

Widely used in production, process measurement
and photovoltaic



1. SURFACES QUALITIES

Tubes and fittings:	Inner surface	Outer surface
● TCC (bf)	Ra _{max.} ≤ 30 µin (0.76 µm)	Ra _{max.} ≤ 48 µin (1.2 µm)
Pipe and pipe fittings:	Inner surface	Outer surface
● TCC (bf)	Ra _{max.} ≤ 32 µin (0.8 µm)	Ra _{max.} ≤ 48 µin (1.2 µm)
Additional notes:	<ul style="list-style-type: none">- Tubes and fittings are prepared for orbital welding.- Other specified surfaces or ends are available upon request.- Pipes and fitting will be supplied with a square cut. Different end preparations may be agreed on.- The Ra value in the cold worked area of fittings (inner and outer surface) and on the surface of circumferential welds is not defined. For dimmensions OD ≤ 3/8" (5.00 mm) roughness is not measured.- Cleaning and test procedure ASTM A 632, S3 and ASTM G93 – level D.	

2. MATERIALS

● TCC	1.4435 / UNS S31603 (316L) 1.4404 / UNS S31603 (316L) UNS S31603 (316L) UNS S30403 (304L)
Hardness equivalent to:	<ul style="list-style-type: none">- max. 180 HV* according to DIN EN ISO 6507-1- max. 90 HRB* according to DIN EN ISO 6508-1 <p>* comparable to ASTM E-384 (HV) and ASTM E 18-22 (HRB)</p>

3. DIMMENSIONS

Tubes and fittings:	Imperial according to ASTM A269 / A270 / A632	
OD x WT:	1/8" x 0.022" to 6" x 0.109"	3.18 x 0.56 mm to 152.4 x 2.77 mm
Length:	OD ≥ 1/4": min. 19.36 ft to max. 19.98 ft (6000 mm -100/+90) OD < 1/4": min. 9.51 ft to max. 9.84 ft (2950 mm ± 50)	
Manufacturing process:	Seamless tubes (≤ 1/2")	Welded or seamless tubes (> 1/2")
Pipe:	Pipe according to ASTM A312	
Dimensions:	NPS 8, 10, 12 Schedule 10S	Length: min. 19.36 ft to max. 19.98 ft
Length	min. 19.36 ft to max. 19.98 ft (6000 mm -100/+90)	
Manufacturing process:	Welded tubes	

4. QUALITY AND TEST PROCEDURES

	Verification of basic test certificate		Visual inspection		Endoscopic inspection of bright finished tubes
	Verification of dimmensions		Roughness measurements		

5. TECHNICAL TERMS OF DELIVERY

Tubes and fittings are prepared for orbital welding:

Tubes

According to ASTM A 269 / A270 / A 632, DIN EN 10217-7/10216-5 with a length of 5900 - 6090 mm (max. 10% short lengths of min. 3000 mm possible).

Fittings

According to DIN 11865, ASTM A 403 (Pipe), ASTM A 182 (Pipe)

Marking always with

DOCKWEILER / DW-Number / Dimension / Material / Heat number

Tube, pipe and fittings are permanently marked. The marking must provide all necessary information to trace back the heat number and the material grade.

6. DOCUMENTATION, PACKAGING AND SHIPPING

Documentation

The documentation result by the Dockweiler Inspection Certificate 3.1 according to DIN EN 10204. Optional online documentation WebCert.

Packaging

Bright finished tubes and fittings are sealed with white/ opaque PE caps and packaged in PE foil. The batch label contains the information TCC.

Anodically cleaned tubes and fittings are sealed with PE/ PA squares and white/opaque PE caps and packed in PE foil. The batch label contains the information TCC.1.

Shipping

Delivery in tubular container or wooden crate, fittings in strong cardboard box with shock absorbing filler.