



OVERCOME THE PRESSURE



**Plates Rolling & Welding
at the desired shape**

Cold Rolled steel Plates

Rolled plates are welded according to the most important international standards in any Steel grade to suit all requirements for the manufacturing of Transition Pup Pieces or pipes, Stubs, Tubes and Cones for Pressure Vessels bodies such as Pig Launcher & Receivers, Heat Exchangers, Power Plants and tubes to be assembled to obtain Lateral Tees, Flow Straighteners, Repair sleeves etc., or hot-forged Fittings. Specific procedures are held to provide also low diameter's tolerances.



Rolled Plates specifically dimensioned according to the required tubes to be re-worked in order to obtain Tees, Elbows, Reducers etc. so, based on the product's final purpose, the relevant manufacturing system is setup so that to assure the conformity of all parameters for the product itself such as special Customer's requirements for minimum operating temperature and so on. Thanks to a special quality system, each production's process is considered as the last phase before the delivery so that, on Customer's request, tubes only tack-welded, preliminary welded or simply rolled plates can be supplied, as well as the edges can be required as Plain Ends, Bevelled by Oxidizing or machined to ASME B16.25.



GROWING IN PROGRESS

Tubes and Pipeline Pups

High performance Welding

Both longitudinal and circumferential welding are executed with procedures approved by Notified Bodies and performed according to ISO EN 15609-1 and qualified in compliance with ISO EN 15614-1 or ASME Boiler and Pressure Vessel Code Section IX. There're specifications for each process and combination, in any type of material according to the relevant P number / Group number, and also conform to any special requirement, for instance, low temperature Carbon Steel with Charpy V @-60°C. or Stainless Steel with Charpy V @-196°C., as well as Low Alloy. The maximum length for each single piece is 3 meters as allowed by the maximum width of commercial plates, bigger lengths are reached by joining them together circumferentially.

Qualification records

The professionals involved in both preparation and execution of the welding activities are qualified according to ASME Boiler & Pressure Vessel code Section IX, EN 287-1, EN 1418. Each single record is updated by means of cyclic controls (each six months) and validated by an Authorised Third Part Inspection Agency (TPI) UNI CEI ISO/IEC EN 17024 accredited. With the lately made available real-time tool the operator which is doing the welding can be identified from our website e-Workshop by clicking on the relevant ID letter shown beside the product while it is being welded so as to download the relevant WPQ.

Out of standard

The challenge is being typical while out of standard. Bar-tubes are not always in compliance with special requirements also in terms of proportions between diameter versus wall thickness or simply raw material performances therefore the choice is obliged: find a suitable plate, make the required extra HIC, SSC or other tests if any, and bend it up. No minimum quantities are necessary so the delivery time can be very short.

Straight profile cones

Better performances in terms of fluid's stability, less dirt collection because of the progressive diameter section's decrease makes the cone shaped Reducers the only solution for completely piggable circuits with minimum risk of pig-stuck due to sudden diameter section's decrease as it would be with the standard profile that is provided by the moulded type Reducers. Main dimensions can be both conform to ANSI schedule or Customer's requirements. Of course, the minor and major Diameters as well as Wall Thickness and Length shall match the minimum feasibility proportions, which means highly customizable Reducer's inclination as it's often required by field operations or other special applications. Being cold formed these products maintains all the plate's characteristics that, when required, can also be improved by means of proper Heat treatments up to Quenching & Tempering for Carbon Steel and Solubilization heat treatments for Stainless Steel.



THE EASIER, THE FASTER, THE SAFER

e-Workshop online data sharing

Dear valuable Customer, it is with great pleasure that we welcome you in our e-Workshop system. This new Customer Service have been created with the aim to be an active support to all technical, quality and logistic matters. Through e-Workshop

it is possible to manage the contents of each manufacturing job-order directly online, by monitoring their status or by the download of relevant documents such as material certificates as well as traceability and N.D.E. reports. The logistic management is a tool aimed at the real time shipping data in order to let you know which is the material ready to be collected, its weight and volume as well as a forecasting tool which allow the prevision of near future shipments. To log in please insert your username and password in the apposite box on the left. If not yet registered, please, click on the top-left area and apply for your subscription, our webmaster should enable your access within few hours (for a complete registration your computer must accept cookies).

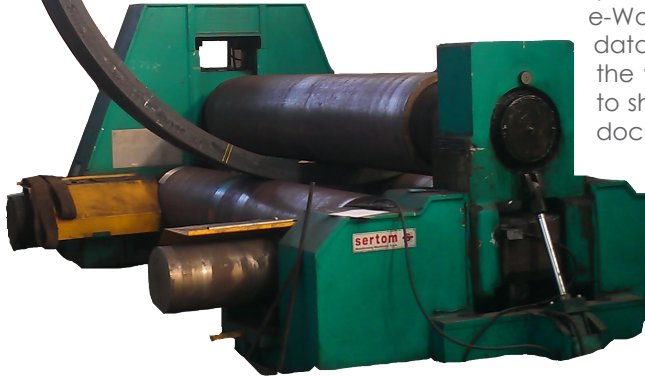
The system is self-maintained by the help of our e-Workshop valets positioned in each manufacturing key area. These tools are technically named wireless terminals, in fact, they actually allow the access to

e-Workshop valets the Company's database system directly from the various departments in order

to share all the information in real time with no risk of referring to outdated documents and so on. Each operator in the workshop has a unique login so that each phase of the product fabrication is recorded in the database and made immediately available for you in both terms of job-order status and traceability matters. Of course a big part of the system is dedicated to our quality department in order to make available all procedure and specifications in the latest revision as well as record in electronic format the instrument maintenance and calibration.

The data protection is assured by adequate software and hardware characteristics. Each information, document, drawing or any other source, is made available only to the specific Customer which manage by

himself all the logon authorizations of his users. In order to avoid malicious unknown users, our webmaster empowers only one user per Customer, this super-user will be responsible of all the users logged on from his company.



Concentric & Eccentric Cone shaped Reducers

Both configurations are always available with the exception of sizes very close to the feasibility limit like when a Concentric Reducer has a very deep inclination ratio then there is the possibility of an obstacle in manufacturing the same in the Eccentric shape. For sizes bigger than 64" two or more longitudinal welds may be required because of the commercial plates sizes which are not large enough to reach the development of big dimension cones. As for the straight Tubes and Pups, also circumferential joints can be implemented when long cones are required or the dimension proportions are so critical that smaller and shorter cones joined together becomes feasible instead of being impossible if considered made by only one single piece at once. Of course, like for all the other welded products, Non Destructive Examinations as well as Destructive Tests are performed according to the specific requirements. Hydraulic and Burst Tests are also executed according to all the most important international standard and Customer's requirements.





SETTING A NEW STANDARD

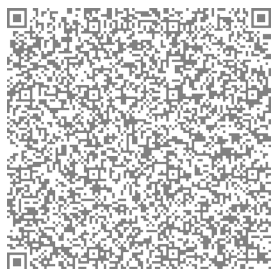
Welcome in our e-Workshop system

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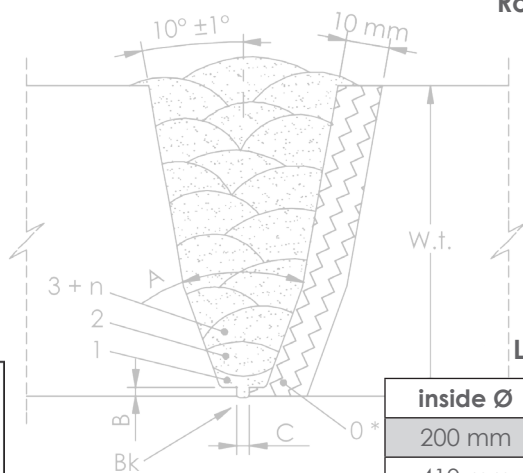


Rolled and welded Tubes & Cones EN 10204 3.1 / 3.2

ASTM A671 gr.CC60 / 70 all classes
ASTM A672 gr.B60 / C60 all classes
MSS SP 75 Wphy52 / Wphy60 / Wphy65 / Wphy70
equiv. to API-5L gr.X52 / X60 / X65 / X70

Typical Tube & Cones tolerances - ASTM A671

- Diameter tolerances $\pm 0,5\%$ - out of roundness 1%



Longitudinal Welded Product's standard tolerances

inside Ø	Thickness	Length	Ø tol.
200 mm	15 mm	1000 \pm 5 mm	+2 -0 mm
410 mm	25 mm	2500 \pm 10 mm	+2 -0 mm
680 mm	50 mm	3000 \pm 10 mm	+2 -0 mm
1100 mm	70 mm	3000 \pm 10 mm	$\pm 0,5\%$
1400 mm	80 mm	3000 \pm 10 mm	$\pm 1\%$
>1400 mm	90 mm	3000 \pm 10 mm	$\pm 1\%$

