

Technical information

Welded tubes - Pipelines

EN 10217-1, P235TR1

Chemical properties

Welded pressure tube is divided into 2 classes, TR1 and TR2.

TR1: The tube analysis does not state aluminium content. Impact strength not tested.

Quality certificate in accordance with EN 10204/-2.2. (Stocked)

TR2: The tube analysis states aluminium content. Impact strength is verified. Test certificate in accordance with SS-EN 10204-3.1. (Not stocked)

Steel grade	Chemical composition in percentage weight, max. (Al = min.)													
	C%	Si%	Mn%	P%	S%	Al tot	Cr%	Cu%	Mo%	Nb%	Ni%	Ti%	V%	Other ¹⁾
P235TR1	0.16	0.35	1.20	0.025	0.020	-	0.30	0.30	0.08	0.010	0.30	0.04	0.02	0.70

¹⁾ Cr + Cu + Mo + Ni

Mechanical characteristics

Steel grade	Tensile strength						Impact strength		
	Upper yield strength min. R _{eh} for T mm			Tensile strength R _m	Elongation A ₅ min.%		KV at a temperature of J		
	T<16	16<T<40	>40		Along	Across	Along	Across	0°C
	MPa	MPa	MPa	0°C			-10°C		
P235TR1	235	225	-	360-500	25	23	-	-	-

Measurement deviations

Tolerance for external diameter (D) and wall thickness (T)

External diameter D	Tolerance for D	Tolerance for T	
D ≤ 219.1	± 1% or ± 0.5 mm Greatest value applies	T ≤ 5	5 < T ≤ 40
D > 219.1	± 0.75% or ± 6 mm Greatest value applies	± 10% or ± 0.5 mm Greatest value applies	± 8% or ± 2 mm Greatest value applies

Straightness

Straightness deviation shall not exceed 0.0015L (where L=delivery length).

Locally, straightness deviation shall not exceed 3 mm per meter.

Surface condition

The tube shall be free from external faults that can be detected visually. The surface may be repaired.

However, nominal size may not be reduced.