUCTS

Care in quality control inspection and tests during various manufacturing stages have brought us the reputation of being one of the best manufacturers of liquefied gas cylinders all over the world. These quality control inspections and tests begin immediately upon arrival of the raw materials at the factory and continue right through all the production stage until the final products leave the factory:



1. TESTING OF THE RAW MATERIALS

The raw materials arriving at the factory (Carbon steels and welding wires) are subjected to the following tests before commencement of and during the production operation:

- Tensile Test (For carbon steels and welding wires).
- Bend Test (For carbon steels and welding wires).
- Elongation Test ((For carbon steels).

2. TESTING OF THE PRODUCTS

The quality control personnel of the company undertake and perform the following tests at various stages during the production operations:

- Hydrostatic test of all manufactured cylinders (products) at a pressure of 35 bars (twice the normal pressure of liquefied the cylinder.)
- Hydrostatic test of elasticity for selected specimens at a pressure of 35 bars for 30 seconds (volumetric expansion should not exceed 10%).

- Burst Test. Subjecting selected specimens of products up to their bursting pressure using water as the testing medium.(Min. bursting point is 84 bars with 15% Volumetric expansion).

- Leak testing by air at a pressure of 7 bars to ensure and prove lack of gas leaking from the cylinder fittings.

The above mentioned tests are compelled, prescribed, emphasized and constantly checked by the Iranian Standards and Industrial Research Institute, which is a member of the International Standards Organizations (ISO), and also informs the factory of the most advanced and modern technological and industrial developments and progresses.

Standards for the liquefied gas cylinders (gas containers) was drawn-up in 1967 and has been improved and supplemented every year.



Our products are manufactured

under below

Standards:

Gas Bottle : 1) I.C.C. 4BW – 1970

International

Commerce

Compressed Gas

2) C.G.A. Pamphlet

C-3-1954

Compressed Gas

Association.

3) C.G.A. Pamphlet

C-1-1966

Compressed Gas

Association

4) ASTM part 31-1966

Designation

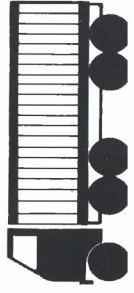
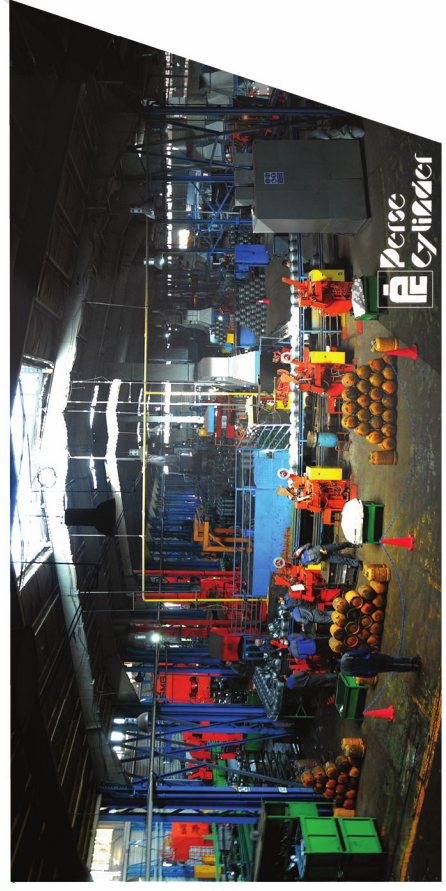
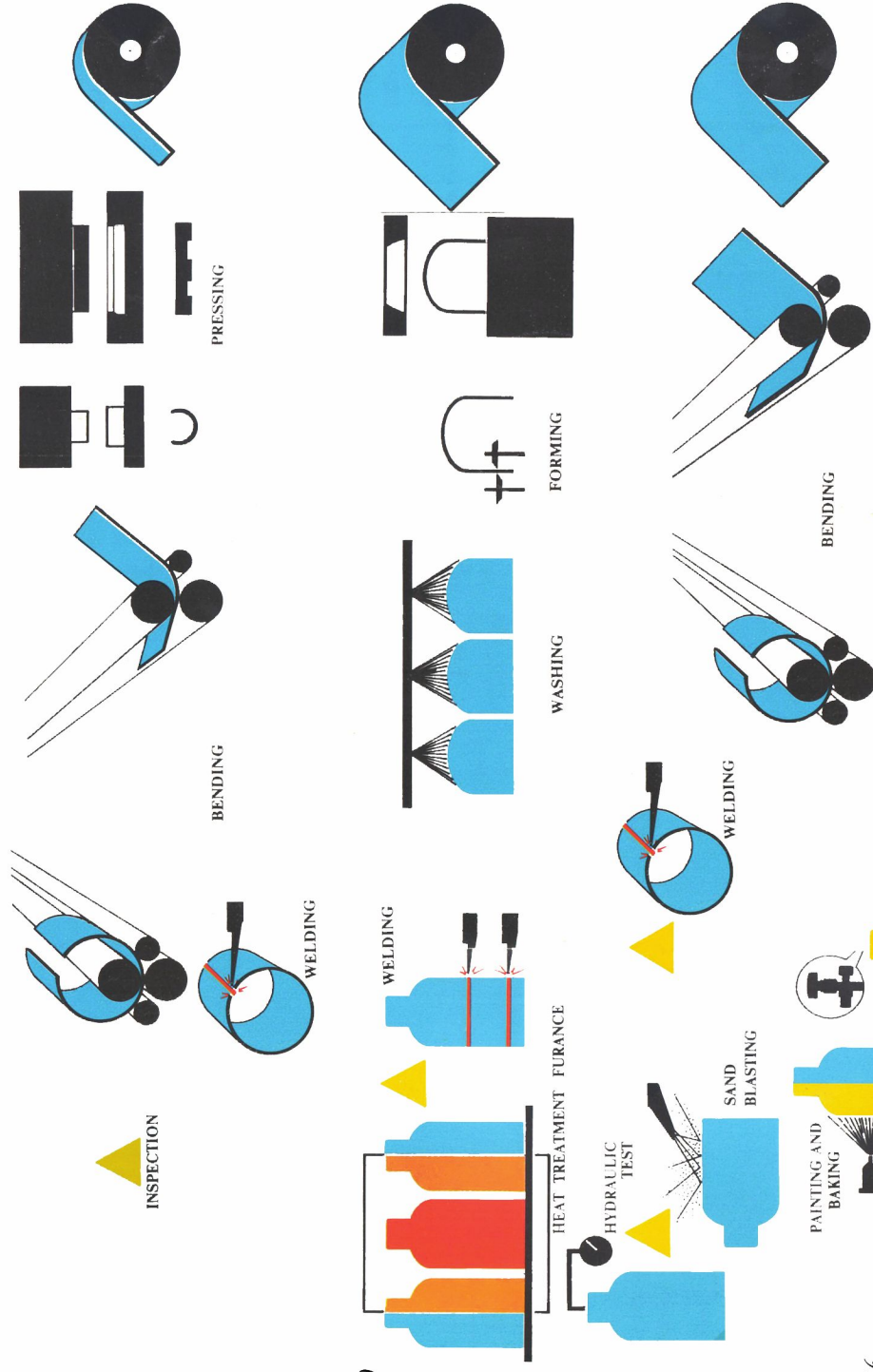
E8-66

5) ISIRI-Institute of

Standard and

Industrial

Research of Iran.



PRODUCTION PROCESS

1.PRESSING, SHEARING, CUTTING, BENDING

Metal cutting and pressing operation are performed by hydraulic presses with the general specifications stated in the table below.

TECHNICAL DATA OF HYDRAULIC PRESSES

MAX SLIDE CAPACITY	MP	400	250	200	160	50	40	25
MAX SLIDE STROKE	MM	400	800	680	800	900	500	700
DISTANCE TABLE SLIDE UP	MM	1000	1300	1000	1500	1000	1100	1000
TABLE AND SLIDE AREA	MM	2350 x 1750	1300 x 850	1000 x 850	1300 x 850	TABLE 800x600 SLIDE 400 x 400	1000 x 500	TABLE 600 x 400 SLIDE 300 x 300

In addition to the above mentioned presses, a round cutting machine and a shearing machine with the table following specifications are used for metal cutting operations.

ROUND CUTTING MACHINE:

MAX THICKNESS (MILD STEEL SHEET)	6MM
DIAMETER OF DISCS	150–1600 MM

SHEARING MACHINE:

WORKING WIDTH	2000 MM
MAX. THICKNESS	4 MM

Furthermore, a hydraulic machine with the following specification is used for Trimming of edges and forming of round drawn parts.

PART ROLLING MACHINE

WORKING WIDTH	1200MM
MAX. THICKNESS	4 MM

MAX. DIAMETER TO BE MACHINED	400 MM
MIN. DIAMETER TO BE MACHINED	200 MM
MAX. HEIGHT FOR THE FINISHED PART	350 MM
MIN. HEIGHT FOR THE FINISHED PART	100 MM

A part rolling is used for forming and shaping of the cylinder's shell segments(main body), valve guard and foot ring. Checking and control of all production operations such as metal cutting, rolling, bending, pressing, trimming and edge forming operations are undertaken and performed, as under, by the inspection and quality control personnel of the company:

- Accurate control and checking of the apparent shape and surface smoothness.
- The extent of overlapping edges of the cylinder segments at the weld seams and the foot ring joint.
- Accurate control and checking of the place of valve boss punched by a hydraulic press.

4. SAND BLASTING, PAINTING, BAKING

These operations are carried out for the purpose of removing oxides formed during stress relieving process in the annealing furnace and also preparing the surface of cylinder for application of paint. The said Operations are carefully checked and controlled by the inspection and quality control personnel of the company and the cylinders are then dispatched to the paint shop and relevant treatment furnace, Sand blasting of cylinders is performed using machineries and equipment with the given specifications:

MAX. O. D. OF CYLINDER	400 MM
MAX. LENGTH OF CYLINDER	1300 MM
OUTPUT OF SAND BLAST	280 CYLINDERS PER HOUR

5. VALVE FITTING

Valve fitting is performed by a machine having a pneumatic socket head, preset for a certain torque. The cylinders are then subjected to a pressure of 7 bars by compressed air to defect and discover any leak by application of suds. The quality inspection and control team then keep the cylinders in a suitable yard area for 24 hours to find any likely pin hole, However, if no such defects are detected. Authorization is issued for transporting the leak-proof cylinders to the product storage/warehouse and transporting and delivering the final products therefrom to the purchasers as scheduled, it is deemed necessary to paint out that even at this stage, our inspection and quality control personnel check and inspect the cylinders at the time of leading them onto the trucks for delivery to the purchasers.

ORDERING CHECK LIST

- 1.REGULATION OR SPECIFICATION (DOT, BS, JIS, ETC.).
- 2.KIND OF GAS TO FILL IN FILLING PRESSURE AND TEST PRESSURE.
- 3.OUR MODEL NUMBER OR DRAWING AND DIMENSIONS.
- 4.MARKETING (DOT, BS, JIS, ETC.).
- 5.SERIAL NUMBER
- 6.IDENTIFICATION COLOR
- 7.DETAILED INFORMATION OF VALVE:
a)Specification b)Size c)Material d)Type e)Thread
- 8.DETAILDE SHIPPING INFORMATION
- 9.ANY OTHER NECESSARY INFORMATION

2.WELDING

Welding operations include the following stages and welding processes or techniques:

- Welding of the valve boss to the top segment of the cylinder's shell is carried out by submerged Arc welding process (Power welding).
- welding of the valve guard to the top segment of the cylinder's shell id performed by CO2 gas welding technique.
- welding of the segments of the cylinder's shell by submerged are welding process.

All the foregoing welding operations are subject to stringent and meticulous checks and control personnel of the company. To ensure sufficient thickness and homogeneity of welds, welding of cylinder parts are performed using automatic submerged are welding and CO2 gas welding machines with the following voltages and currents.

	VOLTAGE	AMPERE
INPUT	380 A.C.	60
OUTPUT	18-6 D.C.	600

As a result, the welds are free of any metallurgical faults and defects.

3. ANNEALING

All cylinders are then as patched for stress relieving in a special annealing furnace at a temperature of 920-950 C for holding time of ten minutes per each cylinder in order to relieve and remove stresses set-up during the welding operations.

Every gas cylinder is subjected to a hydrostatic test at a pressure of 35 bars (twice the pressure of gas inside the cylinder) using a high-discharge pressure pump to detect, discover and remove any defect in case of leaking.





Add.: Hekmat5 St. , Ebn-e-sina St. , Alborz Industrial City
Qazvin - IRAN

Tel:+98 28 32223640 -1 Fax: +98 28 32223041

E-mail: persecylinder@yahoo.com



We trust we have succeeded in affording you a notion of our products and of our plants. We cannot say how long this catalogue will be valid as we are endeavoring To attain further improvements, and very soon it might be out of date.

