

Gaz Liquéfié Industrie A **LPG** tank under pressure

Some products need to be hard tested before they are released for marketing, and gas tanks are among such products. However there are very few infrastructures capable of treating them roughly. Here is the example of the experiment carried out by Gaz Liquéfié Industrie (GLI) in conjunction with Cetim.

When gas is involved, safety regulations become stricter. When it develops a new product, GLI is systematically confronted with this problem. Its latest product (a vertical, transportable LPG steel tank with 1,000 litre capacity) had to undergo a complete battery of extremely hard tests before being considered as fit for marketing. Yann Peron, Head of the GLI Design Office, describes the tests as follows: *"The European standard NF-EN 14893 requires fatigue, failure and drop tests for all newly designed products. The first test consists in varying the pressure in the prototype from 3 to 30 bars, over 12,000 cycles, with a frequency and temperatures which must not be exceeded. To validate the test, no leaks are tolerated. For the second test, called "bursting test", the pressure in the tank must be increased at controlled speed, until burst occurs. The equipment must withstand at least 67.5 bars before bursting, and without fragmentation. Our model*

ruptured at 96 bars. Finally the last test consists in dropping the tank on its weakest part from a height of 1.20 metres, and this fall must not cause any damage or distortion."

Suitable means

GLI performed the last test on its own, but for the first two tests, they called in subcontractors. Yann Peron says: *"After a call for tenders, GLI selected Cetim for the quality of its equipment, in particular the power of the compressor, and for the fact that its technical choices agreed with ours."* Cetim's booster compressors reach 6,000 bars and its hydraulic units reach 350 bars. The test temperature can be varied from 160°C to +200°C. The burst pit has



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a retractable roof and can receive products of very large sizes and varying complexities, from whipped cream siphons to space launcher cryogenic pumps.

OUR CLIENT

Company Name
Gaz Liquéfié Industrie

Workforce
650

Area of business
Manufacturing of cylinders and fixed or mobile storage equipment for household or industrial use, for LPG and all liquefied, compressed or dissolved gases



Cetim's advantage

Cetim's burst pit (12 m long, 3.5 m wide and 4 m high) is just the visible part of the tests carried out on pressure equipment.

During the tests, Cetim's experts assist the customers from the very design of the tests and take part in the calculation of the test devices.