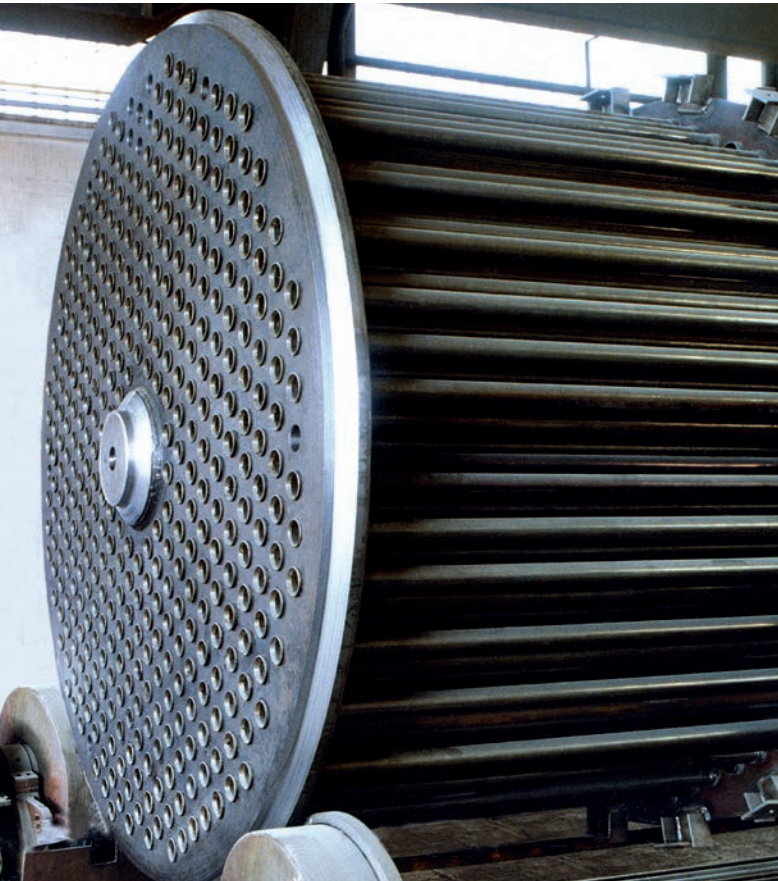




Seamless cold drawn tubes for feedwater heaters

Customer Benefits



We offer the best benefits to the feedwater heater manufacturers through

Experience

Since over 40 years Salzgitter Mannesmann Precision has been manufacturing and delivering seamless steel tubes for the most demanding customers. Our tubes are used in thermal power plants and also in nuclear power stations worldwide.

Integration

Our fully integrated process in the Salzgitter Group, from steel making up to finished products, enables to fulfil our high commitments in terms of quality, service and delivery time.

Expertise

Our manufacturing plants for energy products are certified ISO 9001 and ISO 14001, as well as European pressure equipment directive. Our R&D department is specialized in developing specific products and solutions for specific applications.

Our tubes are manufactured according to the main feedwater heater tubes standards such as:

Standards	Delivery Condition Normalized			Delivery Condition Normalized and Tempered		
EN 10216-2	P 235 GH 1.0345 (1)	P 265 GH 1.0425 (1)	16 Mo3 1.5415 (1)	13 CrMo 4-5 1.7335 (2)	10 CrMo 5-5 1.7338 (2)	10 CrMo 9-10 1.7380 (2)
ASTMA 209				Grade T1/T1A (2)		
ASTMA 210	Grade A1 (1)		Grade C (1)			
ASTMA 213				Grade T2 (2)	Grade T12 (2)	Grade T11 (2)
ASTM 556	Grade A2 (1)	Grade B2 (1)	Grade C2 (1)	Grade T22 (2)	Grade T5 (2)	
JIS 3462	STB 340 (1)			STBA 12 (1)		

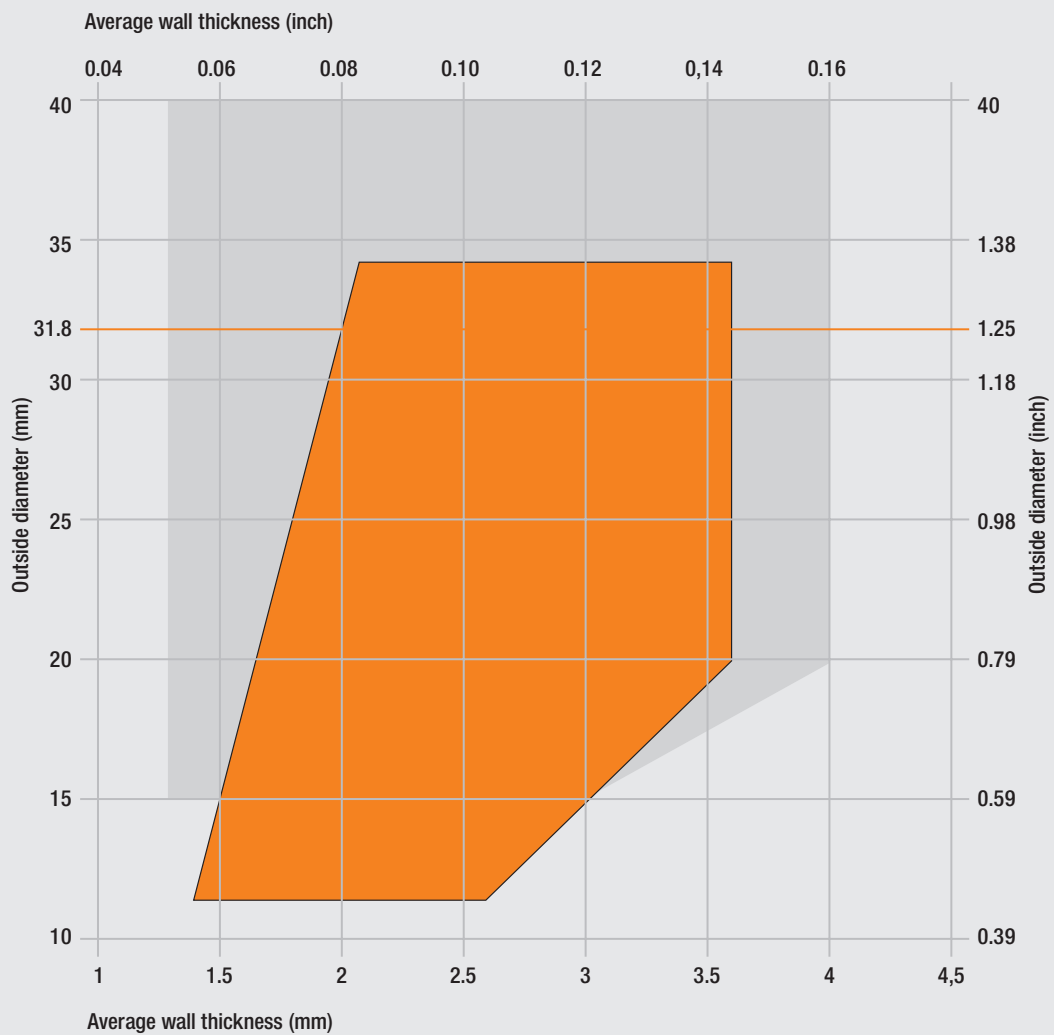
upon request, all these steel grades can be delivered full annealed.
Steel grades can be specifically designed for example for corrosion resistance.

Other grades and standards may be available upon request.



Tubes are manufactured in our plant of Vitry-le-François and cover the widest range. Vitry-le-François is an integrated plant where the tubes are drawn and bent in-house, thus ensuring our

customers a most competitive offer. Our Technical Customer Support (TCS) team is at your disposal for any non standard inquiry.



Legend:
 Straight
 U-bent

Maximum lengths

Straight tubes: 30 m (98 ft 5 inch) Other lengths are available upon request

U-bent tubes: 30 m (98 ft 5 inch) developed length

Minimum radius 1.3 x OD (below upon inquiry)

Maximum radius 2.2 m / 7 ft 2. 5/8 inch

Quality

Mill test certificate 3.1, 3.2
Third Part Inspection: Lloyd's, TÜV, VERITAS,..
Marking with ink stenciled on part or full length of tube

NDT

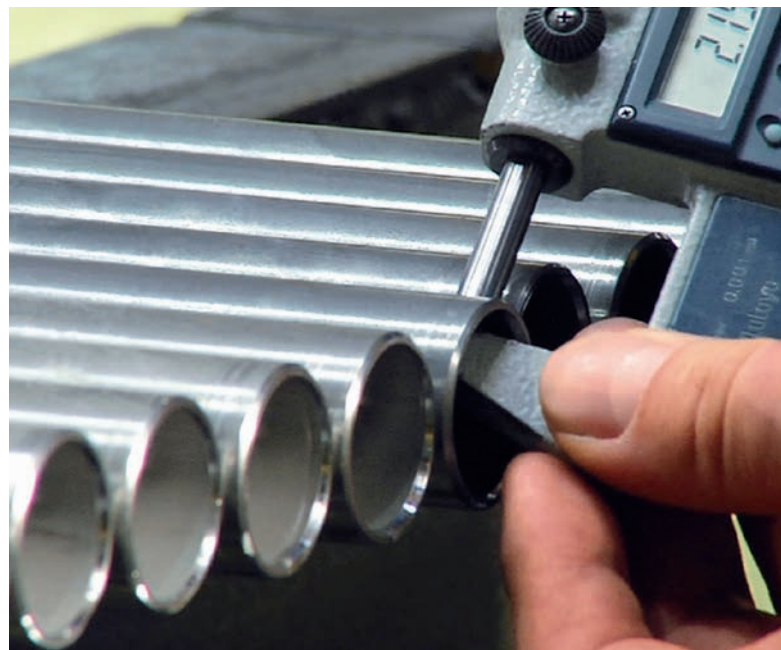
Ultra Sonic testing
Positive Material Identification (PMI)
Eddy Current testing

- Hydrostatic testing
- Magnetoscopic testing
- Material testing
- Tensile test
- Hot tensile test
- Impact test
- Hardness test
- Flattening test
- Flaring test
- Flange test
- Micrographic inspection
- PWHT,
- Testing in accordance with NACE
- Tube checking
- Wall thickness checking of bent part
- Outside diameter checking and/or gauging
- Inside diameter checking and/or free ball passing (only on mock up tests)
- Out-of-roundness checking on bent part

Packaging and shipment

SMP has set a world standard packaging to ensure quality of the tubes up to our customer's workshop whatever the distance. We offer sea proof wooden boxes, wooden frame or bundles. In case of wooden boxes, tubes are wrapped into a thermo welded cover to guaranty rust protection.

Shipments can be made worldwide either by rail, road and/or sea.





Salzgitter Mannesmann Precision – SMP-Group

As a leading European manufacturer of cold-drawn seamless and welded precision steel tubes, Salzgitter Mannesmann Precision – SMP – offers a wide range of products and services with great scope for intelligent, tubing-related solutions.

Salzgitter Mannesmann Precision GmbH based in Mülheim an der Ruhr, with around 2500 employees, is a successful partner in the industry for high quality and matched precision steel tubes. With locations in Germany, France, the Netherlands and Mexico, SMP is an international operating company with a large market presence and customer proximity.

The SMP production plant, based in Zeithain, supplies pre-material (seamless hot rolled hollows) to the precision tube mills of the Salzgitter Group.

Synergistic effects as a result of our co-operation with Mannesmannröhren-Werke and other companies of the Salzgitter Group guarantee outstanding efficiency and achievements.

A comprehensive continuous quality management system ISO 9001, ISO/TS 16949, ISO 14001 and PED (Pressure Equipment Directive) which encompasses all production stages. This certified quality management system, ensures continuously high quality standards ranging from the pre-material that we select and source, with specific consideration given to the needs of precision tube manufacture, to slitting, welding and drawing facilities all the way through to precise-length centers and galvanizing facilities.



Seamless precision steel tubes with special dimensional accuracy

External diameter: 1.5 – 400 mm
Wall thicknesses: 0.2 – 28.5 mm

Welded precision steel tubes with special dimensional accuracy

External diameter: 20 – 120 mm
Wall thicknesses: 1.0 – 7.5 mm

Welded size-rolled precision steel tubes

External diameter: 25 – 114.3 mm
Wall thicknesses: 1.75 – 8.5 mm

*Other diameters on request

Production of seamless and welded precision steel tubes in accordance to international standards e. g. EN 10305-1, EN10305-2, EN10305-3, EN 10305-4, EN10216 and EN10217, ASTM A 179, A192, A 209, A 210, A 213, A 556 Japan Industrial Standard, British Standards, Other standards on inquiry.

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www.smp-tubes.com

Industry and Energy

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MANNESMANN. Das Rohr.



A Member of the Salzgitter Group