

Specification
TCC/TCC.1

Widely used in production, process measurement and photovoltaic

TCC / TCC.1

bf bright finished
ac anodical cleaned



1. SURFACES QUALITIES

Inner surface	Outer surface
TCC (bf)	not defined
TCC.1 (ac)	not defined

Inner surface	Outer surface
TCC (bf)	not defined
TCC.1 (ac)	not defined

Additional notes:

- 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 dimensions OD ≤ 3/8" (5.00 mm) roughness is not measured.
- TCC (bf): Cleaning and test procedure ASTM A 632, S3 and ASTM G93 – level D.
- TCC.1 (ac): Free of oil and grease acc. to CGA G-4.1-2018 and ASTM G93 – level B.

2. MATERIALS

Austenitic stainless steel tubes and fittings (seamless or welded) in:
TCC / TCC.1

1.4435 / UNS S31603 (316L)
1.4404 / UNS S31603 (316L)
UNS S31603 (316L)
UNS S30403 (304L)

Hardness equivalent to:

- max. 180 HV* according to DIN EN ISO 6507-1
- max. 90 HRB* according to DIN EN ISO 6508-1

* comparable to ASTM E-384 (HV) and ASTM E 18-22 (HRB)

3. DIMENSIONS

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	min. 19.36 ft to max. 19.98 ft (6000 mm -100/+90)

Pipe:	according to ASTM A312
Dimensions	NPS 8, 10, 12, 16, 20 Schedule 10S 219,08 x 3,76 mm to 508,00 x 5,54 mm
Length	min. 19.36 ft to max. 19.98 ft (6000 mm -100/+90)

Metric:	
Dimensions	3,00 x 0,50 mm to 35,00 x 1,50 mm
Length	min. 19.36 ft to max. 19.98 ft (6000 mm -100/+90)

Manufacturing process:	Seamless tubes (≤ 1/2")	Welded or seamless tubes (> 1/2")

4. QUALITY AND TEST PROCEDURES



Verification of basic test certificate



Visual inspection



Endoscopic inspection of bright finished tubes



Verification of dimensions



Roughness measurements

5. TECHNICAL TERMS OF DELIVERY

Tubes and fittings are prepared for orbital welding:

Tubes

Acc. to ASTM A 632 / A 269 / A 270, 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 and fittings shall be permanently marked as per Dockweiler guideline AA 8.5.2-80. The marking must provide all necessary information to trace back the heat number and the material grade.

6. DOCUMENTATION, PACKAGING & 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 capped with white/transparent PE caps and packaged in PE foil. The batch label contains the information TCC.

Anodically cleaned tubes and fittings are capped with PE/PA squares and white/transparent 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.