



Officine ORSI S.p.a. 60 years of specialized piping

For sixty years Officine Orsi has specialized in providing piping solutions for some of the most challenging applications in the world. Over the decades the family-owned company has grown not only in size and turnover, but also in the wealth of knowledge and expertise that it has in-house and which allow it to offer tailor-made solutions and expert advice to customers. Over the years one of the core strengths the company has brought to the table is its willingness to be flexible in order to provide just-in-time delivery to customers and provide the best possible solutions, something which the current generation of the Orsi family pride themselves on. *Stainless Steel World* spoke to the three men behind the Orsi name to learn more about this Italian specialist.

By Joanne McIntyre

Speaking to the son of the company's founder Mr Angelo Orsi (Managing Director) and grandsons Luca (Export Manager) and Marco (General Manager), the sense of history and pride in the company is palpable. This is an enterprise which has been run for over

six decades with a clear vision and focus on specialized products for the very toughest applications.

"We work with a very clearly defined vision foremost in our minds," begins Angelo. "We aim to be a point of reference and excellence for all users

of pipes, fittings and pressure vessels manufactured from special alloys, which are highly resistant to corrosion and high temperatures. What enables us to do this is our ability to produce a full range of both standard and tailor made products, achieving excellent quality

solutions



Fast water quenching after heat treatment.

and with the required characteristics to meet our customers' needs. This is complemented by our ability to achieve flexible and just-in-time delivery, and a large on-site stock of products. These factors all provide huge advantages for our customers."

On-going investment program

As part of this clearly defined vision the company continuously strives to achieve



Automatic forming of welded pipes.

further improvements in product quality.

Continuous expansion, investments in human resources, equipment and qualifications have made Officine Orsi unique in its field, as the company is able to produce entirely by itself a complete range of pipes, fittings, prefabricated pipes and pressure vessels.

"We have also modified and extended the layout of our production departments," Marco explains. "A key investment we recently undertook was the successful expansion in the range of dimensions for welded pipes. Our recently opened department for heavy welded pipes - measuring up to 12 meters in length - is now in operation. This was part of our on-going investment strategy, and was a natural evolution in our capabilities. The production of heavy welded pipes is a new field for us although the areas in which these



Flare tip in alloy 800H / 310S.

products are used - high pressure applications - is one which we are already very active in, of course." The last investment is the qualification ASME U-Stamp as manufacturer of pressure vessel parts or complete equipment.

At present the company employs 80 people and occupies an area of 22,000 square meters, of which 13,000 are covered.

Just-in-time delivery

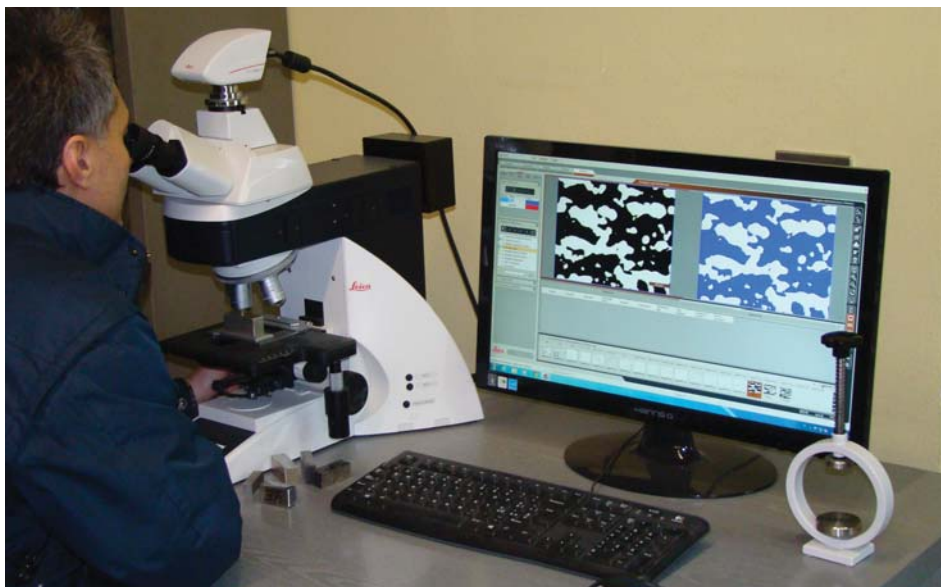
Orders at Officine Orsi are divided into three main types:

- Small quantities which are quickly supplied from the extensive on-site stock of pipes, fittings up to 8 inches in alloy C276, C22, Ti Gr.2, 254SMO, SUPERDUPLEX, 825, 625.
- Items which can rapidly be manufactured from the on-site stock of plate and pipes as raw materials;
- Large orders with a longer delivery time for which the company buys in the raw materials from mills.

"We stay in very close communication with our customers to achieve just-in-time delivery which means they get the products they have ordered exactly when they need them," explains Luca. "It's a challenging service to offer because our production is divided into three different departments: welded pipe, butt welded fittings, pressure vessels. Production needs to be carefully organized across these three departments to achieve this, and this is where our flexibility is key. Our production systems team is very skilled in working across the departments to ensure the smooth fulfilment of each order. We believe that this flexibility is one of the things that allows us stand out from our competitors."

Tailor made services

Officine Orsi prides itself on being able to produce a full range of products in all quantities and dimensions according to the application required by its, and on having the capability to produce



Micrographic examination.

unique parts according to the drawings and specifications of its customers.

“When we deal directly with end users we also have the expertise to suggest materials or dimensions for products and the relevant testing in order to guarantee the best quality and products and the shortest possible delivery time,” explains Angelo. “We have the expertise in house to recommend the very best solution for every customer.” The company’s long history has allowed it to build up a great deal of experience not only in processing and welding special alloys, but also in the internal management of production flows and in synergy among its various departments. After sixty years the facility literally runs like a well-oiled machine, although the human factor remains important. “The good relationships and co-operation we have built up with the major steel mills and our ability to understand customer problems and offer them solutions is of course critical to our success,” Angelo states. “All of these factors combined allow us to offer high quality products for industrial plants in the chemical, petrochemical, pharmaceutical,

offshore, oil & gas and power generation industries.”

Wide ranging projects

“Today most industrial plants - and especially those in the oil and gas, offshore, sea water desalination and power generation industries - work in very critical operating conditions,” explains Marco. “Therefore they increasingly require the use of special alloys which are resistant to corrosion, high temperatures and pressures. Officine Orsi manufactures a full range of standard and tailor made products in a wide range of materials. We recently completed



Heavy wall welded elbows in AISI 321.

orders for three large projects, which demonstrate the diversity of our customer base and the harsh conditions in which our products are used.

“The first I would like to mention was an order for over 160 meters of welded pipe manufactured in alloy 800-H with a diameter of 457 mm and a wall thickness 30 mm. These were destined for a Russian oil & gas company. Another interesting order was for 17 flare tips, also manufactured in alloy 800-H, which were shipped to refineries in Saudi Arabia.



Heavy wall welded pipes in alloy C276.

The history of Officine Orsi

In 1954, Luigi Orsi began to work in a small building in Melegnano (Milan, Italy), producing pipes and small stainless steel tanks. Two years later the business was transferred to its current headquarters in Carpiano. Year after year the business grew and the initial product range extended to include fittings and pressure vessels for the chemical and pharmaceutical industries. Production was divided into different departments pipes – fittings - pressure vessels - hence the name “Officine” Orsi. The company took advantage of the Italy’s years of booming industrial growth in the 1960s to expand and move into exotic materials.

In 1976, Angelo Orsi, son of the founder, gave the business a new impulse and widened the company’s activity. Within a few years, the range of materials included all nickel alloys resistant to corrosion and high temperatures, titanium, duplex, superduplex and superaustenitic stainless steels. The company’s experience has extended to include specialty alloys for corrosion problems such as urea, nitric acid, sulphuric acid.

Products

WELDED PIPES

- made from plates with diameters range from 80 to 2500 mm, thickness from 2 to 60 mm and lengths up to 12 m.

FITTINGS

- elbows, tees, reducers, stub ends, caps, s.w. and npt fittings, tailor made fittings. Diameters from 21.3 to 1016 mm, thickness from 2 to 50 mm.

PRESSURE VESSELS

- reactors, tanks, heat exchangers, columns and flare tips. Diameters up to 4000 mm and thicknesses up to 30 mm

PREFABRICATIONS

- piping spools, manifolds, headers, according to customer’s drawings.



Absorber spray bank in 254 SMO.

Just a couple of weeks ago we shipped an order for over 100 items of pipes and fittings manufactured in alloy C4 for a chemical plant in China. These pieces ranged in size from one to eight inches.”

Quality above all else

“Our primary commitment is to achieve customer satisfaction and to get it we aim at the continuous innovation of our production processes, in combining with on-going improvements in the quality of our products,” explains Angelo.

“For this purpose we have implemented a management system certified by Lloyd’s Register for quality assurance, safety at work and environmental protection in accordance with ISO 9001, ISO 14001 and OHSAS 18001. In addition we are qualified by TUV for the supply of products complying with Directive PED 97/23/EC, AD 2000-MERKBLATT W0 and HPO and also for products used in the nuclear field.”

“We are also qualified for the production according to NORSOK M-650; and have obtained the

qualification “ASME U-Stamp” as manufacturers of pressure vessels, parts or complete equipment.

For welding procedures, we have implemented a quality assurance system in accordance with UNI EN ISO 3834-2, certified by TÜV. Welding activities are carried out by qualified personnel, under the direction of an International Welding Technologist (I.W.T.) qualified by IIS (Italian Institute of Welding). All of our welding procedures (automatic and manual) are according to international codes (ASME IX and EN ISO 15614-1) and certified by TÜV, LLRR, Bureau Veritas, etc.

The entire range of products is manufactured in compliance to international standards and regulations (ASTM, ASME, EN, PED) and can be supplied fully inspected by RINA, LLOYD’S REGISTER, Norske Veritas, Bureau Veritas, TUV (certificate EN 10204 / 3.2).”

“The dimensions and tolerances of our products can either be in accordance

with all international standards ANSI, UNI EN ISO and DIN, or the special requirements of the customer.”

The company has its own department for non-destructive testing staffed with qualified personnel according to SNT-TC1 A and UNI EN 9712 (473), for the following methods: RT (X-ray), PT (liquid penetrant) and UT (ultrasonic). In addition, products undergo visual, dimensional, metallographic, ferrite, hardness and roughness inspections, PMI and hydrostatic testing. Other controls such as destructive mechanical testing and corrosion tests are performed by external laboratories,

Overview of certifications

- ISO 9001
- ISO 14001
- OHSAS 18001
- PED 97/23/EC
- AD 2000-MERKBLATT W0 and HPO
- UNI EN ISO 3834-2
- NORSOK M-650
- ASME U-Stamp

qualified and accredited ACCREDIA, in accordance with the requirements of the UNI CEI EN ISO / IEC 17025 and operating in accordance with international standards (ASME, ASTM, DIN, AFNOR) and in accordance to customer specifications.

“We welcome a challenge and look forward to continuing to serve some of the world’s most demanding applications with specialty piping solutions for many decades to come,” concludes Angelo.



Welded and seamless pipes ready ex stock.



Welded and seamless fittings ready ex stock.



Facts & Figures

- Name: Officine Orsi S.p.A.
 Headquarters: Carpiano, Milan, Italy
 Products: Pipes, Fittings, Pressure vessels, Prefabrications
 Materials: Nickel alloys, Titanium, Special stainless steels, Zirconium
 Employees: 80