

Welded pipes DIN EN 10217-7 (DIN 17457)

Stainless steel pipes

Area of applications	Pipeline and plant engineering (transport of corrosive materials), pressure vessel and apparatus engineering, water and wastewater industry
Order text example	Pipe, welded, DIN EN ISO 1127/DIN EN 10217-7 TC2, 1.4571, inspection certificate acc. to DIN EN 10204 / 3.1, requirements acc. to AD 2000-Merkblatt W2 / W10 168.3 × 4.5 mm

Materials (extract)

Material number	Designation acc. to EN	Comparable to ASTM A312
1.4301	X5CrNi18-10	TP 304
1.4306	X2CrNi18-9	TP 304L
1.4307	X2CrNi18-9	TP 304L
1.4541	X6CrNiTi18-10	TP 321
1.4401	X5CrNiMo17-12-2	TP 316
1.4404	X2CrNiMo17-12-2	TP 316L
1.4571	X6CrNiMoTi17-12-2	TP 316Ti
1.4410	X2CrNiMoN25-7-4	Super-Duplex
1.4462	X2CrNiMoN22-5-3	Duplex
1.4539	X1NiCrMoCu25-20-5	TP 904L

Manufacturing process acc. to DIN EN 10217-7 table 1 (extract)

Welding process	Base material	Deformation process
Arc welding	Hot or cold rolled strip Hot or cold rolled plate or sheet	Continuous forming from strip Single forming from plate or sheet
Laser welding	Hot or cold-rolled strip	Continuous forming from strip

Scope of testing / Test unit = Max. 100 pipes	TC1 1 Tensile test, 1 ring test per unit TC2 2 Tensile test, 1 ring test per pipe
Delivery lengths	6 to 18 Meter continuous forming from strip
Range of sizes	6.0 to 1,016 mm
Wall thicknesses	1.0 to 14.2 mm
Dimensions and weights	According to DIN EN ISO 1127
Inspection certificate	According to DIN EN 10204/3.1 or 3.2
Official regulations	AD 2000-W2/W10 (for low temperature)
Marking	Manufacturer's mark, dimension, EN standard, material number, heat number, test category, mark of the inspection representative, identification number (e. g. order or item number), symbol identifying the delivery condition

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Tolerances on outside diameter and wall thickness

Outside diameter D mm	Tolerances on outside diameter D		Tolerances on wall thicknesses T	
	Class	Permissible deviation	Class	Permissible deviation
D ≤ 168.3	D ₃	± 0.75 % or ± 0.3 mm, whichever is the greater	T ₃	± 10 % or ± 0.2 mm, whichever is the greater
	D ₄ ^a	± 0.50 % or ± 0.1 mm, whichever is the greater		
D > 168.3	D ₂	± 1.0 %		

^a Option 18: Tolerance class D₄ is specified.

Delivery conditions

Symbol	Type of delivery condition ^a	Surface condition
W0 ^b	Welded from hot or cold rolled plate, sheet or strip	As welded ^f
W1 ^b	Welded from hot rolled plate, sheet or strip, descaled and/or pickled ^e	Metallically clean
W1A ^b	Welded from hot rolled plate, sheet or strip, heat treated, descaled and/or pickled ^e	Metallically clean
W1R ^b	Welded from hot rolled plate, sheet or strip, bright annealed	Metallically clean
W2 ^b	Welded from cold rolled plate, sheet or strip, descaled and/or pickled ^e	Metallically clean
W2A ^b	Welded from cold rolled plate, sheet or strip, heat treated, descaled and/or pickled ^e	Metallically clean. Smoother than W1/W1A, weld seam excluded
W2R ^b	Welded from cold rolled plate, sheet or strip, bright annealed	Metallically bright
WCA	Welded from hot rolled or cold rolled plate, sheet or strip, heat treated, if appropriate, at least 20 % cold formed, heat treated, with recrystallized weld metal, descaled and/or pickled ^e	Metallically clean, weld scarcely recognizable
WCR	Welded from hot rolled or cold rolled plate, sheet or strip, heat treated, if appropriate, at least 20 % cold formed, bright annealed, with recrystallized weld metal	Metallically clean, weld scarcely recognizable
WG	Ground ^c	Metallically bright-ground, the type and degree of grinding shall be agreed at the time of enquiry and order ^d
WP	Polished surface ^c	Metallically bright-polished, the type and degree of grinding shall be agreed at the time of enquiry and order ^d

^a Symbol of flat products according to EN 10028-7.

^b For tubes ordered with smoothed inside welds ("bead worked") letter "b" shall be appended to the symbol for the delivery condition (e. g. W2Ab).

^c Conditions W2, W2A, WCA or WCR are usually used as the starting condition.

^d It should be indicated in the enquiry or order whether grinding or polishing is to be performed internally or externally, or internally and externally.

^e Unless specified at the time of the order the method of descaling and/or pickling is at the discretion on the manufacturer.

^f Tubes may have residual scale, welding colours and grease residue.