

Welded steel pipes for pressure purposes

Overview of pipes acc. to DIN EN 10217 in comparison to earlier DIN standards

Conditions of use	acc. to EN	acc. to DIN
Non-alloy steel tubes with specified room temperature properties	10217-1	1626 / 1628
Electric welded non-alloy and alloy steel tubes with specified elevated temperature properties	10217-2	17177
Submerged arc welded non-alloy and alloy steel tubes with specified elevated temperature properties	10217-5	
Alloy fine grain steel tubes	10217-3	17178
Electric welded non-alloy steel tubes with specified low temperature properties	10217-4	17174
Submerged arc welded non-alloy steel tubes with specified low temperature properties	10217-6	17174
Stainless steel tubes	10217-7	17457

Part 1: Non-alloy steel tubes with specified room temperature properties

Area of application: acc. to rules and standards of DVGW, TRB, TRD and AD 2000 Data Sheet W4 (only TR2 approved under PED)

Standards (formerly DIN)	Operating temperature / working pressure	Size range	EN materials (formerly DIN)	Test scope
EN 10217-1 (DIN 1626)	to 300° C / to 160 bar	10,2–2.540 mm	P235TR1 (St 37.0) P265TR1 (St 44.0)	TR1 without impact test
EN 10217-1 (DIN 1628)	to 300° C / unlimited		P235TR2 (St 37.4) P265TR2 (St 44.4)	TR2 impact test at 0° C (optional –10° C)

Part 2: Electric welded non-alloy and alloy steel tubes with specified elevated temperature properties

Part 5: Submerged arc welded non-alloy and alloy steel pipes with specified high temperature properties

Area of application: Pressure vessel and plant engineering, pipeline construction, shipbuilding

Standards (formerly DIN)	Welding process	Size range	EN materials (formerly DIN)	Test scope
EN 10217-2 (DIN 17177)	Electric welded (HFW = high frequency welding)	10,2–508,0 mm	P235GH (St 37.8) P265GH (St 42.8)	TC1 without US testing TC2 with US testing
EN 10217-5	Submerged arc welded (SAW = submerged arc welded) SAWL longitudinal welded / SAWH spiral welded	406,4–2.540 mm	16Mo3 (15 Mo 3) 13CrMo4-5 (13 CrMo 4 4)	(generally with alloy steels)

Part 3: Alloy fine grain steel tubes**Area of application:** Pressure vessels, apparatus and general mechanical engineering

Standards (formerly DIN)	Welding process	Size range	EN materials (formerly DIN)	Test scope	
EN 10217-3 (DIN 17178)	Electric welded (HFW = high frequency welding)	10,2–508,0 mm	basic quality	P355N (StE 355) P460N (StE 460)	TC1 without US testing TC2 with US testing (generally with alloy steels)
	Submerged arc welded (SAW = submerged arc welded) SAWL with longitudinal seam / SAWH with spiral seam	406,4–2.540 mm	elevated temperature quality low temperature quality special low tempera- ture quality	P355NH (WStE 355) P460NH (WStE 460) P275NL1 (TStE 285) P355NL1 (TStE 355) P460NL1 (TStE 460) P275NL2 (EStE 285) P355NL2 (EStE 355) P460NL2 (EStE 460)	

Part 4: Electric welded non-alloy steel tubes with specified low temperature properties**Part 6:** Submerged arc welded non-alloy steel tubes with specified low temperature properties**Area of application:** Apparatus, pressure vessel, refrigeration system and general pipeline engineering

Standards (formerly DIN)	Welding process	Size range	EN materials (formerly DIN)	Test scope
EN 10217-4 (DIN 17174)	Electric welded (HFW = high frequency welding)	10,2–508,0 mm	P215NL1 (TTSt 35 N) P265NL1	AD 2000 Data Sheet W4 / W10
EN 10217-6 (DIN 17174)	Submerged arc welded (SAW = submerged arc welded) SAWL with longitudinal seam / SAWH with spiral seam	406,4–2.540 mm		

Part 7: Stainless steel tubes**Area of application:** Chemical system, pressure vessel and apparatus engineering, pipelines (transport of corrosive media), water and wastewater technology

Standards (formerly DIN)	Test classes / test scope per 100 pipes	Size range	EN materials (comparable to ASTM A312)	Delivery conditions
EN 10217-7 (DIN 17457)	TC1 1 Tensile test / 1 Ring tension test TC2 2 Tensile tests / 1 Ring tension test	6,0–1.016 mm	V2A-Series 1.4301 (TP 304) 1.4306 (TP 304L) 1.4307 (TP 304L) 1.4541 (TP 321) V4A-Series 1.4401 (TP 316) 1.4404 (TP 316L) 1.4571 (TP 316Ti) V5A-Series 1.4529 1.4539 1.4547 Duplex 1.4462 Super-Duplex 1.4410	W1 = hot rolled strip, unannealed W2 = cold rolled, unannealed W1A / W2A = heat-treated, descaled W1R / W2R = bright annealed WG = Ground WP = Polished b = Smoothed welding seam