HOT INDUCTION BENDING
WELD-OVERLAY OF MOTHER PIPES & PIPES
PIPING SPOOLs, PRESSURE VESSELS
Company profile

The acquisition of Bassi Luigi & C. by the Allied Group during 2018 naturally involved also SIMAS S.p.A., an experienced manufacturer founded in 1963, located in Prezzate di Mapello (Bergamo, Italy) which in 1994 entered the Bassi Group following the complete acquisition of the former B.G. Metallurgica Bergamasca.

SIMAS is specialized in the production of a wide range of large-radius bends cladding, pressure vessels, heat exchangers, and in prefabrication. In particular many ranges of special pieces are destined for oil&gas such as prefabricated pipes in all types of material grades, large-radius bends in all sizes up to 60” diameter (produced from bended pipe by electrical induction - 3D, 5D, 7D, 10D), receiving and launching traps with patented quick closures, extrusions on manifolds. Cladding services for pipes and bends are fully in line with requests from clients to upgrade the product performances in several applications.

Last but not least, the company produces pressure reactors for desulphurisation plants, tubular reactors for polypropylene and polyethylene plants, jacketed reactors/semipipe heating, high pressure separators, shell and tubes heat exchangers, pressure vessels, distillation and fractionation columns for the petrochemical sector, while the thermotechnical sector is served with low and medium pressure water pre-heaters, superheaters and tubular refrigerants.

SIMAS occupies an area of 45,000 sq m (15,000 sq m covered), employs 60 people and has a yearly capacity of 10,000 tonnes of finished products.

Company details

<table>
<thead>
<tr>
<th>Company name</th>
<th>Chamber of Commerce</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIMAS SpA</td>
<td>REA/MI 1417637</td>
</tr>
<tr>
<td>Chamber of Commerce</td>
<td>Paid Capital</td>
</tr>
<tr>
<td>REA/MI 1417637</td>
<td>Euro 1,000,000</td>
</tr>
<tr>
<td>VAT No.</td>
<td>IT10916000150</td>
</tr>
</tbody>
</table>

Telephone +39 035 4655400
Fax +39 035 909430

E-mail info@simas.net
Website https://www.simas.net
Products & target markets

**Bends:** SIMAS’ aim is to provide high quality bending solutions for oil&gas pipelines, either onshore or offshore. The manufacturing and testing procedures exceed all quality standards required by the oil&gas industry through the use of state-of-the-art technology that enables full control of the bending process, as well as total monitoring of bending parameters.

**Bending capabilities**

<table>
<thead>
<tr>
<th>PIPE DIMENSION</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. dia.</td>
<td>60”</td>
</tr>
<tr>
<td>Min. dia.</td>
<td>2”</td>
</tr>
<tr>
<td>W.t.</td>
<td>From 6 mm to 150 mm</td>
</tr>
<tr>
<td>Max. length</td>
<td>14900 mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BENDING RADIUS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Min.</td>
<td>100 mm</td>
</tr>
<tr>
<td>Max.</td>
<td>10500 mm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BENDING ANGLE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Max.</td>
<td>182°</td>
</tr>
</tbody>
</table>

**Prefabration:** thanks to more than 50 years’ of experience, SIMAS is one of the main players in the design, fabrication and inspection of pressure vessels and heat exchangers for oil&gas, refinery and petrochemical plants. SIMAS is an authorized holder of PP, S, U and U2 stamps for manufacturing pressure vessels and it is also certified by TÜV NORD for the manufacturing of such products according to standard DIN EN ISO 3834-2 and AD-2000 Merkblatt HP0. SIMAS policy is to focus on the most demanding jobs, working on heavy wall products and special materials.

**Cladding of pipes and straight pipes:** SIMAS has been operating in the field of clad piping manufacturing and fabrication for more than 20 years. Thanks to this experience, we have developed and improved our manufacturing systems and experiences. Our different experience has enabled us to support clients’ requests and their even more challenging needs.

All SIMAS products and services are destined for the oil&gas, petrochemical, power generation and offshore sectors.
## Bends

<table>
<thead>
<tr>
<th>TYPE OF PRODUCT</th>
<th>DIAMETER</th>
<th>THICKNESS</th>
<th>MATERIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Induction bends</td>
<td>From 2” up to 60”</td>
<td>From 6 mm to 150 mm</td>
<td>Carbon steel, Micro AlloYed steel, High strength steel, Stainless steel, Low &amp; High Alloy steel, Duplex and Superduplex, Titanium, Inconel, Hastelloy, Incoloy.</td>
</tr>
</tbody>
</table>

## Piping Prefabrication

<table>
<thead>
<tr>
<th>TYPE OF PRODUCT</th>
<th>DIAMETER</th>
<th>THICKNESS</th>
<th>MATERIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spools for thermal, and nuclear power stations, offshore platforms etc.</td>
<td>From 2” up to 60”</td>
<td>From 6 mm to 150 mm</td>
<td>Carbon steel, Micro AlloYed steel, High strength steel, Stainless steel, Low &amp; High Alloy steel, Duplex and Superduplex, Titanium, Inconel, Hastelloy, Incoloy, Clad.</td>
</tr>
</tbody>
</table>

## Cladding service

<table>
<thead>
<tr>
<th>TYPE OF PRODUCT</th>
<th>DIAMETER</th>
<th>BASE MATERIAL</th>
<th>CLADDING MATERIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cladding by hot wire TIG</td>
<td>Min. ID 115 mm Max OD 914,4 mm</td>
<td>Carbon steel , Low temperature Carbon steel , High yield strength (up to X-70); Alloy steels (P11, P22);</td>
<td>Inconel 625; Incoloy 825; AISI: 316L, 317L, 321 &amp; 347; Hastelloy C276 &amp; C2000; Stellite 6</td>
</tr>
</tbody>
</table>

## Heat exchangers/ Pressure vessels

<table>
<thead>
<tr>
<th>TYPE OF PRODUCT</th>
<th>DIAMETER</th>
<th>THICKNESS</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure vessels</td>
<td>Up to 195”</td>
<td>Max 180 mm</td>
<td>Max 190 tons</td>
</tr>
<tr>
<td>Heat exchangers</td>
<td>Up to 195”</td>
<td>Max 180 mm</td>
<td>Max 150 tons</td>
</tr>
</tbody>
</table>

## Scraper traps

<table>
<thead>
<tr>
<th>TYPE OF PRODUCT</th>
<th>DIAMETER</th>
<th>QUALITY MATERIALS</th>
<th>CERTIFICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pig launcher and receivers</td>
<td>from150 lbs to1500 lbs</td>
<td>From API 5L X42 to API 5L X70</td>
<td>ASME stamps</td>
</tr>
</tbody>
</table>

## Titanium

<table>
<thead>
<tr>
<th>TYPE OF PRODUCT</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Induction bends, spool, prefabrication</td>
<td>In order to develop the application of titanium with characteristics of anti-corrosion and high resistance, we dedicated a special area “the cleanroom” in our workshop for this specific working process</td>
</tr>
</tbody>
</table>
Cladding

Cladding is a fundamental process in the manufacturing industry and it is applied across the whole spectrum of applications, from the oil&gas industries to petrochemical, nuclear and steelmaking. Cladding is required to provide corrosion resistance against highly severe corrosive service fluid. To this end and to serve increasing demand for clad products, SIMAS is now specialized in weld overlay using GTAW hot wire automatic process and our manufacturing program covers sizes over 115 mm (inside diameter) and length up to 12 m. SIMAS is also able to offer a complete product to its clients including the induction bending service for clad pipe, heat treatment in our API 6A certified furnace and spool fabrication including hydro-testing and packing into crates or containers for easy transport worldwide. Finally SIMAS has the right to use the API 5LD monogram and works in accordance with API Q1.
SIMAS has gained a good reputation with national and foreign customers all over the world, and many of its bends have been used successfully in their projects.
SIMAS is able to manufacture prefabricated items for the most extended applications, manufactured in accordance with the official national and international code standard.
Materials used and related International Standards

CARBON AND ALLOY STEEL
FOR ROOM, MODERATE AND ELEVATED TEMPERATURES

ASTM / ASME A/SA 106
API 5L: Gr.B - Gr.C
ASTM / ASME A/SA 335:
Gr.1 - Gr.11 - Gr.12 - Gr.5
Gr.22 - Gr.9 - Gr.91 - Gr.92
CLAD:
CS+INCONEL - CS+INOX
CS+HASTELLOY
EN 10216-2:
P195GH - P235GH - P265GH
20MnB6 - 16Mo3 - 8MoB5
4 - 14MoV63
10CrMo5-5 - 13CrMo4-5
10CrMo9-10
15NiCuMoNb5-6-4
X11CrMo5 - X11CrMo9-1
X10CrMoVNb9-1
X10CrWMoVNob9-2
X20CrMoV11-1 and
equivalent grades

CARBON AND ALLOY STEEL
FOR LOW TEMPERATURE SERVICE

ASTM / ASME A/SA 333:
Gr. 6, Gr. 3, Gr. 8
and equivalent grades.

STAINLESS STEEL

ASTM / ASME A/SA 312:
TP304 - TP304L - TP304H
TP304LN - TP304N
TP316 - TP316L - TP316H
TP316LN - TP316N - TP317
TP317L - TP321H - TP347
TP347H - S31254 and
equivalent grades.

TITANIUM ALLOY

ASTM / ASME B/SB862:
and equivalent grades
ASTM / ASME B/SB861:
Gr. 1-2-12.

HIGH YIELD STEEL FOR PIPELINE AND OFFSHORE

API 5L:
Gr. X42 - X46 - X52
X60 - X65 - X70 - X80
EN 10208-2:
L245NB
L290NB - L360NB - L415NB
L360QB - L415QB - L450QB
L485QB - L555QB - L360MB
L415MB - L450MB - L485MB and equivalent
grades.

AUSTENITIC/FERRITIC STAINLESS STEEL

ASTM / ASME A/SA 790:
UNS 31803 (duplex) - UNS 32750 (superduplex)
UNS 32760 (superduplex) -
UNS 32550 (superduplex) and equivalent
grades.

NICKEL ALLOY

UNS N04400 - UNS N06600
UNS N06625 - UNS N08020
UNS N08800 - UNS N08811
UNS N08825 - UNS N10276 and equivalent grades.

Manufacturing Standards

ISO 15590-1
DNVGL-ST-F101
ASME B16.49
NORSOK M630
SHELL DEP specifications
CHEVRON specifications
ARAMCO specifications
TOTAL GS specifications
BP specifications
EXXONMOBIL specifications
MSS SP-75, PFI-ES-24

Design codes

ASME B31.1 - ASME B31.3
ASME B31.4 - ASME B31.8
AD 2000 Merkblatt
W0 - HP0
STOOMWEZEN rules
DIN EN ISO 3834-2

Certifications

- ISO 9001: 2015 by Bureau Veritas
- ASME Stamp authorizations U, U2, S, PP
- AD2000 Merkblatt W0 & PED
  2014/68/EU by TÜV Nord
- DIN EN ISO 3834-2 by TÜV Nord
- ISO 14001: 2004 by Afnor
- OHSAS 18001:2007 by Afnor
- API 5LD & Q1

In addition to these Certifications, issued by public entities and organizations, SIMAS has Approvals issued by private and public companies, such as: Aramco, BP, Chevron, Exxon, FMC, KNPC, Kvaerner, Saipem, Shell, Snam Rete Gas, Statoil, Technip, Total, TransCanada.

SIMAS