

# Seamless and Longitudinally Welded Pipes

*For industrial piping systems – from standard to special-alloy grades*

**Designs:** Seamless (hot / cold finished) · longitudinally welded (LSAW, ERW/HFW)

**Standards:** EN 10216-1/-2/-3/-4/-5 (seamless) · EN 10217 (welded) · EN 10220 · ASME B36.10 / B36.19 · ASTM A106 / A312 / A335 / A790

**Dimensions:** OD 21.3 – 1,219 mm · DN 15 – DN 1200 · NPS ½" – NPS 48" · wall thicknesses up to Sch. XXS / as agreed

**Materials:** Carbon steel · low-temp steel · CrMo creep-resistant · P91/P92 · stainless 304L/316L/321/347/316Ti/904L/6Mo · duplex · super duplex · nickel-based · CuNi

**Test certificates:** EN 10204 type 3.1 / 3.2 · NDT on request · external inspection available

**Certifications:** ISO 9001 · AD 2000 · ISO 19443 (nuclear)

## 1 Applications

Pipes are the central component of every piping system. We supply pipes as a stand-alone position or in combination with fittings and flanges – matched to material, pressure rating and the documentation requirements of each project.

- ✓ **Power plants & energy**  
High-pressure / high-temperature systems, steam and feed-water piping
- ✓ **Chemical industry & refineries**  
Corrosive media, aggressive process environments
- ✓ **Equipment & plant engineering**  
Pressure vessel nozzles, project-specific custom dimensions
- ✓ **Nuclear**  
Qualified supply chain per ISO 19443

## 2 Available Designs

Depending on the requirements for pressure rating, material and wall thickness we supply seamless or longitudinally welded pipes.

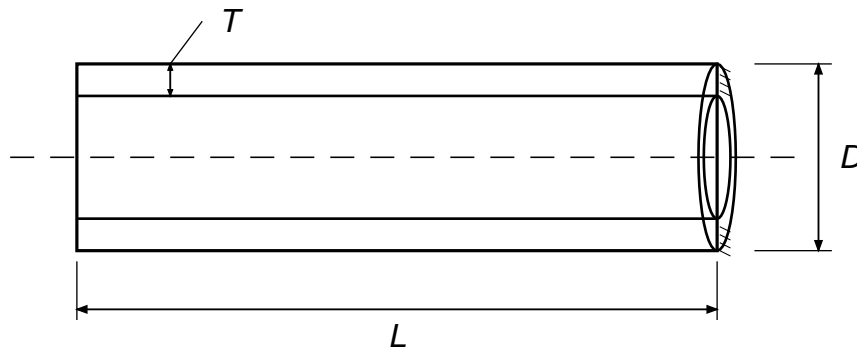
### Seamless pipes

Designation	Standard	Characteristic
Seamless hot-finished	EN 10216 / ASME B36.10 / B36.19	Standard for pressure applications, heavy walls, creep-resistant steels
Seamless cold-finished	EN 10216 / ASTM A312 / A213	Tighter dimensional tolerances, smaller sizes, austenitic steels
Precision tubes	EN 10305 / per drawing	High dimensional and surface quality

### Welded pipes

Process	Standard	Characteristic
LSAW (longitudinal SAW)	EN 10217-3 / API 5L	Large diameters, heavy walls, pipeline and structural applications
ERW / HFW (high frequency)	EN 10217-1/-2 / API 5L	Cost-efficient standard pipes, medium dimensions
TIG / plasma welded stainless pipes	EN 10217-7 / ASTM A312	Austenitic steels, corrosive media

Custom lengths, bevelled / chamfered weld ends and project-specific fabrication on request.



### 3 Dimensions & Pressure Classes

Feature	Range / value
Outside diameter (OD)	21.3 mm – 1,219 mm (larger on request)
Nominal sizes	DN 15 – DN 1200 · NPS ½" – NPS 48"
Wall thicknesses	Sch. 5S · 10S · STD / 40S · 80S / XS · 120 · 160 · XXS · special wall thicknesses as agreed
Lengths	Standard: 6 m / 12 m · custom lengths on request
Pipe ends	Plain end · bevelled weld end (BE) · threaded · per drawing
Surface finishes	Black · pickled · shot-blasted · polished (on request)

## 4 Procurement & Quality Assurance

We source pipes exclusively from qualified suppliers – with continuous material traceability and complete inspection documentation. For nuclear and pressure-equipment-relevant applications, sourcing is carried out through our ISO 19443-qualified supply chain.

- ✓ **Qualified supplier base**  
 Approved mills only, regularly audited
- ✓ **Full traceability**  
 Heat number, mill certificate, delivery records
- ✓ **Goods-in inspection**  
 Visual and dimensional check on every delivery
- ✓ **Flexible fabrication**  
 Cut-to-length, bevelling, marking per specification

## 5 Materials

We supply pipes from the same range of materials as fittings and flanges – uniform material selection within a project is therefore straightforward.

EN materials	ASTM / ASME materials
P235GH (1.0345) · P265GH (1.0425)	A/SA 106 Gr. A / B / C
P355N (1.0562) · P355NH (1.0565)	A/SA 333 Gr. 6
L290NB · L360NB/NE · L415NB/NE	API 5L Gr. B · X42 · X52 · X60
16Mo3 (1.5415)	A/SA 335 P1 · A/SA 213 T1
13CrMo4-5 (1.7335) · 10CrMo9-10 (1.7380)	A/SA 335 P11 / P12 / P22
X10CrMoVNb9-1 – P91 (1.4903)	A/SA 335 P91 · A/SA 213 T91
X11CrMoWVNb9-1-1 – P92 (1.4901)	A/SA 335 P92 · A/SA 213 T92
X2CrNi18-9 – 304L (1.4306 / 1.4307)	A/SA 312 TP304L · A/SA 213 TP304L
X2CrNiMo17-12-2 – 316L (1.4404)	A/SA 312 TP316L · A/SA 213 TP316L
X5CrNiMo17-12-2 – 316 (1.4401)	A/SA 312 TP316
X6CrNiTi18-10 – 321 (1.4541)	A/SA 312 TP321
X6CrNiNb18-10 – 347 (1.4550)	A/SA 312 TP347
X6CrNiMoTi17-12-2 – 316Ti (1.4571)	A/SA 312 TP316Ti
X1NiCrMoCu25-20-5 – 904L (1.4539)	A/SA 312 TP904L
X1NiCrMoCuN25-20-7 – 6Mo (1.4529)	A/SA 312 TPN08367
X2CrNiMoN22-5-3 – Duplex 2205 (1.4462)	A/SA 790 S31803 · S32205
X2CrNiMoN25-7-4 – Super Duplex 2507 (1.4410)	A/SA 790 S32750

EN materials	ASTM / ASME materials
NiCr22Mo9Nb – Alloy 625 (2.4856)	SB-444 · SB-705 UNS N06625
CuNi10Fe1Mn – CuNi 90/10 (2.0872)	C70600 (B-466 / B-467)

### Special materials & high-performance alloys

- Super Duplex (e.g. 1.4410 / S32750)
- Nickel-based alloys: Inconel, Hastelloy, Monel
- Copper-nickel alloys (CuNi 90/10, 70/30)
- Further project-specific materials on request

## 6 Standards & Codes

**EN 10216-1/-5:** Seamless pipes for pressure purposes – non-alloy, creep-resistant, austenitic, duplex

**EN 10217-1/-7:** Welded pipes for pressure purposes

**EN 10220:** Dimensions and masses for seamless and welded steel pipes

**ASME B36.10 / B36.19:** Welded and Seamless Wrought Steel Pipe / Stainless Steel Pipe

**ASTM A106 / A312 / A335 / A790:** Carbon · austenitic · CrMo · duplex / super duplex

**API 5L:** Line pipe for oil and gas pipelines

**2014/68/EU (PED):** Pressure Equipment Directive · AD 2000 code

Procurement and supply in accordance with the AD 2000 code as well as project-specific specifications on request.

## 7 Quality & Documentation

Our quality management system is certified to DIN EN ISO 9001, AD 2000 and ISO 19443 (nuclear). Every delivery is inspected and fully documented.

### Standard inspection

- Visual inspection
- Dimensional checks
- Material certificate 3.1

### Extended inspection

- NDT (RT, UT, PT, MT)
- PMI analysis
- Hydrostatic pressure test

### External acceptance

- TÜV / SGS / DNV / Lloyd's
- Certificate EN 10204 type 3.2
- Customer-specific inspection

## 8 Nirotec as Project Supplier

We supply pipes as a stand-alone item or together with the matching fittings – elbows, tees, reducers, caps and flanges – from the same material, to the same standards, with uniform documentation from a single source.

**Your benefit:** One contact for pipes and all pipe fittings within your project – no coordination effort between multiple suppliers, consistent material selection and uniform inspection documentation.

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## 9 Inquiry & Contact

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For a project-specific inquiry we ideally require:

- Standard and type (e.g. EN 10216-2 P235GH or ASTM A106 Gr. B seamless)
- Material grade and, if applicable, heat restriction
- Dimension: OD x wall thickness, or DN / NPS + schedule
- Length / piece length, pipe-end finish (plain / BE / threaded)
- Quantity, requested delivery date
- Required documentation (3.1 / 3.2, NDT, external inspection)

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