# O.M.S. SALERI S.p.A.
# COMPANY PROFILE

| Revision | Year | Prepared by | Checked by | Approved by |
|---|---|---|---|---|
| 0 | 2021 | A. Gnecchi<br>T.Cherri | F.Ghisi | P. Saleri |

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# 1 Introduction

Since 1896, OMS Saleri has dedicated itself to providing customers with the most up-to-date, advanced industrial technology. This commitment to on-going research and development, combined with our emphasis on high quality services, has earned OMS Saleri a name as one of the world's leading valve manufacturers.

After more than 100 years of experience, we continue to evolve and maintain our leading position as manufacturer of ball valves. Recent construction of a new larger Saleri manufacturing plant stands as testimony to our forward vision to the future.

Built using the most modern design technology available, the 61200 Sqm factory includes a state-of-the-art foundry and highly sophisticated manufacturing department.

Testing and control laboratories guarantee that each one of our valves meets the most demanding quality, functionality, and safety criteria.

*"Excellence is never an accident. It is always the result of high intention, sincere effort, and intelligent execution; it represents the wise choice of many alternatives - choice, not chance, determines your destiny."*

Aristotle

## 1.1 Details and Contacts

| | | |
|---|---|---|
| **Company Name** | **O.M.S. SALERI S.p.A.** | |
| **Legal Form** | **Joint-Stock Company** | |
| **Registered Address** | **Via Aldo Moro, 10 – 25124 Brescia/Italy** | |
| **Head Office, Main Factory, Foundry & Welding/Cladding** | **Via Valle Sabbia, 2 – 25076 Odolo (Bs)/Italy** | |
| **Branch for Assembly, Testing, Painting & Dispatch** | **Via Prada, 7/9 – 25070 Bione (Bs)/Italy** | |
| | www.oms-saleri.it | |
| | **General Information** | oms@oms-saleri.it |
| | **Administration** | ad@oms-saleri.it |
| | **Sales** | cd@oms-saleri.it |
| | **Technical Department** | td@oms-saleri.it |
| | **Techno-Commercial Department** | tcd@oms-saleri.it |
| | **+39 / (0)365 826610** | |
| | **+39 / (0)365 826613** | |

## 1.2 Field of Employment

OMS Saleri ball valves have been specifically designed for offshore & onshore platforms, (such as gas, oil hydrocarbons, water, sour fluids), refinery, seawater, and severe service for the chemical and petroleum industries.

OMS Saleri ball valves assure top reliability and safety even under[i] severe environmental conditions.

Ball valves trunnion / floating design are manufactured fully in accordance with the applicable standards. OMS Saleri is an authorized company to use API monogram on ball valves.

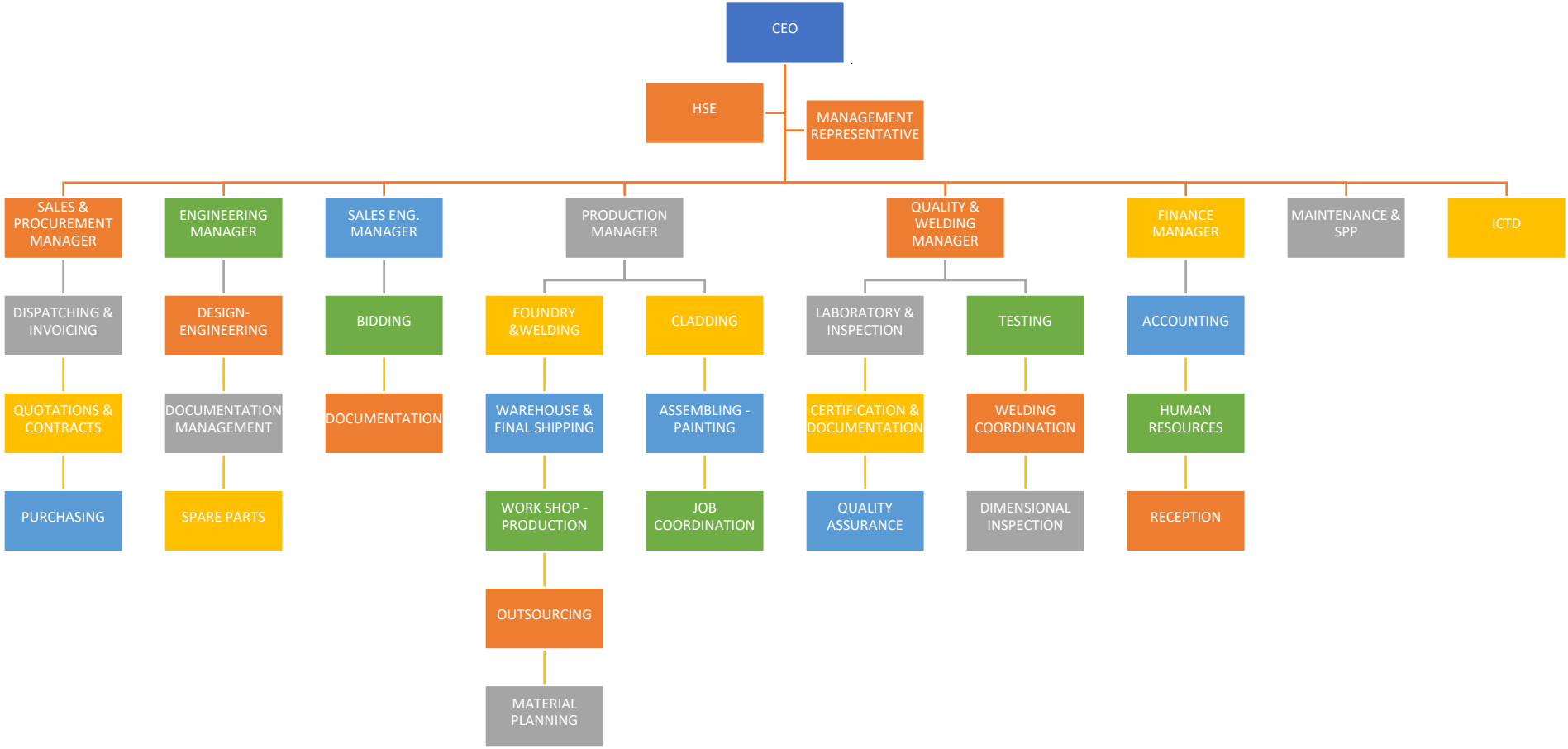
| | |
|---|---|
| GAS AND OIL PIPELINES | OFFSHORE INSTALLATIONS |
| ONSHORE INSTALLATIONS | GAS CARRIERS |
| CHEMICAL PLANTS | PETROLCHEMICAL PLANTS |
| REFINERIES | NUCLER POWER PLANTS |
| THERMOELECTRIC POWER PLANTS | SHIPYARDS |
| STEEL PLANTS | |

[i] *Images courtesy by Maksym Kaharlytskyi, Zachary Theodore, & Zbynek Burival - unsplash*

# 2 History

| | |
|---|---|
| **1896** | OMS Saleri Company was founded by Mr. Bortolo Saleri |
| **1915/1918** | Manufacturing of special military equipment during the 1st World War |
| **1918** | Manufacture of bronze and brass valves |
| **1939/1945** | Manufacturing of special military equipment during 2nd World War |
| **1945** | Bronze and brass valves (New types and wider range). Also high-quality, high precision water meters. |
| **1961** | Manufacture of ball valves in stainless steel and special alloys. |
| **1981** | Manufacturing of self-lubricating plug valves, FULL and REDUCED bore |
| **2009** | In order to increase the services and production, the factory has invested in NEW assembling, testing, painting, shipping plant and expanded the production site and Company facilities. |
| **2019** | Saudi Branch, and a new Saudi manufacturing facility |

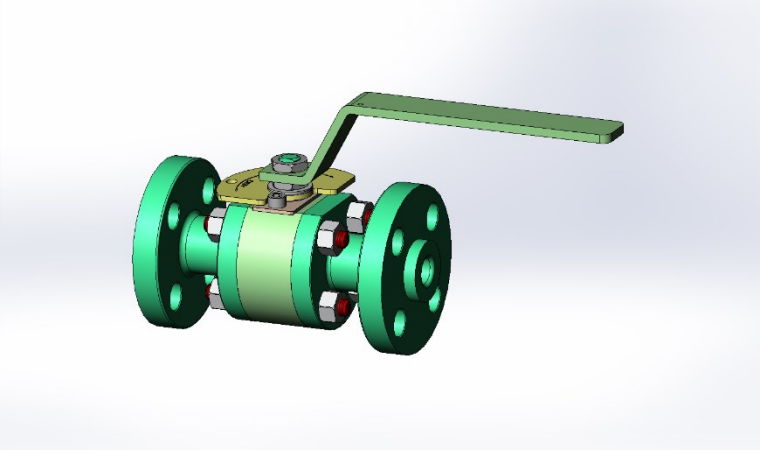
# 3 Organization



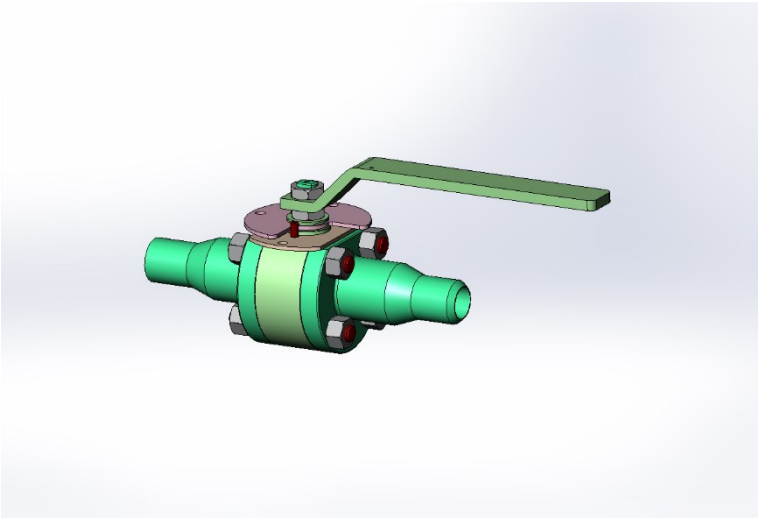
# 4 Products

## 4.1 3 P

Three pieces floating compact design ball valves, designed to prevent any seats damage during the welding process.



| 2 Pieces Bolted Body | 3 Pieces Bolted Body | 2 Pieces Screwed Body |
|---|---|---|
| ✓ ½" to 1 ½" Full Bore only class 150# & 300#<br>✓ 2" to 8" Full Bore<br>✓ 2" to 10" Reduced Bore class 150# & 300# | ✓ ½" to 6" Full Bore<br>✓ 2" to 8" Reduced Bore class 600# to 1500#<br>✓ ½" to 1½" Full Bore<br>✓ 2" Reduced Bored class 2500# | ✓ ¼" to 1½" Full Bore<br>✓ 2" only Reduce Bore class 600# to 1500# |

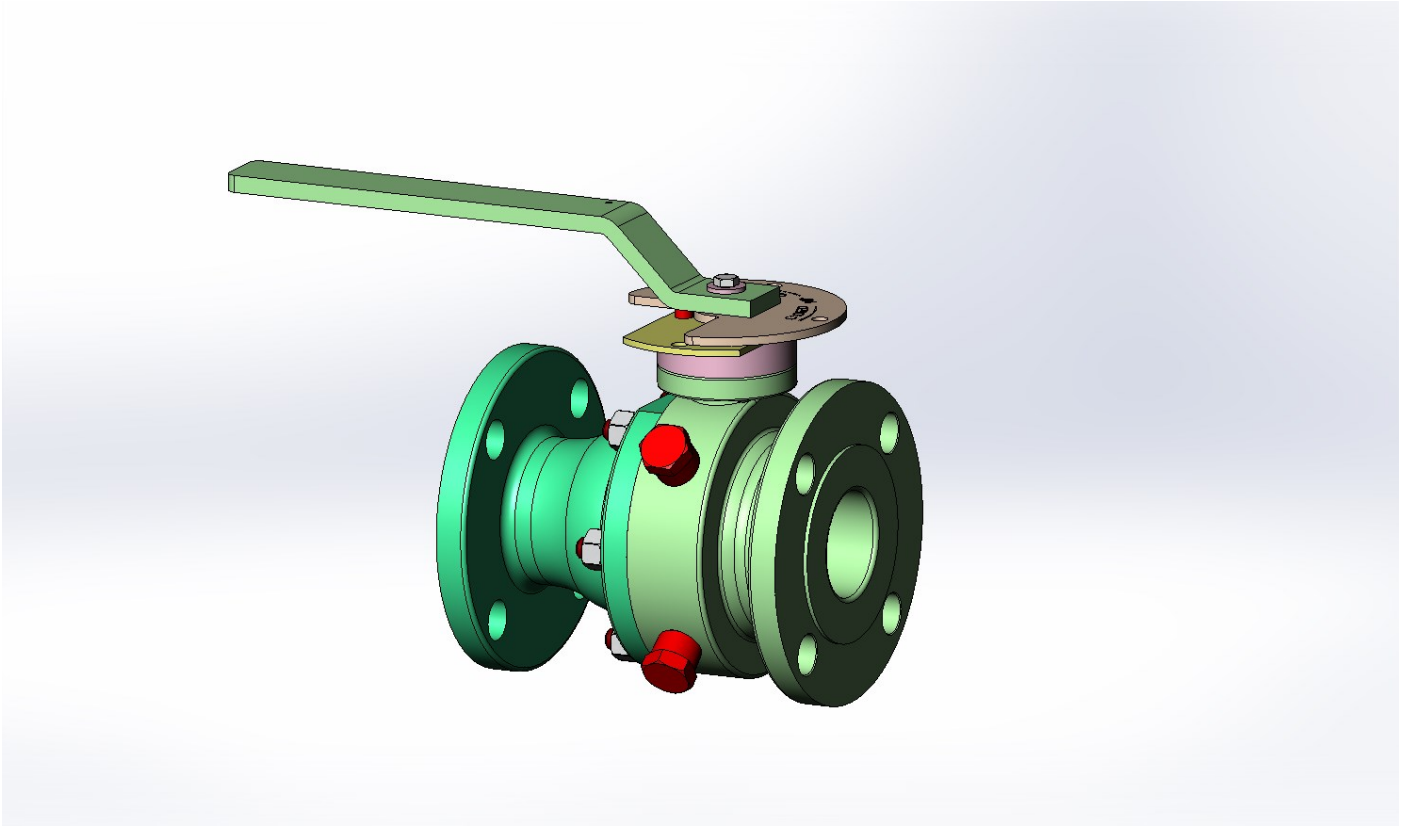


## 4.2 SPLIBO

Two flanged pieces trunnion ball valves, rugged construction, suitable to withstand the piping loads and the thermal shocks. “Split Body” type

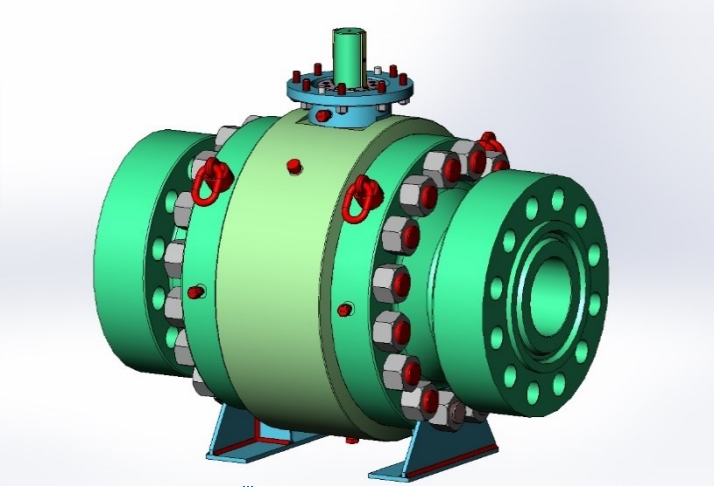
2 Pieces

- ✓ 2” to 4” Full Bore only class 150# & 300#



## 4.3 SPLIBO S 7100 T

Three pieces ball valves, trunnion type bolted body with self-relieving or double piston effect seats. Suitable for all refinery, petrochemical, chemical, gas line, pipeline, on-shore, and off-shore services.

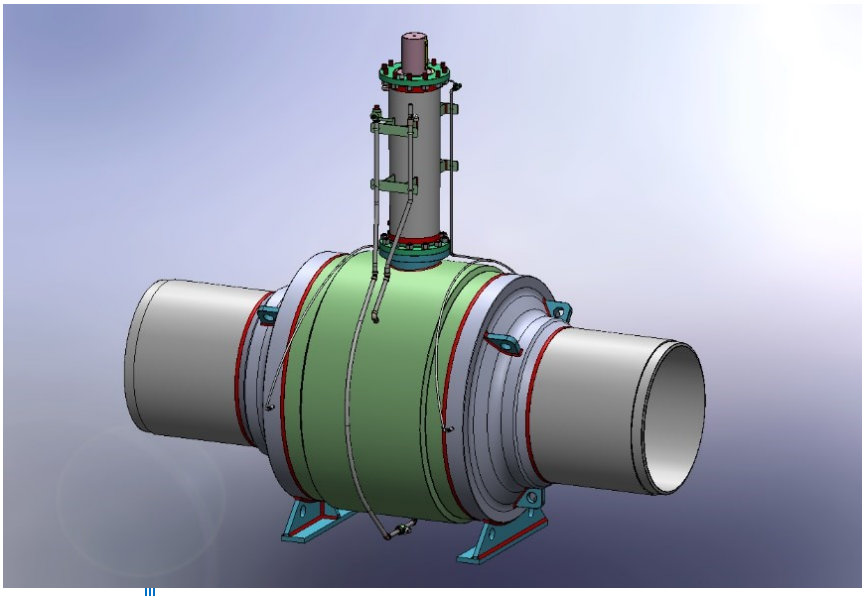


| 3 Pieces | 3 Pieces | 3 Pieces |
|---|---|---|
| ✓ 2" Full Bore class 600# to 1500# & API 6A 5000 PSI<br>✓ 2" – 3" Reduced Bore class 600# to 2500# & API 6A 5000 PSI | ✓ 6" to 66" Full Bore class 150#/300#<br>✓ 2" to 56" Full Bore class 600#<br>✓ 2" to 48" Reduced Bore class 600#<br>✓ 2" to 40" Reduced Bore class 1500#<br>✓ 2" to 36" Reduced Bore class 2500#<br>✓ 3" & Above Full Bore class 600# to 2500# & API 6A 15000 PSI<br>✓ 4" & Above Full Bore class 600# to 2500# & API 6A 15000 PSI<br>✓ 6" & Above Full Bore class 150# to 2500# & API 6A 5000 to 15000 PSI | ✓ $2^{1/16}$" to 11" Full Bore/Reduced Bore class 3000#/5000# & API 6A 2000/3000/5000 PSI<br>✓ $1^{13/16}$" to 13" Full Bore class 10000#/15000# & API 6A 10000 PSI<br>✓ $1^{13/16}$" to $5^{1/8}$" Full Bore class 15000# & API 6A 15000 PSI<br>✓ $2^{1/16}$" to $5^{1/8}$" Reduced Bore class 15000# & API 6A 15000 PSI |

*Other sizes/pressure classes could be available on Customers' request.*

## 4.4 SPLIBO S 7100 FULLY WELDED

Three pieces ball valves, trunnion or floating type fully welded body; for trunnion type valves, both self-relieving or double piston effect seats are available. Suitable for all refinery, petrochemical, chemical, gas line, pipeline, on-shore and off-shore services.



2 / 3 Pieces Floating

- ✓ ½" up to 4" Full Bore class 150# up to 800#
- ✓ ½" up to 4" Reduced Bore class 150# up to 800#

2 / 3 Pieces Trunnion

- ✓ 2" to 48" Full Bore class 150#/900#
- ✓ 2" to 56" Reduced Bore class 150#/900#
- ✓ 2" to 20" Full Bore class 1500#
- ✓ 2" to 24" Reduced Bore class 1500#

*Other sizes/pressure classes could be available on Customers' request.*

## 4.5 EN TOP

"Top entry" ball valves for "in line" maintenance. Rugged construction, suitable for refinery, petrochemical, gas line, pipeline, on-shore, and off-shore service.

Top Entry

- ✓ 2" Full Bore class 600# to 1500# & API 6A 5000 PSI
- ✓ 2" – 3" Reduced Bore class 600# to 2500# & API 6A 5000 PSI

Top Entry

- ✓ 6" to 66" Full Bore class 150#/300#
- ✓ 2" to 56" Full Bore class 600#
- ✓ 2" to 48" Reduced Bore class 600#
- ✓ 2" to 42" Reduced Bore class 1500#
- ✓ 2" to 36" Reduced Bore class 2500#
- ✓ 3" & Above Full Bore class 600# to 2500# & API 6A 15000 PSI
- ✓ 4" & Above Full Bore class 600# to 2500# & API 6A 15000 PSI
- ✓ 6" & Above Full Bore class 150# to 2500# & API 6A 5000 to 15000 PSI

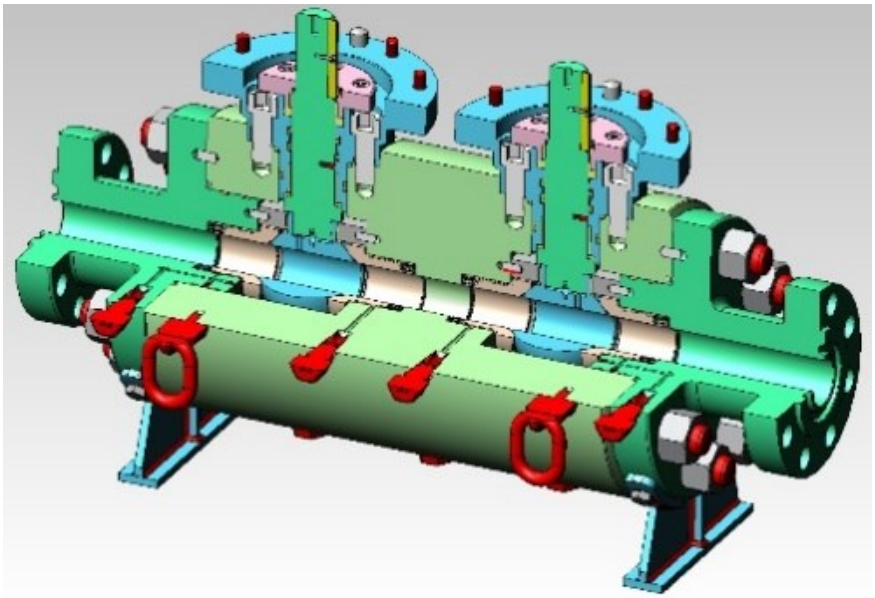
Top Entry

- ✓ $2^{1/16}$" to 11" Full Bore/Reduced Bore class 3000#/5000# & API 6A 2000/3000/5000 PSI
- ✓ $1^{13/16}$" to 11" Full Bore class 10000#/15000# & API 6A 10000 PSI
- ✓ $1^{13/16}$" to $5^{1/8}$" Full Bore class 15000# & API 6A 15000 PSI
- ✓ $2^{1/16}$" to $5^{1/8}$" Reduced Bore class 15000# & API 6A 15000 PSI

*Other sizes/pressure classes could be available on Customers' request.*

## 4.6 Modular Valves

Three pieces twin ball valves, floating or trunnion type valves depending on the customer/project need; in case of trunnion type, with self-relieving or double piston effect seats depending, again, from the service and customer needs. Suitable for all refinery, petrochemical, chemical, gas line, pipeline, on-shore and off-shore services. Specially designed to meet space restrictions with need to have a double isolating barrier usually provided by a single obturator valve.



3 Pieces

- ✓ 2" up to 20" Full Bore class 150# to 2500# & 1 13/16" up to 7 1/16" API 6A 3000 PSI to 10000 PSI

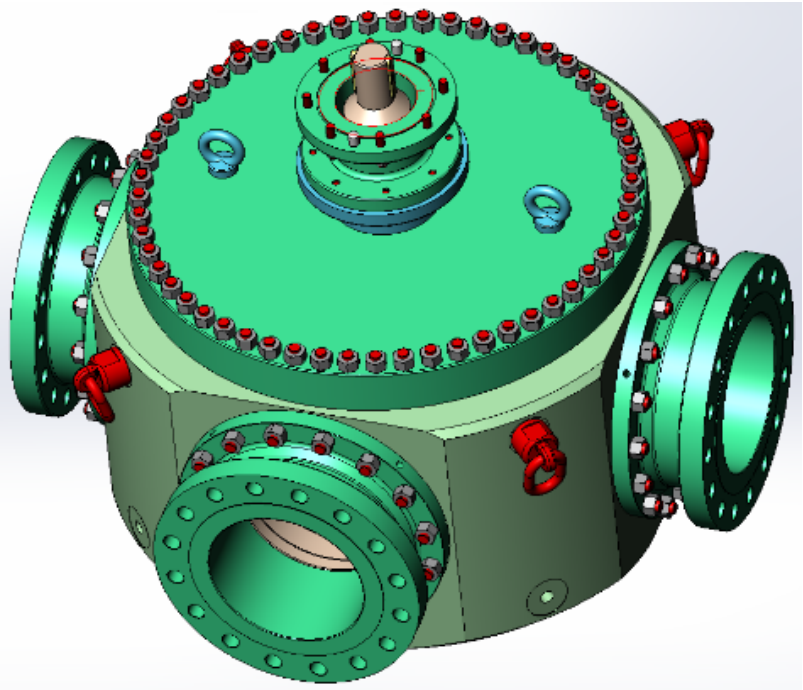
3 Pieces

- ✓ 2" up to 20" Reduced Bore class 150# to 2500# & 2 1/16" up to 9" API 6A 3000 PSI to 10000 PSI API 6A

*Other sizes/pressure classes could be available on Customers' request.*

## 4.7 Multiport Valves

Top entry or side entry multipiece construction ball valves, trunnion type valves; valves engineered and fit for purpose. Valves may be supplied with “L” or “T” port and in both cases either “trans-flow type” or “non-trans-flow type” can be supplied. Selection depends on the service and customer needs.

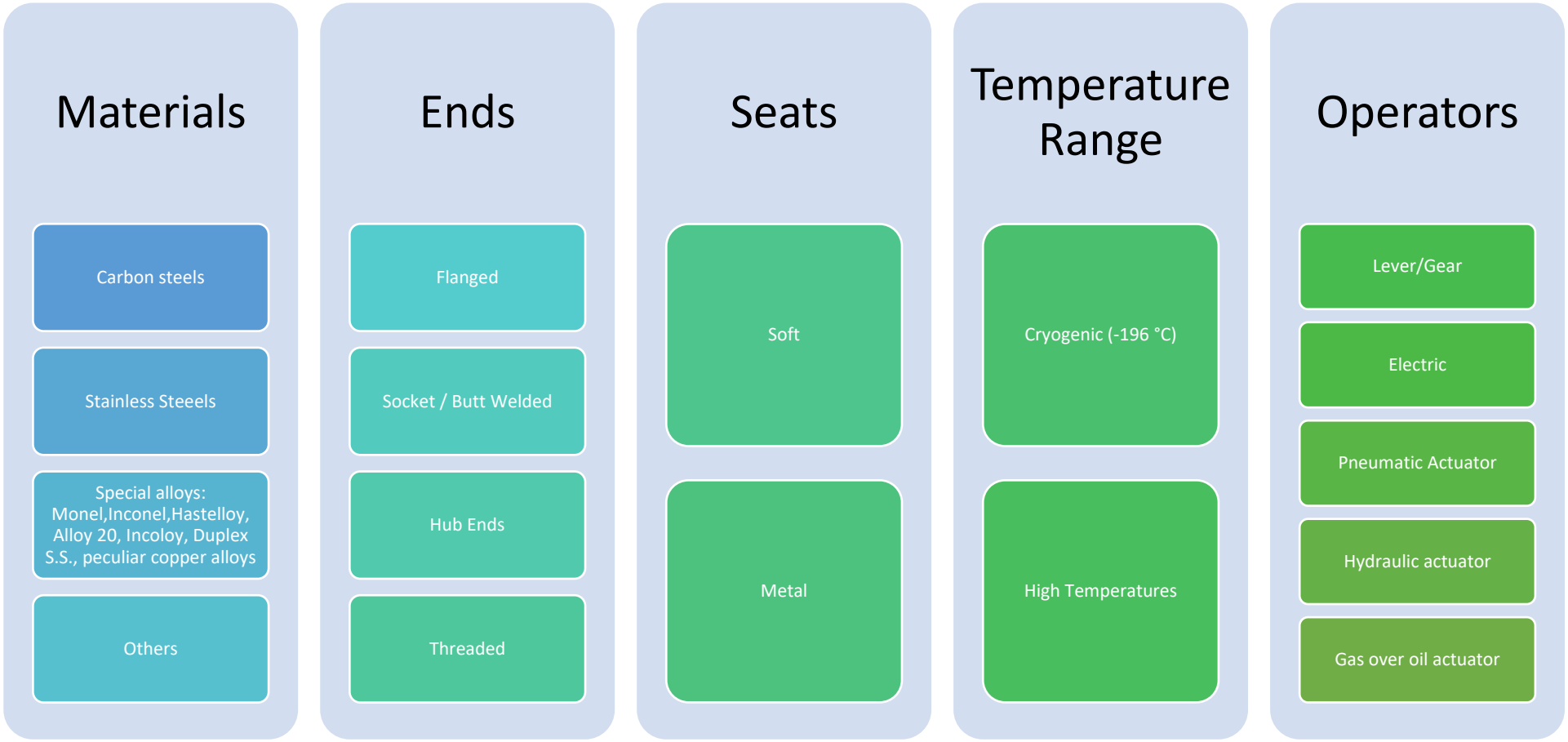


2/3 Pieces

- ✓ 2” up to 36” Full Bore class 150# to 600#
- ✓ 2” up to 20” Reduced Bore class 150# to 600#

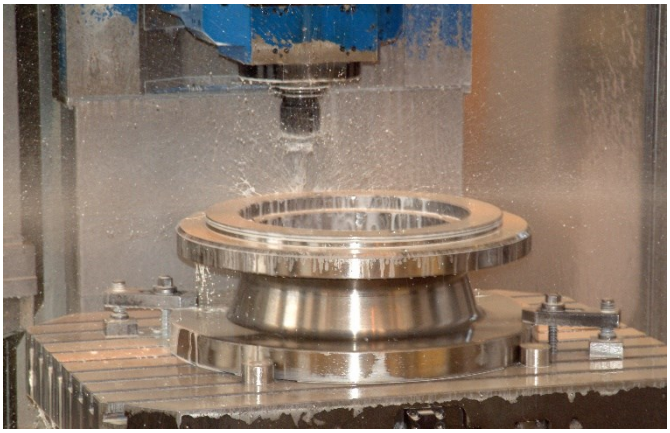
*Other sizes/pressure classes could be available on Customers’ request.*

## 4.8 Materials & Features

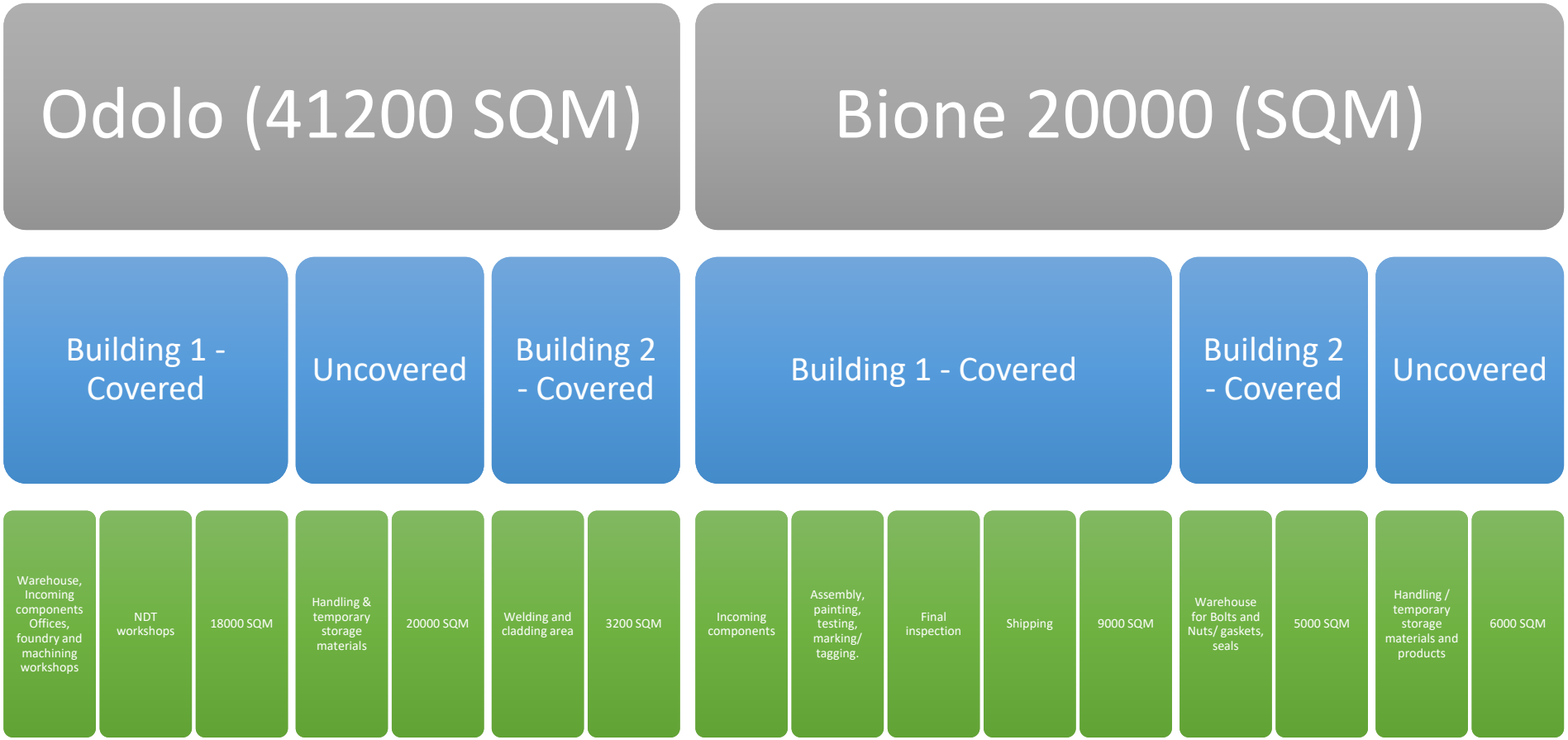


# 5 Capacity & Capability

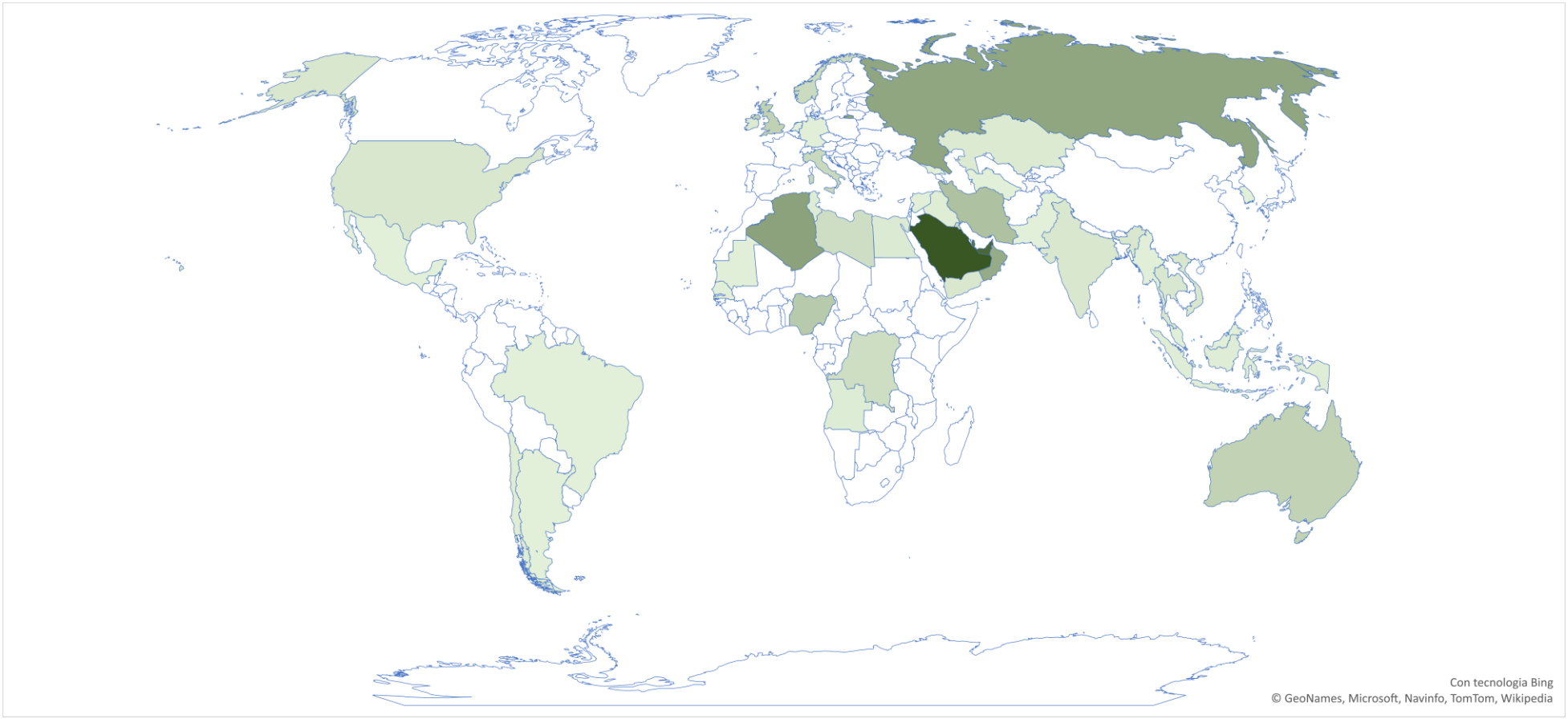
Thanks to the investments over the years, OMS Saleri currently possesses infrastructures with wide machinery fleet, allowing the company to manufacture and deliver up to 25,000 valves per year, with an average of 34,000 Metric tons handled per year.



## 5.1 Area Overview

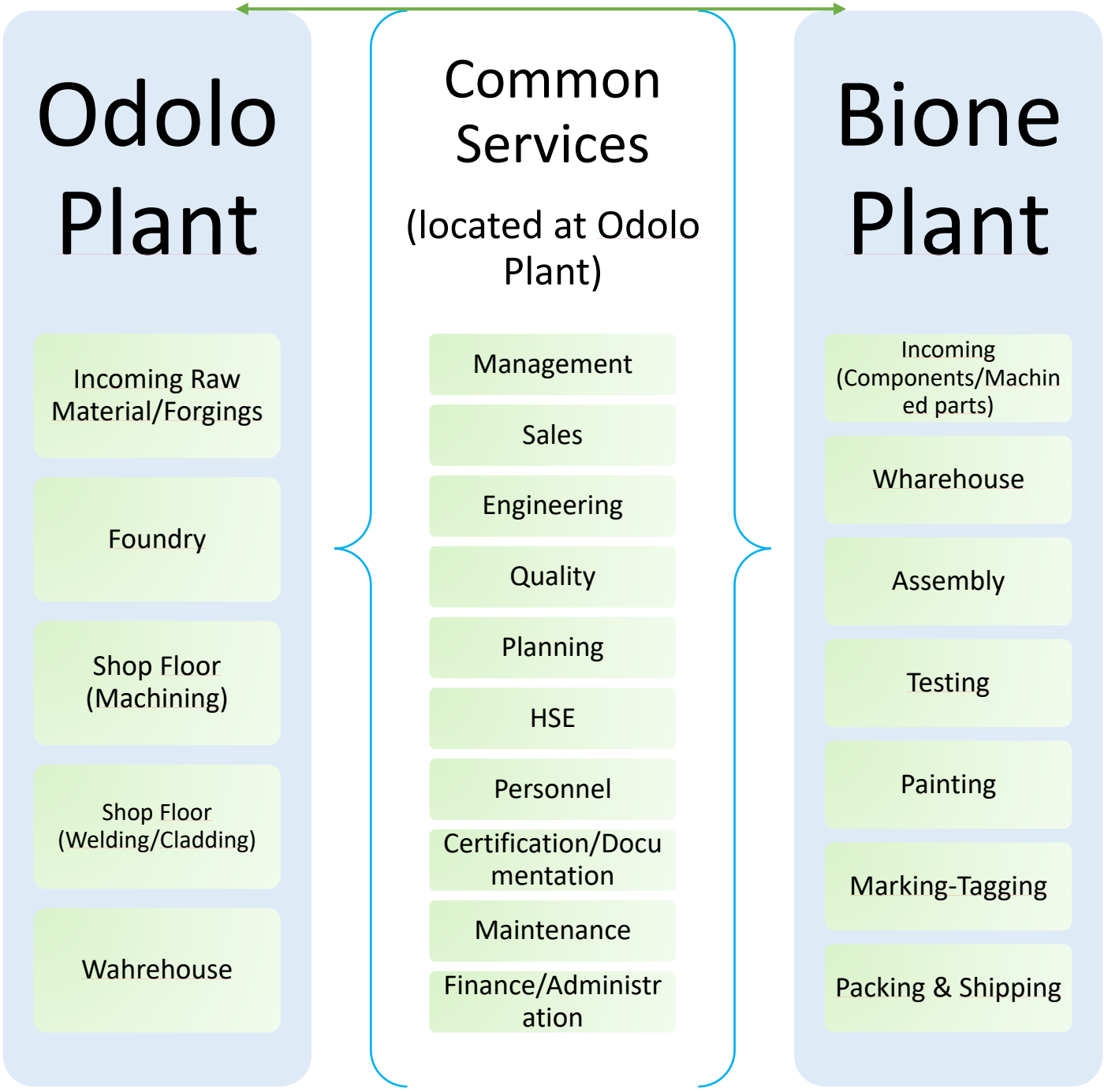


## 5.2 Installations around the world[i]

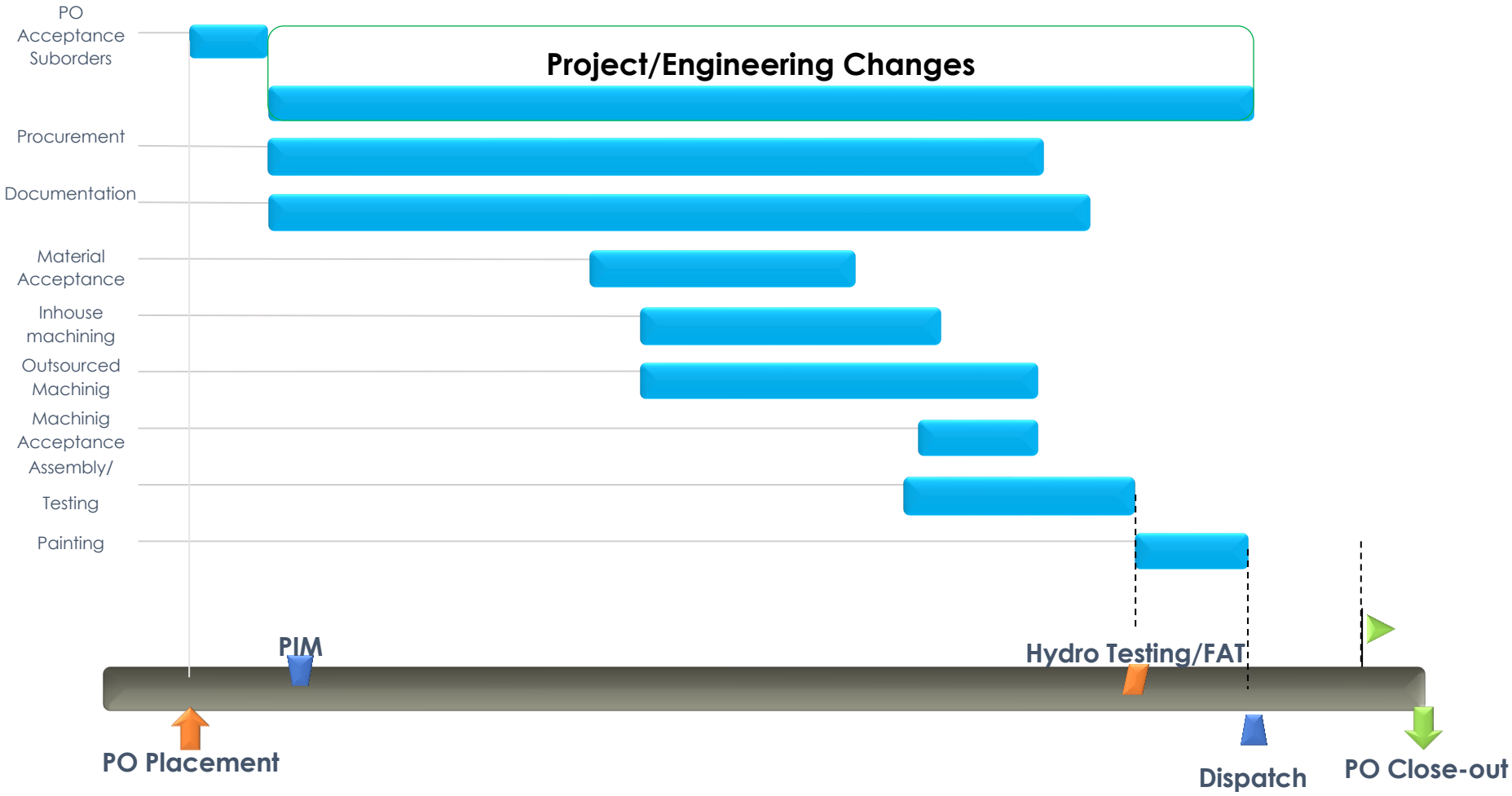



[i] Data from 2006, last update 25th February 2021

## 5.3 Production Flow Description



## 5.4 Typical Execution Plan



# 6 Accreditations & Certifications

## 6.1 Main Certificates & Accreditations

| CERTIFICATION | ISSUED BY | CERTIFICATE N°. |
|---|---|---|
| **API 6A** | API | API 6A-0575 - Monogram Bione + extension letter API website |
| **API 6D** | API | API 6D-0040 - Monogram Bione + extension letter API website |
| **ATEX DIRECTIVE** | DNV - GL | 12923-2018 |
| **EN ISO/IEC 17025: 2018** | DNV - GL | No. 1558 |
| **GOST – TU CR 032** | POYTECH GROUP | 40490 |
| **ISO 14001: 2015** | DNV - GL | 93940-2011-AE-ITA-ACCREDIA |
| **ISO 3834-2:2005** | DNV - GL | 160183-2014-AQ-ITA-ACCREDIA |
| **ISO 45001: 2018** | DNV - GL | 204135-2016-AHSO-ITA-RvA |
| **ISO 9001: 2015** | DNV - GL | CERT-00210-94-AQ-IND-SINCERT |
| **PED DIRECTIVE** | DNV - GL | 116334-2012-CE-ITA-ACCREDIA |
| **PED DIRECTIVE** | DNV - GL | 116335-2012-CE-ITA-ACCREDIA |
| **QTR – ASTM A 351 CK-3MCUN (UNS J93254) – CENTRIFUGAL** | NORSOK | No. CK-19 C |
| **QTR – ASTM A 351 CK-3MCUN (UNS J93254) - STATIC** | NORSOK | No. CK-19 S |
| **QTR – ASTM A995 4A (UNS J92205) - CENTRIFUGAL** | NORSOK | No. 4A-19 C |
| **QTR – ASTM A995 4A (UNS J92205) – STATIC** | NORSOK | No. 4A-19 S |
| **QTR – ASTM A995 5A (UNS J93404) – CENTRIFUGAL** | NORSOK | No. 5A-19 C |
| **QTR – ASTM A995 5A (UNS J93404) – STATIC** | NORSOK | No. 5A-19 S |
| **SIL CERT** | TUV | 18-SIL-0010015-01-TIC |
| **SIL CERT** | TUV | 18-SIL-0010015-02-TIC |
| **SIL CERT** | TUV | 18-SIL-0010015-03-TIC |

## 6.2 Approvals

OMS SALERI is proud to be listed in the Approved vendor lists of main players in the Market, from End Users to Operators and to EPCs.[i]

[i] An extract of main End Users and Operators.

# 7 Departments

## 7.1 HSE

OMS Saleri has always considered Health, Safety & Environment as a basic objective within its business strategy, fully aware of the social responsibility towards all the stakeholders in the pursuit of sustainable development, as well as a competitive factor in long term economic growth.

OMS SALERI has environmental management system certified according to UNI EN ISO 14001:2015. This system permits the company not only to respect environmental legislature, but also to continually improve its environmental impact involving all the personnel who work at its factories.

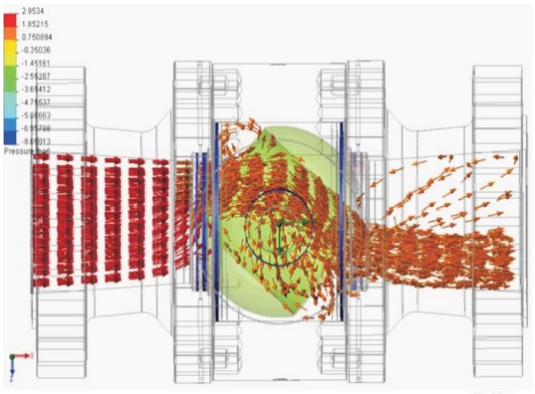
OMS SALERI, as well, is proud to have a certified management system to Occupational Health and Safety Management System standard: UNI ISO 45001:2018.

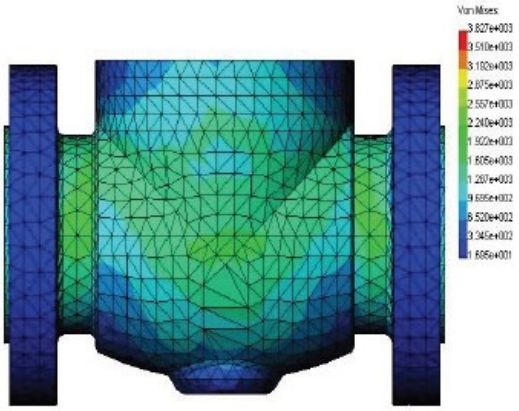
## 7.2 Engineering

Our entire production is designed and engineered by OMS Saleri engineering department using the most up dated software and hardware technology such as 3-Dimensional drawing, Finite Element Analysis for both structural and CFD purposes.

Our manufacturing process is planned by OMS Saleri high qualified staff with the aid of the best software and hardware technology.

Constant research with the aim to pursue the continuous design improvement are the premises to work with our clients in the best professional way, doing our utmost to satisfy any special technical requirement that the market requires.





## 7.3 Quality Assurance and Quality Control

### 7.3.1 Quality Policy

This policy is shared within all our Company's employees so that they understand the importance of everyone of applying the relevant procedures and they help the Company to achieve continuous improvement.

Everyone involved in the Company is required to apply the management rules given in the Quality Manual and inside the applicable procedures, with the aim to:

- Keep under control all the activities.
- Ensure that the products meet the specifications, that they are suitable for the intended use and meet the applicable quality standards, safety standards (regulations, rules, and laws) and specifications, that they come up to customer's expectation, and they are supplied at the lowest cost and without waste of human or financial resources.
- Promote actions to prevent the occurrence of nonconforming product.
- Identify needs for training, keep the updating and the improvement of our quality, effectiveness, and organization.

Top management highlights the importance of communication processes and mutual collaboration of the staff and the continuous information exchanging: the job of this staff leads the success of the Company.

During the management review (at least once a year), all the targets are monitored, documented, and evaluated.

*"Following my precise choice and continuing the family tradition, I decided to confirm the application of a quality management system for our company. This policy to meet the requirements of the reference specifications for the management system (ISO 9001, API Q1, ISO 3834-2) related to the standard products (API 6A, API 6D) and to the international requirement for product and services supplied (PED Directive for pressure vessels, ATEX Directive, SOLAS 74 requirement section VI/2).*

*I decided as well to continue to apply safety directives, taking into account the experience acquired and the practice in use, taking care to orient them towards better effectiveness and efficiency."*

Eng. Piero Saleri

CEO

### 7.3.2 Quality Control and Testing on Material

Internal accredited ISO 17025 laboratories allow OMS to carry out all types of quality testing, including mechanical tests, chemical analysis, micrographic examination, destructive tests, and comparative checks on raw materials in accordance with International Standards and Regulations.

Moreover, our internal NDE department are qualified from level I to level III of ISO 9217 & SNT code on all methods suitable to investigate finished products.

| | |
|---|---|
| **Physical -Chemical properties** | ➢ Quantometric chemical analysis or by chemistry.<br>➢ Tensile strength test.<br>➢ Impact tests at room and low temperature.<br>➢ Hardness Rockwell, Brinell test.<br>➢ Bending test. |
| **Metallographic examinations** | ➢ Micrographic structure check.<br>➢ Micrographic Ferrite content measurement.<br>➢ Micrographic Inclusion count check.<br>➢ Micrographic tests. |
| **Non Destructive Tests** | ➢ Liquid penetrant inspection.<br>➢ Magnetic particle examination - Magnetoscopy.<br>➢ Ultrasonic inspection. |
| **Corrosion Tests** | ➢ HUEY -nitric acid<br>➢ HIC -hydrogen induced cracking<br>➢ SSCC -Sulphide stress corrosion cracking at room temp., at 90° and at 120° C.<br>➢ CSCC -Chloride stress corrosion cracking in boiling MgCL2.<br>➢ G 48 -Pitting and crevice corrosion resistance by use of Ferric Chloride solution. |

### 7.3.3 Special Tests On Valves

OMS Saleri valves are designed and manufactured to guarantee greater functionality and safety on any plant. For such scope qualification tests have been performed on sample valves to check the performance at extreme condition, witnessed by third party inspection certifying bodies.

These tests include:

- ✓ Fire safe tests, in accordance with API 607, ISO 10497 ed.2010 and API 6FA ED 2020 including errata 1 e 2.
- ✓ Fugitive emission prototype test in accordance with ISO 15848-1:2015
- ✓ Fugitive emission production test in accordance with ISO 15848-2:2015
- ✓ Prototype (as per customer spec) & TAT tests (as per SHELL 77/200)
- ✓ Cryogenic Test (as per BS 6364 and ISO 28921 or as per customer spec)
- ✓ Bending tests, in accordance with Client's specifications on valves size 3", 12" and 24" for gas-pipelines and oil-pipelines application.
- ✓ High pressure/leakage tests with Helium/Nitrogen mixture at variable temperatures from - 40°C to + 180°C.
- ✓ These tests are performed to verify valve stability, no deformations under simulated pipe loads, no detrimental effects on valve functions, etc.

In order to obtain the optimal design of ball valve, critical parts are studied by Finite Elements Analysis that keeps in consideration the stress and strain criteria to satisfy the customer's technical requirements.

## 7.4 Foundry

The most important advantage of OMS Saleri is its Integral Cycle Manufacturing Capability, running from the foundry through to final testing and shipping of products.

Having in house foundry OMS Saleri does not need to depend on suppliers and contractors for the supply of castings. Therefore, the Company is in a favorable position compared to competitors – our Company can guarantee the quality of the castings as well as on time delivery.

An internal foundry also means that OMS Saleri can satisfy customer's requirements for special materials that are not easily available on the market. It also offers the possibility for constant research of new alloys and continuous improvement of the manufactured components.

The foundry has several departments:

- Depot for patterns
- Molding
- Melting furnaces
- Knockout
- Shotblasting
- Scarfing
- Trimming
- Heat treatment

Each activity is performed following written procedures in accordance to regulations outlined in the Quality assurance described in the Quality Manual.

Patterns are catalogued and checked when these are taken or returned to the depot. For the mouldings, different sands, special filter and proper painting are used. Moulding preparation is carried out with advanced equipment which allows for high-grade casting of different materials in a shorter time.

Starting from raw materials melting is performed in medium frequency electric furnace which allow a constant check during special alloy forming stage. There are thermocouples to check the temperature and a Spectrometer for immediate alloy analysis composition taken from the bath to allow for refining/corrections of the cast metal.

The foundry is equipped with two shotblast machines with different types of grit: one for carbon steel materials and the other for stainless steel material, which is used only on stainless steel parts to prevent surface contamination. For any possible defect, OMS Saleri has welders with ASME IX qualification who operate in compliance with certified welding procedures. Heat treatment is performed in computer-programmed bell furnaces, with tilting bases and cooling water tank.

## 7.5 Workshop

OMS Saleri has a very wide range of most technological equipment located in the different in-house departments. Such range includes CNC machineries and tridimensional measuring machines to guarantee the highest quality and reliability of all OMS Saleri product.

## 7.6 Welding and Cladding

OMS Welding workshop is qualified ISO 3834-2 since August 2014.

OMS Saleri held more than one hundred of welding procedure qualified based on ASME IX and ISO 15614-7 and around 10 welding operators qualified based on ASME IX and Iso 14732

OMS welding dept is able to carry out weld overlay and cladding from 3" to 56" component's size, regardless of the type of component subject to be weld, always in two passes.

The main weld overlay cladding materials used are UNS N06625 (ER NiCrMo-3), Stainless steel (ER309Lxx/ER616Lxx) and Duplex stainless-steel material (ER309Lxx/ER 2209 or ER2209)

Chemical analysis shall be carried out at a height of 1.0 mm from the original material surface. The chemistry for all aforementioned material will be within the range specified in ASME SEC II Part C or AWS classification.

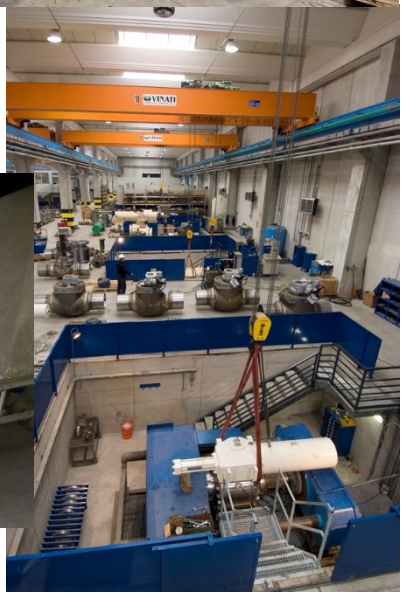
## 7.7 Assembly and Testing

All OMS Saleri valves are assembled and tested by qualified personnel following specific procedures. All valves are subjected to the following final tests:

- hydrostatic shell test
- hydrostatic seat test
- low pressure pneumatic seat test
- functional acceptance test (actuated valves)

In accordance with applicable standards or customer's specifications, OMS Saleri is also able to perform the following tests:

- vacuum leakage test
- nitrogen/helium leakage test
- high pressure gas test
- cryogenic tests (down to -196° C)
- functional test with gear operator or with actuators
- high temperature leakage test
- experimental tests to determine valve CV
- tests with strain gauges
- deflection/bending tests.
- fire-safe tests



## 7.8 Sandblasting and Painting

OMS Saleri has a very high qualified painting facility made by:

- 2 semi-automatic and 1 manual shotblast machines
- 4 spray booths
- 1 drying oven

OMS Saleri is able to comply with any client painting project requirements.

## 7.9 Final Inspection & Packing Area

At Bione Plant, a dedicated area to perform the final inspection and FATs, as well as packing activities following the customers' requirements.