



**BORUSAN**

# Guide to EN 10217-1/2 & EN 10255 Dual Certified Carbon Steel Tubes



# Standard Requirements

	BS EN10255	EN 10217-1 TR1	EN 10217-1 TR2	EN 10217-2 GH
<b>Scope</b>	Non-alloy steel tubes suitable for welding and threading	Welded steel tubes for pressure purposes (R.T)	Welded steel tubes for pressure purposes (R.T)	Welded steel tubes for pressure purposes (E.T)
<b>Grade</b>	S195T	P195/P235/P265	P195/P235/P265 Steel shall be fully killed	P195/P235/P265 GH Steel shall be fully killed
<b>Max Test Pressure</b>	50 bar	70 bar	70 bar	70 bar
<b>Technical Delivery Condition</b>	Cold formed	Cold formed	Hot-formed or Hot-finished	Hot-formed or Hot-finished
<b>CE Approval</b>	Yes	No	No	No
<b>Temp classification</b>	Ambient Temp.	Ambient Temp.	Ambient Temp.	Low & High Temp. -10°C Up to 400°C
<b>PED compliance</b>	No	No	Yes*	Yes

# Manufacturing of Product

- This product is designed to be used in Electric welded non-alloy and alloy steel tubes with specified elevated temperature properties. Products are produced with cold forming and subsequent heat treatment with induction heating furnace and slow cooled under air.
- Tubes are produced according to EN 10217-1 (TR1 & TR2) / EN 10217-2/EN 10255 P235 GH TC1/S195T with delivery condition NP.
- This product is ideal for steel piping systems operating at specified elevated temperatures and are suitable for welding, bending operations.

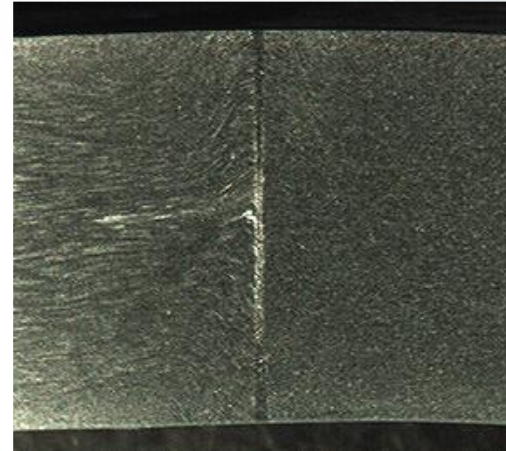


# Manufacturing of Product

Cold forming followed by induction annealing removes HAZ area and its adverse effects that impact bending, corrosion and grooving performance. Cold formed metallography vs induction annealed metallography shows that HAZ region is eliminated by induction heating furnace. Also, residual stresses created during cold forming are eliminated by induction heating furnace as well.



As Welded

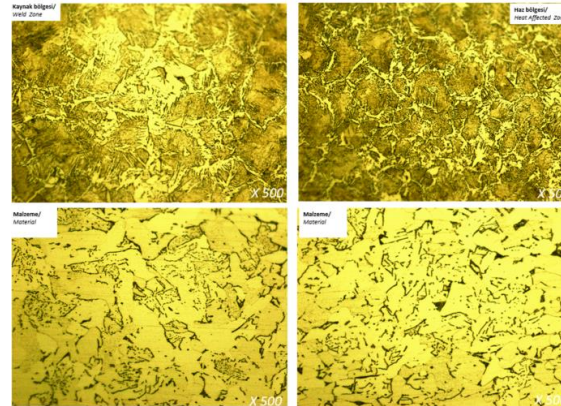
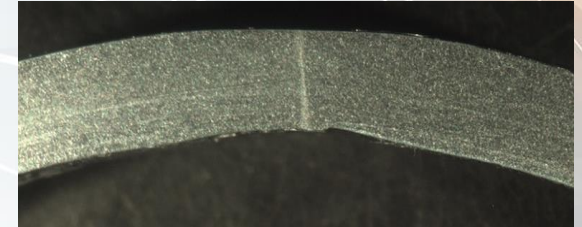
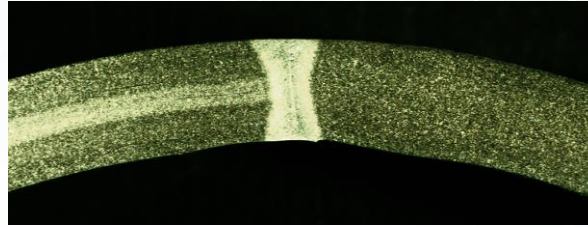


After annealing

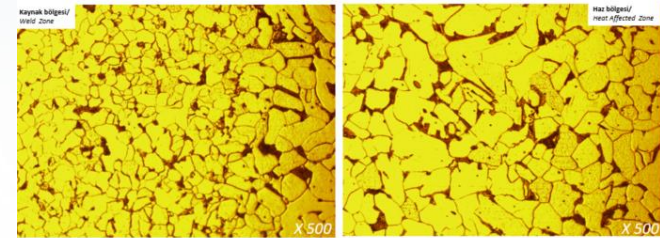


# Manufacturing of Product

- Cold forming followed by gas furnace heat treatment at normalizing temperature.
- Pipe dimension 60,3 x 3,91 mm
- EN 10217-2 P235 GH TC1



As Welded



Normalizing Heat Treated

# PED Certificate

The company Borusan MANNESMANN is qualified in pressure equipment directive in accordance with 2014/68/EU Annex I Section 4.3 as well as AD 2000-Merkblatt W.



**TUV NORD**

## CERTIFICATE

Quality-Assurance System for material manufacturer according to directive 2014/68/EU

Certificate no.: 05-802-2184812727-2019-G-10-2022

Name and address of manufacturer: **BORUSAN MANNESMANN BORU SAN. VE TIC. A.S.**  
**Ata Mah. Sanayi Cad. No: 54 / 68 16601 Gemlik - Bursa TURKEY**

Herewith we certify that the manufacturer has established and applies a **quality-assurance system related to the material**. This QA System has been subjected to a specific assessment acc. to directive 2014/68/EU, annex I, point 4.3 with regard to the materials mentioned within the scope of approval.

Approved acc. to directive 2014/68/EU:	QA-System in relation to materials, EN 754-5, section 4.2 and AD 2000-Merkblatt W0
Certification file no:	2184812727
Audit report file no:	RP-2184812727-01
Scope of approval: (product / material)	<b>Welded non alloy and alloy steel tubes</b> (Details of the scope are mentioned in the annex of the certificate.)
Production site:	<b>SAWI &amp; ERW Pipe Factories, Gemlik - Bursa TURKEY</b>

The certificate is valid until: **03.10.2022**  
only valid with a certificate in force acc. to EN ISO 9001

**Istanbul , 01.10.2019**

Annex: scope of approval

Certifier for Pressure Equipment of  
TUV Teknisik Kontrol ve Belgelendirme A.Ş.



TUV Teknisik Kontrol ve Belgelendirme A.Ş.  
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F-1034-001

“Thank you”