PRESS RELEASE

Faber is your trusted supplier of H2 cylinders and systems for all your needs

Based near Venice in Cividale, Italy, Faber produces all four “Types” of cylinders to fully serve the growing demand for hydrogen. In fact, Faber has designed and already supplied Type 1 and Type 3 models for hydrogen powered Fuel Cell Forklifts. Type 1 and 2 for hydrogen Refilling Stations and Type 4 designs for Portable Fuel Cells, Drones as well as for Mobility, all of them for Transportation. Type approvals have been secured case by case for Japan, Korea, USA and EU according to the prevailing regulations set by the relevant Competent Authority for each of the latter geographical areas.

In order to truly meet the hydrogen cylinder users’ demands in their primary market segments, all different Types (1 – 4) of cylinders are therefore needed. Moreover, having all of them as part of Faber’s portfolio, capability and expertise, we are well positioned to provide a totally comprehensive solution. Thus we provide a wide range of differing working pressures, dimensions and weight requirements which could be needed by our customers.

In this vein, Faber has already catered for a number worldwide customers for hydrogen cylinders of working pressures from the usual 200 bar hydrogen cylinders for industrial applications up to 1100 bar when used for static hydrogen storage units. While 350bar has become the standard for material handling applications, for mobility there are two adopted working pressures, 350 or 700bar. All our hydrogen cylinders are fully manufactured in-house (i.e. liners and the accompanying composite overwrap) and tested/ certified in our newly equipped test laboratory (see below), by a number of third party inspection bodies, who have been appointed by Competent Authorities (Government).

Having the product design and manufacturing facility is not enough to satisfy the demands from the market. You need to have an in-house facility to comply with the type approval, batch and individual testing requirements, in a timely fashion.

Here Faber’s does not possess just a single test laboratory but a suite of unique test laboratories; they are best appreciated when one views them. Here Faber’s competent engineers have developed a cell in which, under high purity hydrogen, we can test samples for a variety of test methods. Examples include; slow strain rate test (SSRT), fatigue crack growth rate, fracture

toughness etc. at pressures up to 1000 bar and at temperatures as low as -20°. Both metallic (for seamless steel cylinders) and non-metallic (for composite cylinders) materials are being tested in this unique cell. The hydrogen cell's overall chamber has been constructed with utmost safety in mind. When undertaking the above test programs: a sacrificial wall in the chamber will yield, away from the main site, in case of a sudden pressure release. The materials selected for the cell's components have been meticulously selected, all having resistance to the hydrogen embrittlement phenomenon.

Also, within our laboratory we can fatigue full-size hydrogen bearing cylinders to failure up to 2000 bar and burst test them up to 4000 bar. Our Cividale based test laboratories are capable of advanced testing cylinders for varying environmental conditions, extreme temperatures, flawed burst simulation, bonfire/high vel**oc**ity impact (gunfire) tests, gaseous pressure cycling tests etc. Additionally, a number of material tests such as full chemical analysis, Sulphide Stress Cracking (SSC), assessment of corrosion of coatings, characteristics of permeation of plastics etc. are continuously performed.

But our pièce de resistance has to be a world beating equipment extremely valuable to car companies who require critical dimentional data. This instrument, a "Coordinate Measuring Machine (CMM)" has brought much success to a number of leading OEM's around the world. To date a number of large Industrial gas companies and motor vehicle manufacturers have made use of this unique facility based at Faber.

Established in 1969 and operating since 1972, Faber has grown rapidly to become the world's leader in the production of cylinders (Types 1, 2, 3 & 4) and systems for the storage of High-Pressure Gases for the Clean Energy applications (CNG and H_2), Industrial, Technical, Medical and Breathing Air sectors. The world over, with a production capacity of a million cylinders, Faber has earned the best reputation for its high standards of quality and for its capability to comply with the most stringent specifications set down by International Bodies, Local Authorities and its customers.

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