

# Seamless steel pipes for pressure purposes

Overview of pipes acc. to DIN EN 10216 in comparison to earlier DIN standards

Area of application	acc. to EN	acc. to DIN
Non-alloy steel tubes with specified room temperature properties	10216-1	1629 / 1630
Non-alloy and alloy steel tubes	10216-2	17175
Alloy fine grain steel tubes with specified room temperature properties	10216-3	17179
Non-alloy and alloy steel tubes with specified low temperature properties	10216-4	17173
Stainless steel tubes	10216-5	17458 / 17459

**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)	Notes
EN 10216-1 (DIN 1629)	to 300° C / to 160 bar	10,2–711,0 mm	P235TR1 (St 37.0) P265TR1 (St 44.0)	<b>TR1</b> without impact test
EN 10216-1 (DIN 1630)	to 300° C / unlimited		P235TR2 (St 37.4) P265TR2 (St 44.4)	<b>TR2</b> impact test at 0° C (optional –10° C)

**Part 2:** Non-alloy and alloy steel tubes with specified elevated temperature properties

**Area of application:** Boiler construction, pipeline and plant engineering, pressure vessels and apparatus engineering

Standards (formerly DIN)	Test classes / operating temperature / working pressure	Size range	EN materials (formerly DIN)	Notes
EN 10216-2 (DIN 17175)	Non-alloy tubes: <b>TC1</b> / to 450° C / 160 bar <b>TC2</b> / to 450° C / unlimited Alloy tubes: <b>TC2</b> / to 600° C / unlimited	10,2–711,0 mm	P235GH (St 35.8) P265GH (St 45.8) 16Mo3 (15Mo3) 13CrMo4-5 (13CrMo44)	<b>TC1</b> without US testing <b>TC2</b> with US testing (generally with alloy steels)

**Part 3:** Alloy fine grain steel tubes

**Area of application:** Pressure vessel, apparatus, pipelines, general mechanical engineering and tool-building

Standards (formerly DIN)	Test classes	Size range	EN materials (formerly DIN)
EN 10216-3 (DIN 17179)	<b>TC1</b> without US testing <b>TC2</b> with US testing	10,2–711,0 mm	basic quality P355N (StE 355) P460N (StE 460) elevated temperature quality P355NH (WStE 355) P460NH (WStE 460) low temperature quality P275NL1 (TStE 285) P355NL1 (TStE 355) P460NL1 (TStE 460) special low temperature quality P275NL2 (EStE 285) P355NL2 (EStE 355) P460NL2 (EStE 460)

**Part 4:** Non-alloy and alloy steel tubes with specified low temperature properties

**Area of application:** Apparatus, pressure vessel, refrigeration system and general pipeline engineering

Standards (formerly DIN)	Test classes	Size range	EN materials (formerly DIN)	Official regulations
EN 10216-4 (DIN 17173)	Non-alloy tubes: <b>TC1</b> without US testing <b>TC2</b> with US testing Alloy tubes: general <b>TC2</b>	10,2–711,0 mm	P215NL (TTSt 35N) P255QL (TTSt 35V) 12Ni14 (10Ni14) X12Ni5 (12Ni19)	AD 2000 Data Sheet W4 / W10

**Part 5:** Stainless steel tubes

**Area of application:** Apparatus, pressure vessel, pipeline and plant engineering (transport of corrosive materials)

Standards (formerly DIN)	Test classes / operating temperature	Size range	EN materials (comparable to ASTM A312)	AD 2000-W2 regulations
EN 10216-5 (DIN 17458) EN 10216-5 (DIN 17459)	<b>TC1</b> without US testing <b>TC2</b> with US testing Generally <b>TC2</b> / from 550° C operating temperature	6,0–610,0 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	Internal tubes: AD 2000-W2 / <b>TC1</b> Line pipes: OD ≤ 42.4 mm and wall ≤ 3,6 mm: AD 2000-W2 / <b>TC1</b> OD > 42.4 mm or wall > 3,6 mm: AD 2000-W2 / <b>TC2</b> Casing tubes for pressure vessels: AD 2000-W2 / <b>TC2</b>