



## NGV-CYL-SP10

### ACID ENVIRONMENT TESTING MACHINE

#### ISO 11439 Statement

On a finished cylinder the following test procedure shall be applied:

- expose a 150 mm diameter area on the cylinder surface for 100 h to a 30 % sulfuric acid solution (battery acid with a specific gravity of 1,219) whilst the cylinder is hydrostatically pressurized to 260 bar;
- pressurize the cylinder to burst in accordance with the procedure defined in A.12.

The burst pressure shall exceed 85 % of the minimum design burst pressure.

#### DESCRIPTION OF MACHINE

The test cylinders are placed in the bath. Then they are exposed to a 30 % sulfuric acid solution (battery acid with a specific gravity of 1,219) over a 150 mm diameter area on the cylinder surface for 100 h to whilst the cylinder is hydrostatically pressurized to 260 bar. The exposure pond of 150 mm diameter is made by a soft rubber compound and the glass wool soaked with the above required acid solution is put inside the pond.



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## SPECIFICATIONS

1. The machine can be used to test the CNG cylinders according to ISO11439 Annex A (normative) Test methods and criteria A.14. Acid environment test.
2. The machine can be used to test the CNG cylinder of size: diameter 406.4 mm and length 1,400 mm or bigger.
3. A steel reinforced concrete (RC) tank can accommodate 6 CNG cylinders.
4. The chemical resistant thick epoxy paint is applied on inside tank surfaces.
5. The tank inter dimensions are 3.0 m length x 1.8 m width x 0.6 m depth.
6. The machine can measure and control the pressure of the test cylinders during test.
7. Inside the tank, the cylinders are supported by strong stainless steel supports which hold the cylinder in position firmly.
8. The test cylinders are pressurized to 260 bar by using the “Extreme temperature pressure cycling machine”.
9. Enough chemicals are supplied for testing 600 cylinders according to ISO11439 Annex A (normative) Test methods and criteria A.14. Acid environment test.