

**SPHERES
BULLETS
STORAGE TANKS
LOW TEMPERATURE
&
CRYOGENIC TANKS**



www.waltertosto.it
www.maraldi.it

walter tosto 

Maraldi
SINCE 1947





ABOUT US

With a consolidated experience in the design and fabrication of critical items for the process industry, in particular Chemical, Petrochemicals, Oil & Gas and Energy, today Walter Tosto is recognized worldwide as a leading manufacturer of top quality high pressure equipment and vessels.

The company owns six workshops in Chieti (Italy), a seafront workshop in Ortona (Italy), directly connected to the main international ports and routes, a subsidiary facility Walter Tosto WTB based in Bucharest, and an additional workshop in Oltenița, Romania with direct access on the Danube river.

Through its business unit Maraldi, Walter Tosto also delivers customized products such as pressure spheres, low-temperature and cryogenic storage tanks.

With consolidated know-how, extensive track record, unique manufacturing facilities, capabilities, high standards engineering and through water-front and strategic manufacturing locations, the Group offers limitless capabilities in terms of weight and materials of fabrication with technology and delivery consistency as main drivers.



HISTORY

Founded in 1960 by Mr. Walter Tosto, today the Company is managed by his son Luca, with the support of his sisters Catia and Emanuela and its management. The first activity related to tanks manufacturing for the local wine companies and oil mills (in the 70's) evolved first into the fabrication of pressure vessels for LPG/fuel and then into the production of long lead critical items for the international Oil & Gas, Petrochemical and Power generation market (1994).

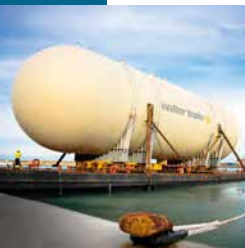
PRODUCTS RANGE

SPHERES



We manufacture spheres with a size that typically can vary from 1,000 up to 7,000 m³, with diameters between 12 and 24 m and wall thicknesses from 30 to 80 mm. The weight of a large sphere can exceed 1,200 tons. Our spheres can be used to store liquefied gases under pressure at ambient temperature. Our scope of supply normally includes all the auxiliary structures, the firewater/cooling rings, the heat detection system, valves (cut-off valves and pressure relief valves) and instrumentation including radar-type level instrument. With more than 300 past references in this field, we can guarantee structures that are extremely safe in service and easy to assemble.

BULLETS



We design and manufacture bullets with no limitations in terms of capacity. Among our many track- records for LPG, both the biggest LPG bullets ever supplied in Italy with a capacity of 5000m³ and those supplied abroad with a capacity exceeding 9000m³ are significant achievement. Our bullets moreover are suitable to store other fluids as butene, ethane, isobutane, propylene with a minimum design temperature up to -50°C,

TANKS



We are specialised in design and manufacturing tanks to store gases in liquid phase under low pressure, low- temperature and cryogenic conditions up to a minimum design temperature of -196°C. Our tanks ensure constant low temperatures to keep evaporation of the product to a minimum and precision in the construction of single- or double-walled tanks for containing ammonia, oxygen, nitrogen, ethylene, ethane, propane and other hydrocarbons. The tanks capacity may vary from less than 100m³ up to 160.000m³ and even more.

SEMI-FINISHED



Walter Tosto is willing to cooperate with Customers not only with the supply of complete equipment but also with the design and manufacturing of semi-finished components. Our workshops, both in Italy and Romania, are equipped with state-of-the-art machinery and ready to manufacture semi-finished goods in accordance with Customer technical requirements and needs, even the most stringent. Walter Tosto has virtually no limitations in terms of dimensions of equipment/components and materials to be machined and we have a consolidated experience in processing the most common steel grades including but not limited to ASTM SA 353, SA 516 Gr.60/Gr.70, SA 537 Cl.1/Cl.2, SA 553 Tp.1.

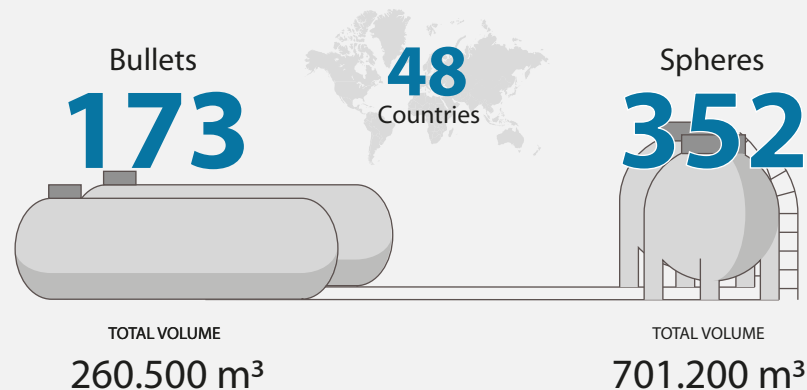


Maraldi was founded in 1947 and through the last 70 years became one of the Italian landmarks in design and manufacture of pressure equipment (columns, reactors, vessels), spherical tanks, low-temperature and cryogenic storage tanks

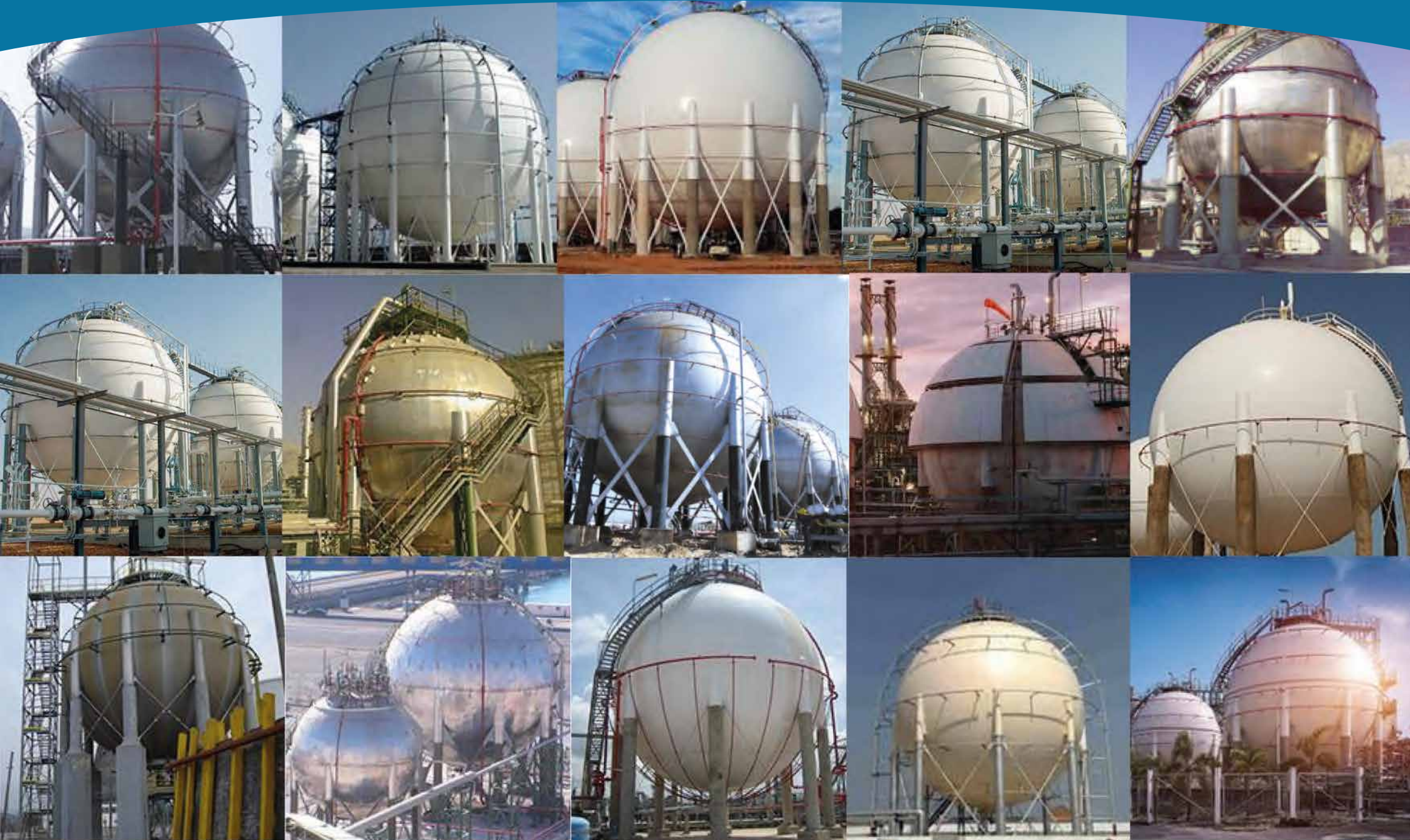
In the early years Maraldi contributed to producing storage tanks for the most important Italian refineries, and started to consolidate its experience. Over time new types of production plant have been added to the original nucleus, in the needs of other industries ranging from

iron metallurgy to sugar production, all contributing to increasing the scope of the group's competencies.

The brand Maraldi is now part of the Tosto Group. Officine Maraldi became in 2019 a Business Unit of Walter Tosto SpA specialized in pressure spheres and low temperature cryogenic tanks.



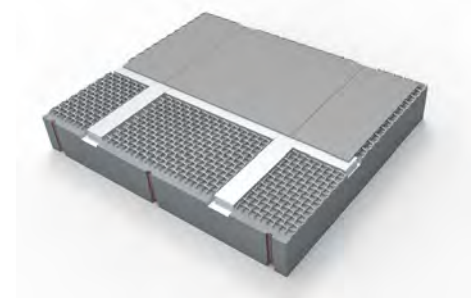
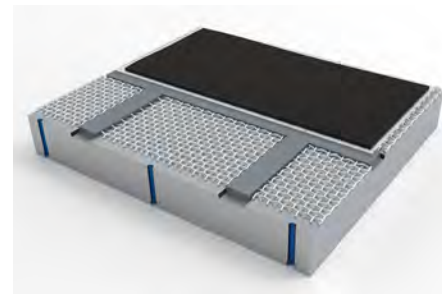
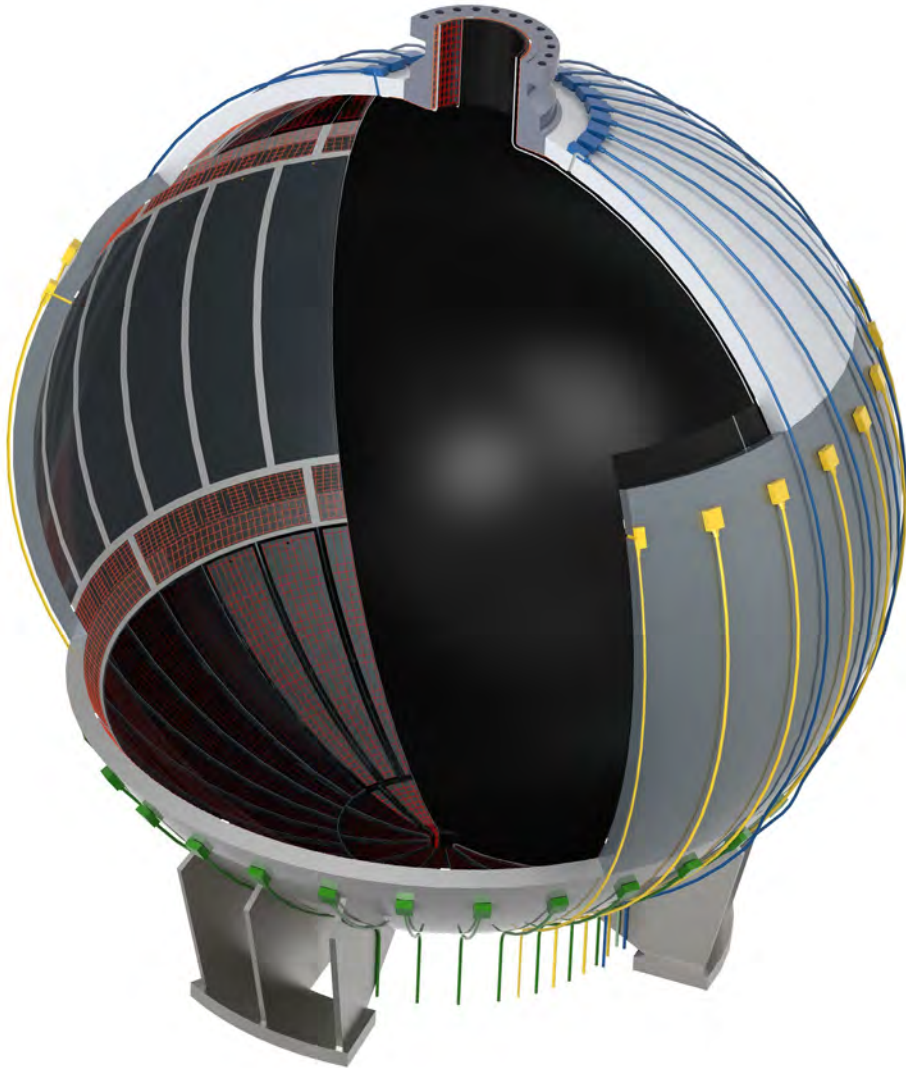
Spheres



Spheres for Hydrogen Storage

Patented System for Hydrogen Storage

Hydrogen susceptibility increases with steel strength. Walter Tosto proposes a novel coating system as a protection system for steel tanks to eliminate hydrogen influence on high pressure steel shell. With this innovative approach high strength steel can be used for the long-term hydrogen storage at high pressure. This innovative storage tank also includes rapid detection of any leaks or losses and a possible accumulation system for the leak.



Bullets



Walter Tosto's experience in mechanical design and fabrication of bullets goes back to early 1990s. The largest storage tank was designed and supplied in 2010 for a capacity of 9300 m³ of LPG. Carbon capture, utilisation and storage (CCUS) technologies offer an important opportunity to achieve deep carbon dioxide (CO₂) emissions reductions in key industrial processes and in the use of fossil fuels in the power sector. CO₂ storage is a critical component of the CCUS opportunity. Thanks to our experience in low temperature bullet manufacturing, we are offering our mechanical design and fabrication capabilities also for the storage of CO₂.

Our bullet portfolio covers high pressure storage and optimisation of fabrication phases through high standard engineering. By analysing the possibilities for the application of various metallic materials, we offer innovative solutions of bullets also for long-term high-pressure hydrogen gas storage.

LPG Bullets



Storage Tanks



Ammonia

Chemical energy storage is one of the possibilities for a large-scale, long-duration, and transportable form of energy which can be stored in the form of hydrogen and ammonia (NH₃). Since natural gas does not fully align with environmental objectives in the absence of carbon capture, utilization, and storage (CCUS), the solution of the long-term large-scale energy storage can be either hydrogen or ammonia.

In the specific field of fertilizer plants, Maraldi's reference list shows a considerable number of ammonia storage tanks installations for several clients around the world, starting from the first ammonia tank supplied in 1990. The largest ammonia tank was designed and supplied in 2007 for a capacity of 44 000 m³.

Spheres are mostly used when the hydrocarbon gas is received at a certain pressure from the production site or from the grid and also when the storage space available is limited. Maraldi is able to ensure design experience and precision in the construction phase of single-or double-walled tanks. For cryogenic storage, first Ethylene tank was designed and supplied in 1976. The highest capacity experience of Maraldi for Ethylene storage is 32.000 m³. Thanks to our experience in cryogenic tanks with the lowest design temperature of -196°C, we are offering our mechanical design and fabrication capabilities also for the storage of energy carriers such as (Bio)LNG and liquid hydrogen.



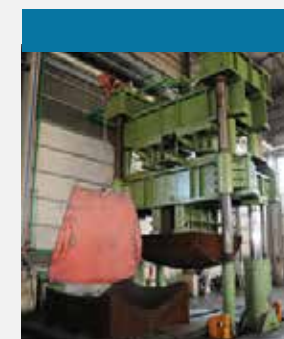
WORKSHOP COSTRUCTION SOLUTIONS



Prefabrication activities carried out in WT workshops

Heads (major heads): WT is able to produce the heads in petals, forming the heads and the crown by press forming.

Each petal will be accurately dimensional tested by using a template and then reworked if necessary to reach the final and correct shape.



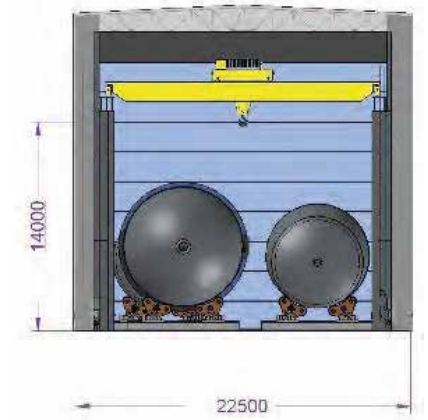
ON SITE COSTRUCTION SOLUTIONS

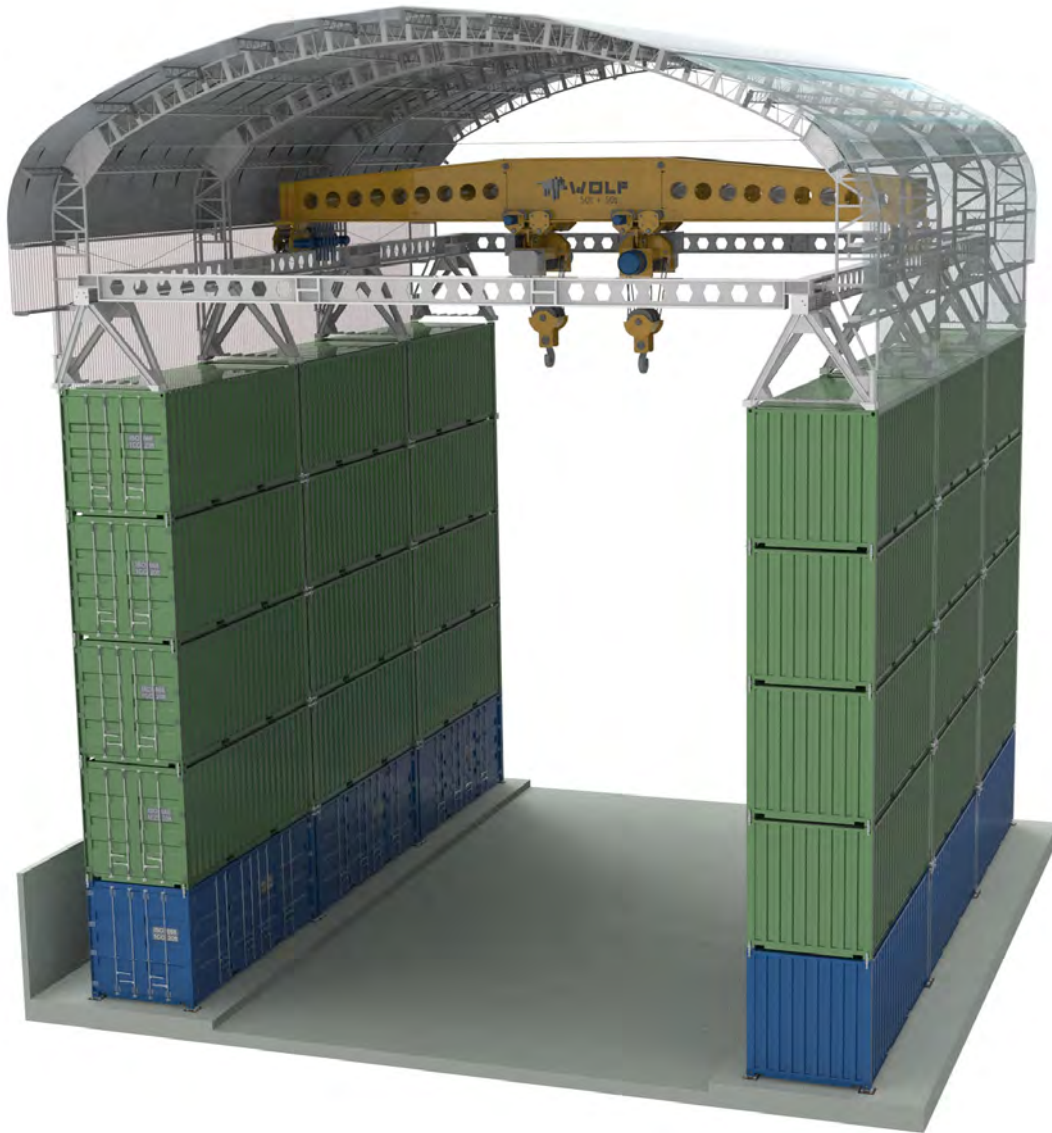


Fully equipped modular and covered workshop

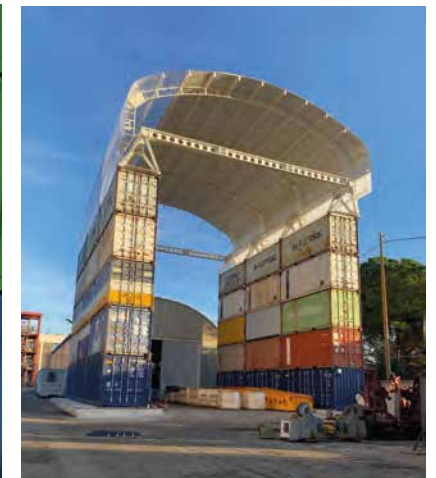


Each pillar shall be fully equipped with all necessary utilities and accessories (Electric Power, Compressed Air and Technical Gases)





The project aims at the development of an evolutionary and adaptive paradigm of fabrication and sustainable mobility of large machining and equipment for the pressure vessel industry. An itinerant, modular and intelligent prototype of an “overseas workshop” is planned according to the Industry 4.0 logic with a strong economic and environmental impact on logistics.



Major Clients

