Carbon and stainless steel pipes
for the transportation of liquids and gases

ThyssenKrupp Materials Austria
Our service for you.

The area of materials management is placing ever greater demands on companies and employees, with improved profitability one of the key objectives.

Greater efficiency in procurement will be reflected subsequently in a better market position for the products.

Our all-round service helps meet these requirements. From materials to processing to just-in-sequence delivery, we are the right contact for your procurement needs.
Consulting
· Transportation logistics
· Use of materials
· Package solutions

Application-oriented stock range
· Stainless steel pipes/tubes and accessories
· Carbon steel pipes/tubes and accessories
· Rolled steel products

Customized processing
· Processing services for the entire product range

Material testing
· Preparation of specimens
· Non-destructive and mechanical tests
· Third-party acceptance testing
· Documentation

Quality assurance
· Our quality management guarantees uniform high quality standards

Just-in-sequence delivery
· Coordination of materials procurement
· Processing and transportation logistics to specified delivery cycles
Our aim is to provide outstanding service. Your requirements are our yardstick for success. Contact our sales staff.
We demand top quality and outstanding service from ourselves and our suppliers with the aim of keeping our customers satisfied in every respect. When selecting our suppliers, we take particular care to ensure that they are flexible and dependable.

Key to partnering us is the ability to meet the most exacting quality requirements.

But even after we have made our selection, we constantly check on the efficiency and quality of our suppliers.

And we apply these same high quality standards to our own operations.

Continuous quality control from incoming goods to storage to outgoing goods is a matter of course. Our established quality assurance procedures guarantee our customers the dependability they have come to expect from us.

Our EN ISO 9001 quality management system has been certified by an internationally accredited inspection company and is subjected to regular internal and external audits.

The right product for every requirement
To ensure that every seamless or welded steel pipe/tube meets the requirements placed on it, selecting the right material quality for the job is essential.

Each material has its own specific properties that make it particularly suitable for its intended use.

The various materials have been classified in groups in line with their general application areas.

In the following, we present the individual product groups with the applicable standards and indicate the materials allocated to each type of pipe/tube.
Our special service

**Processing at a glance**
We not only supply the grades and dimensions of your choice, we also ensure rapid and flexible deployment on site with our broad processing offering. This helps you save time and money as time-consuming preparation work on site is eliminated. The pipes/tubes are delivered ready-cut for your project and can be immediately installed at the construction site.

**Cutting**
Our cutting center is designed to meet any requirement. We cut fixed lengths in many different dimensions up to 850 mm outside diameter (OD). We can also produce miter cuts and special end shapes in accordance with your specifications and bills of materials.

**Weld seam preparation**
Our comprehensive services also include weld seam preparation.

With our profile milling machines we can produce a diverse range of joint geometries in all dimensions in accordance with customer wishes. Even the beveling of miter cuts is no problem for us.

In this way we create the prerequisites for good and secure joints.

**Preserving**
Following preliminary treatment, the material is blasted with grade SA 1, 2, 21/2 and 3 steel grit in accordance with DIN 55928 Part 4. We then coat the material either with a shop primer for short-term corrosion protection or with a coating material suitable for long-term corrosion protection. A further temporary corrosion protection option for steel pipes/tubes is oiling.

**Coating and lining**
Within our broad spectrum of line pipes, we offer pipes with the appropriate corrosion-protection coating or lining for various areas of application.

**Bending**
We can supply custom-bent steel pipes with single or multiple bends in a wide range of material grades for use as line pipes. Any bending radii from 200 to 10,000 mm, with angles up to 180° are possible. The ends can be machined to requirements.

**Thread cutting**
In the household installation sector, we can machine threads into pipes up to 4". The pipes and threads are designed to withstand an internal pressure of up to 6 bar.

**Cutting options**

- **Miter/Double miter**
- **Alignment centric**
- **Alignment eccentric**
- **Penetration centric**
- **Penetration eccentric**
Material testing/Inspection certificates

Material testing
We can carry out all common tests for you. These include:

- Non-destructive testing, e.g. ultrasound tests and surface crack tests.
- Destructive testing, e.g. chemical analyses, tear tests, hardness tests, notched bar impact tests.
- Technological testing, e.g. flattening tests, bending tests, ring flaring tests, drift expanding tests and flanging tests.

Certification in accordance with EN 10204
We offer our customers certified safety. On request, your delivery can be made with the certification you require in accordance with EN 10204. Please define the type of certification when placing the order.

The various certifications in accordance with the latest edition of EN 10204 (January 2005 version) are listed in the above table.

<table>
<thead>
<tr>
<th>No. of standard</th>
<th>Certificate</th>
<th>Type of inspection</th>
<th>Content of certificate</th>
<th>Delivery terms and conditions</th>
<th>Certificate confirmation by</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Certificate of compliance</td>
<td>non-specific</td>
<td>No information about test results</td>
<td>In accordance with the delivery terms and conditions of the purchase order or, if requested, also in accordance with statutory regulations and the corresponding technical rules</td>
<td>the manufacturer</td>
</tr>
<tr>
<td>2.2</td>
<td>Test report</td>
<td>non-specific</td>
<td>Confirmation of minimum standard values or test results based on non-specific tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1</td>
<td>Inspection certificate</td>
<td>specific</td>
<td>Test results based on specific tests</td>
<td>In accordance with the delivery terms and conditions of the purchase order or, if requested, also in accordance with statutory regulations and the corresponding technical rules</td>
<td>the independent expert commissioned by the manufacturer and not connected to the production department (plant expert)</td>
</tr>
<tr>
<td>3.2</td>
<td>Inspection certificate</td>
<td>specific</td>
<td>Test results based on specific tests</td>
<td>In accordance with the delivery terms and conditions of the purchase order or, if requested, also in accordance with statutory regulations and the corresponding technical rules</td>
<td>the independent expert commissioned by the customer and the plant expert</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No. of standard</th>
<th>Certificate</th>
<th>Type of inspection</th>
<th>Content of certificate</th>
<th>Delivery terms and conditions</th>
<th>Certificate confirmation by</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Certificate of compliance</td>
<td>non-specific</td>
<td>No information about test results</td>
<td>In accordance with the delivery terms and conditions of the purchase order or, if requested, also in accordance with statutory regulations and the corresponding technical rules</td>
<td>the manufacturer</td>
</tr>
<tr>
<td>2.2</td>
<td>Test report</td>
<td>non-specific</td>
<td>Confirmation of minimum standard values or test results based on non-specific tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1</td>
<td>Inspection certificate</td>
<td>specific</td>
<td>Test results based on specific tests</td>
<td>In accordance with the delivery terms and conditions of the purchase order or, if requested, also in accordance with statutory regulations and the corresponding technical rules</td>
<td>the independent expert commissioned by the manufacturer and not connected to the production department (plant expert)</td>
</tr>
<tr>
<td>3.2</td>
<td>Inspection certificate</td>
<td>specific</td>
<td>Test results based on specific tests</td>
<td>In accordance with the delivery terms and conditions of the purchase order or, if requested, also in accordance with statutory regulations and the corresponding technical rules</td>
<td>the independent expert commissioned by the customer and the plant expert</td>
</tr>
</tbody>
</table>
Pipes for the transportation of liquids and gases

Complete pipelines from a single source. Pipes and accessories for all media and pressure levels. Just ask.

The framework conditions for standardization and technical regulations are currently changing significantly for fabricators of pipes and accessories. The European Pressure Equipment Directive (PED) has replaced the previous Pressure Vessel Code and new EN standards have replaced the previous DIN standards. In addition, previous technical regulations such as the Technical Rules for Pressure Vessels – Pipes (TRR), Technical Rules for Pressure Vessels (TRB) and the Technical Rules for Pressure Vessels – Steam Boilers (TRD) are now invalid for new installations. They have been replaced by the standardized EU-wide technical regulations EN 13480 – “Metallic Industrial Piping”, EN 13445 – “Unfired Pressure Vessels” and EN 12952 “Water-tube boilers and auxiliary installations” and 12953 “Shell Boilers”.

However, repairs and maintenance for existing equipment are still carried out in accordance with the previous TRR, TRB and TRD regulations, meaning that European and German standards will exist in parallel and have to be observed for some time to come. For this reason, you will receive pipes certified to both the previous DIN and new EN standards in the future.
Pipeline construction at ambient temperatures

Seamless, standard wall pipes in accordance with EN 10216-1/DIN 1629. Can be used without restrictions under the PED up to the temperature limits in the related regulations (German Technical and Scientific Association for Gas and Water (DVGW) 60°C, AD2000-W4, 02/05 edition, 300°C)

Steel grade
- P235TR2/St 37.0

Dimensions
- in accordance with EN 10220 (DIN 2448)
  - 10.2 – 711 mm OD, up to 1,450 mm by arrangement
  - 1.6 – 14.2 mm wall

Inspection certificate
- APZ 3.1 (formerly APZ 3.1.B) and AD2000-W4; German mark of conformity (CE mark of conformity in the future)

Welded steel pipes in accordance with EN 10217-1/EN 10219/DIN 1626. For pressure pipes outside the remit of the PED

Steel grade
- P235TR1/S235JRH/St 37.0

Dimensions
- in accordance with EN 10220 (DIN 2448)
  - 10.2 – 2,220 mm OD
  - 1.6 – 10 mm standard wall
  - 1.4 – 10 mm thin wall
  - 1.8 – 40 mm heavy wall

Inspection certificate
- APZ 3.1 in accordance with EN 10204 (formerly APZ 3.1.B); German mark of conformity (CE mark of conformity in the future)

Elbows in accordance with EN 10253-1
- seamless

Steel grade
- S235

Dimensions
- 21.3 – 406.4 mm OD
- standard wall

Finish
- 3S in 45°, 90°, 180°

Elbows in accordance with DIN 2605-1,
- seamless

Steel grade
- St 35.8I

Dimensions
- 21.3 – 610 mm OD
- standard and heavy wall

Finish
- 2S, 3S and 5S in 45°, 90°, 180°

Elbows in accordance with ASTM A 234
- welded

Steel grade
- St 35.8 I

Dimensions
- up to 24”, grade WPB, short and long radius in STD and XS

Tees in accordance with DIN 2615, Part 1
- seamless

Steel grade
- St 35.8I

Dimensions
- up to 508 mm OD, standard and heavy walls, equal and reduced

Reducers in accordance with DIN 2616
- seamless

Steel grade
- St 35.8 I

Dimensions
- up to 508 mm OD, concentric and eccentric
Flanges
Steel flanges in accordance with DIN standards, all combined under EN 1092-1 in the future. Steel grade S235 with test report EN 10204-2.2, steel grade P250GH with mill inspection certificate EN 10204-3.1 (formerly 3.1.B).

Welding neck flanges
DIN 2631 – DIN 2638 in a nominal pressure range of 6 – 160 bar
Steel grades
· RSt 37-2 and C22.8
Dimensions
· dished heads with a low cylindrical straight flange up to 610 mm OD

Blind flanges
DIN 2527 in a nominal pressure range of 6 – 40 bar
Steel grades
· RSt 37-2 and C22.8, nominal diameter 15 – 600

Threaded flanges
DIN 2565/DIN 2566, nominal pressure range of 6 – 16 bar
Steel grade
· St 37-2, black and galvanized, nominal diameter 15 – 150 (1/2” – 6”)

Plain welding flanges
DIN 2573 and DIN 2576, nominal pressure ranges 6 and 10 bar
Steel grade
· St 37-2 for pipe diameters of 21.3 – 406.4 mm

Lapped flanges and rings for welding
DIN 2673, nominal pressure of 10 bar
Steel grade
· St 37-2 for pipe diameters of 21.3 – 406.4 mm

Dished heads with a low cylindrical straight flange up to 610 mm OD

Torispherical heads in accordance with DIN 28011
Steel grades
· S235JR (RSt 37-2)
· P265GH-TC1 (HII)
Dimensions
· dished heads with a low cylindrical straight flange up to 610 mm OD

Caps in accordance with DIN 2617
Steel grades
· St 35.8 l
· P265GH-TC1 (HII)
Dimensions
· up to 406.4 mm OD

Saddles – DIN 2618, weld-in-bends – DIN 2619
Steel grade
· St 35.8 l
Dimensions
· up to 406.4 mm OD
Welded and seamless thread-
ed gas and water pipes
Medium-weight threaded pipes
EN 10255 M series (DIN 2440)
Heavy-weight threaded pipes
EN 10255 H series (DIN 2441)
with or without thread and
coupling
Steel grade
· S195 (St 33-2)
Dimensions
· 1/8” – 6”, corresponds to
  10.2 – 165.1 mm OD
· 2.0 – 5.4 mm wall
Inspection certificate
· Certificate of compliance 2.1
  or test report 2.2 in
  accordance with EN 10204
Finishes
· black
· galvanized in accordance with
  EN 10240-A1 (DIN 2444)
· PE-coated on request
  in accordance with DIN 30670

Welded and seamless water pipes
in accordance with EN 10224
(DIN 2460)
Steel grade
· L235 (St 37.0)
Dimensions
· seamless
  · 88.9 – 508 mm OD
  · 3.2 – 11.0 mm wall
· welded
  · 88.9 – 2,220 mm OD
  · 3.2 – 17.5 mm wall
Inspection certificate
· APZ 3.1 in accordance with
  EN 10204
  (formerly APZ 3.1.B)
Finishes
· black inside and outside
· PE-coated (outside) in accor-
dance with DIN 30670,
  normal or reinforced layer
  thickness
· cement mortar coating
  (inside) in accordance with
  DIN 2614, layer thickness
  3 – 12 mm
Steel line pipes and large-diameter pipes for oil and gas

Welded steel line pipes for low-pressure applications up to an operating pressure of 16 bar in accordance with EN 10208-1 (DIN 2470-1/1626)

House connection pipes with plain ends 1" – 2 1/2" with V-seam welding bevel in accordance with DIN 2559-1

Steel grade
- L235GA (St 37.0)

Dimensions
- 33.7 – 508 mm OD
- 3.6 – 6.3 mm wall

Inspection certificate
- APZ 3.1 in accordance with EN 10204 (formerly APZ 3.1.B)

Finish
- Yellow PE-coating in accordance with DIN 30670

TS-petrol gas station tubes
DIN 2442 longitudinally welded threaded pipes and DIN 1626/2458 longitudinally welded steel pipes with a welding factor of 1.0 for sub-surface gasoline and diesel pipe systems

Steel grade
- St 37.0

Dimensions
- 1" – 5" (33.7 – 133 mm OD)
- 3.6 – 5.4 mm wall
- 6,000 mm length, –0/+50 mm

Finish
- PE-coated in accordance with DIN 30670

Seamless steel line pipes in accordance with API 5L
All-purpose line pipes and boiler pipes/tubes in accordance with API 5L and ASTM A 106

Steel grades
- Grades B and C

Dimensions
- 1/2" – 24" OD
- Sch 10 – Sch 160 wall above 2" with beveled ends in normal and double manufactured lengths

Inspection certificate
- APZ 3.1 in accordance with EN 10204 (formerly APZ 3.1.B)
Seamless and welded steel line pipes and large-diameter pipes for high-pressure applications; steel pipes for oil and gas transportation pipelines with permitted operating pressures above 16 bar.

- in land-based pipelines for pure, dry natural gas in accordance with EN 10208-2 (formerly DIN 17172 and DIN 2470-2)
- and for undersea pipelines with acid gas specification

Seamless steel line pipes

Steel grades
- L245NB to L485QB (StE 240.7 to StE 480.7)
- suitable for acid gas
- L245NCS to L450QCS
- also as API grades, grade B
  up to X70

Dimensions
- up to 508 mm OD
- up to 17.5 mm wall

HF-welded steel line pipes

- of normalized strip with no subsequent weld seam annealing

Steel grades
- L245NB to L415NB (StE 240.7 to StE 415.7)

Dimensions
- up to 20” (508 mm OD)
- as well as of thermomechanically rolled strip

Steel grades
- L245MB to L485MB (StE 240.7TM to StE 480.7TM)
- also suitable for acid gas
- L290MCS to L485MCS
- as API grades, grade B
  up to X70 with and without acid gas specification

Dimensions
- up to 64” (1,620 mm OD)
- 40 mm wall

Inspection certificate
- APZ 3.1 to EN 10204
  (formerly APZ 3.1.B)

Finishes
- with PE coating in accordance with DIN 30670
- also black on request

Longitudinal or spiral weld large-diameter pipes

Steel grades
- L290MB to L555MB (StE 290.7TM)
- also suitable for acid gas
- L290MCS to L485MCS
- as API grades, grade B
  up to X80 with and without acid gas specification

Dimensions
- up to 64” (1,620 mm OD)
- 40 mm wall

Inspection certificate
- APZ 3.1 to EN 10204
  (formerly APZ 3.1.B)
### High-temperature resistant pipes for boiler construction and chemical processing equipment

<table>
<thead>
<tr>
<th>EN grade</th>
<th>DIN grade</th>
<th>Color marking</th>
<th>Inspection certificate</th>
</tr>
</thead>
<tbody>
<tr>
<td>P235-TC1</td>
<td>St 35.8 I</td>
<td>white</td>
<td>3.1</td>
</tr>
<tr>
<td>P235-TC2</td>
<td>St 35.8 III</td>
<td>white</td>
<td>3.1</td>
</tr>
<tr>
<td>P265-TC2</td>
<td>St 45.8 III</td>
<td>yellow</td>
<td>3.1</td>
</tr>
<tr>
<td>16Mo3</td>
<td>15 Mo 3</td>
<td>yellow/carmine</td>
<td>3.2 TÜV</td>
</tr>
<tr>
<td>13CrMo4-5</td>
<td>13 CrMo 4 4</td>
<td>yellow/silver</td>
<td>3.2 TÜV</td>
</tr>
<tr>
<td>10CrMo9-10</td>
<td>10 CrMo 9 10</td>
<td>red/green</td>
<td>3.2 TÜV</td>
</tr>
<tr>
<td>X20CrMoV11-1</td>
<td>X20 CrMoV 12 1</td>
<td>blue</td>
<td>3.2 TÜV</td>
</tr>
<tr>
<td>X10CrMoVNb9-1</td>
<td>X10 CrMoVNb 9 1*</td>
<td>n/a</td>
<td>3.2 TÜV</td>
</tr>
<tr>
<td>P215NL</td>
<td>TT ST 35 N</td>
<td>n/a</td>
<td>3.1</td>
</tr>
</tbody>
</table>

* Not included in DIN

### Seamless boiler pipes/tubes
of high-temperature unalloyed steels with and without ultrasound testing and high-temperature alloyed steels with ultrasound testing in accordance with EN 10216-2/DIN 17175. Can be used without restrictions in accordance with the new PED and the old Pressure Vessel Code through certification in accordance with EN and DIN.

**Steel grades**
- P235GH-TC1 (St 35.8 I)
- P235GH-TC2 (St 35.8 III)
- P265GH-TC2 (St 45.8 III)
- 16Mo3 (15 Mo 3)
- 13CrMo4-5 (13 CrMo 4 4)
- 10CrMo9-10
- X10CrMoVNb9-1

**Dimensions**
- 10.2 – 610 mm OD
- 1.6 – 50 mm wall

**Inspection certificate**
- unalloyed: APZ 3.1 in accordance with EN 10204 (formerly APZ 3.1.A-TÜV)
- alloyed: German Technical Inspection Agency (TÜV) APZ 3.2 in accordance with EN 10216-4/DIN 17173, test category 1, excl. US testing

### Seamless pipes of unalloyed low-temperature steels
for chemical plants and processing equipment in accordance with EN 10216-4/DIN 17173, test category 1, excl. US testing.

**Steel grades**
- Grades B and C

**Dimensions**
- 21.3 – 508 mm OD
- 2.0 – 16 mm wall

**Inspection certificate**
- APZ 3.1 in accordance with EN 10204 (formerly APZ 3.1.B)

### Seamless boiler pipes/tubes in accordance with ASTM

- Unalloyed in accordance with ASTM A 106/ASME SA 106

**Steel grades**
- Grades B and C

**Dimensions**
- 1/2” – 24” OD

**Inspection certificate**
- APZ 3.1 in accordance with EN 10204 (formerly APZ 3.1.B)

### Seamless cold manufactured heat exchanger pipes
for boiler, chemical processing equipment and plant construction in accordance with EN 10216-2/EN 10305-1 or DIN 17175/DIN 2391C

**Steel grades**
- P235GH-TC1+N (St 35.8 I NBK)

**Test scope**
- EN 10216-2
- DIN 17175
- AD2000-W4

**Dimensions**
- 10 – 38 mm OD
- 1.0 – 3.0 mm wall
- 6,000 mm length

**Inspection certificate**
- APZ 3.1 in accordance with EN 10204 (formerly APZ 3.1.B)

**On request**
- other high-temperature materials
- long random lengths (up to 22 m)
- cut lengths
Seamless cold-drawn HPL tubing
Can be used without restrictions under the PED up to 500 bar and in the automotive industry in accordance with EN 10305-4/DIN 1630/2391C

Steel grade
- E235+N (St 37.4 NBK)

Dimensions
- 4 x 0.5 – 80 x 10 mm

Inspection certificate
- APZ 3.1 in accordance with EN 10204 (formerly 3.1.B)

Finishes
- bonderized
- yellow
- white chromated

Manufactured to order
- green chromated
- E355+N (St 52.4 NBK)
Stainless steel pipes

Stainless steel pipes in accordance with DIN, AFNOR, EN and ASTM with corresponding accessories. Help yourself from our well-stocked warehouse.
Stainless steel pipes and accessories for pressure pipes

Seamless stainless steel pipes
for use with corrosive media at high and low temperatures. Installation pipes and line pipes with no restrictions under the PED.
· in accordance with EN 10216-5/DIN 17458/SEW 400, test categories 1 + 2
· usually in connection with AD2000-W2 (AD-W2)
· ASTM 312/ASME SA 312

Steel grades
· 1.4301/1.4306
· 1.4401/1.4404
· 1.4462
· 1.4539
· 1.4541
· 1.4571

Dimensions
· 4.0 – 406.4 mm OD
· 0.5 – 40.49 mm wall

Inspection certificate
· APZ 3.1 in accordance with EN 10204 (formerly APZ 3.1.B)

Seamless hydraulic line pipes
for use with corrosive media.
· in accordance with EN 10216-5/DIN 17458
· with tolerances D4/T3 in accordance with ISO 1127 (corresponds to DIN 2391/EN 10305-1)

Steel grades
· 1.4301/1.4306
· 1.4401/1.4404
· 1.4539
· 1.4541
· 1.4571

Dimensions
· 4.0 – 42.0 mm OD
· 1.0 – 5.0 mm wall

Inspection certificate
· APZ 3.1 in accordance with EN 10204 (formerly APZ 3.1.B)

Seamless heat-resistant stainless steel pipes DIN/ISO
for use with corrosive media and at high temperatures in accordance with DIN EN 10095/SEW 470

Steel grades
· 1.4749
· 1.4841

Cold manufactured, heat-treated, not descaled, cold water test pressure 50 bar

Dimensions
· 8.0 – 108.0 mm OD
· 1.0 – 6.3 mm wall

Inspection certificate
· APZ 3.1 in accordance with EN 10204 (formerly APZ 3.1.B)
**ANSI seamless stainless steel pipes**
for use with corrosive media in accordance with the ANSI standard with multiple inspection to international standards.

- ASTM A 312/ASME SA 312
- EN 10216-5, TC-1 as an installation pipe with AD2000-W2 (DIN 17458, PK1)
- NF A 49117, NACE MR 0175

**Steel grades**
- TP304/304L/304H
- TP316/316L
- TP316Ti
- TP321/321H
- TP347H
- UNS S 31803 (Duplex)
- UNS N 08904 (TP904L)

**Dimensions**
- 3/8” Sch 10s–16” Sch 160s (17.15 x 1.65 mm – 406.4 x 40.49 mm)

**Seamless instrument pipes in inch dimensions**
in accordance with ASTM A 269

**Steel grades**
- TP304/304L
- TP316/316L

**Dimensions**
- 6.35 – 25.4 mm OD
- ANSI: 1/4” 22BWG/SWG – 1” 14BWG/SWG

**Inspection certificate**
- APZ 3.1 in accordance with EN 10204
  (formerly APZ 3.1.B)

**ANSI seamless heat-resistant stainless steel pipes**
for use with corrosive media and at high temperatures in accordance with ASTM A 312, ASME SA 312, SEW 470

**Steel grade**
- TP310S

**Dimensions**
- 1/4” – 6” OD
- Sch 40s–Sch 80s wall

**Inspection certificate**
- APZ 3.1 in accordance with EN 10204
  (formerly APZ 3.1.B)
Welded stainless steel pipes

- for use in corrosive media in accordance with EN 10217-7, TC-1 or TC-2 with AD2000-W2 (DIN 17457 PK1/PK2)

Steel grades
- 1.4301
- 1.4307
- 1.4401
- 1.4404
- 1.4462
- 1.4541
- 1.4571

Dimensions
- 4.0 – 609.6 mm OD
- 1.0 – 16 mm wall

Inspection certificate
- APZ 3.1 in accordance with EN 10204 (formerly APZ 3.1.B)

Finishes
- to nominal diameter 100 annealed
- above nominal diameter 100 unannealed

z for the paper and cellulose industry, longitudinally welded in accordance with DIN 17455/17457

Steel grades
- 1.4301
- 1.4306/1.4307
- 1.4541
- 1.4571

Dimensions
- 23 – 508 mm OD
- 1.5 – 4.0 mm wall

Inspection certificate
- APZ 3.1 in accordance with EN 10204 (formerly APZ 3.1.B)

z ANSI
for use in corrosive media, longitudinally welded in accordance with ASTM A 312

Steel grades
- TP304/304L (1.4301/1.4307)
- TP316/316L (1.4401/1.4404)

Dimensions
- 3/8" – 16" OD
- Sch 5 – Sch 40 wall
Elbows, welded fittings and fittings of austenitic materials in accordance with DIN standards, in the future in accordance with EN 10253-3 and -4.

Elbows in accordance with DIN 2605
- seamless, 3S 90°
  Steel grades
  · 1.4541; 1.4571

Dimensions
- 15.0 – 168.3 mm OD
- 1.5 – 4.5 mm wall

z welded, 3S 90°
Steel grades
· 1.4541; 1.4571

3S 90°, dimensions
· 18.0 – 206 mm OD
· 1.5 – 3.0 mm wall

Tees
- equal, seamless, annealed and pickled
Steel grades
· 1.4541; 1.4571

Dimensions
· 21.3 – 168.3 mm OD
· Wall thickness range 1–3

z equal tee, welded, annealed and pickled
Steel grades
1.4541; 1.4571

Dimensions
· 21.5 – 323.9 mm OD
· Wall thickness range 1 and 2 of DIN 2615

z equal tee, welded, similar to DIN 2615 for the paper and cellulose industry
Steel grades
1.4541; 1.4571

Dimensions
· 18 – 254 mm OD
· 1.5 and 2.0 mm wall

Reducers in accordance with DIN 2616
- concentric and eccentric, seamless, annealed and pickled
Steel grades
· 1.4541; 1.4571

Dimensions
· to 219.1 mm OD

z concentric, welded
Steel grades
· 1.4541; 1.4571

Dimensions
· 33.7 – 323.9 mm OD

z concentric, welded similar to DIN 2616 for the paper and cellulose industry
Steel grades
1.4541; 1.4571

Dimensions
· 35–254 mm OD
Saddles
in accordance with DIN 2618
extruded from pipe

Steel grade
· 1.4571

Dimensions
· 21.3 – 323.9 mm OD
· 2.0 – 3.0 mm wall

Torispherical heads
in accordance with DIN 28011
annealed and pickled

Steel grade
· 1.4571

Dimensions
· 21.3 – 609.6 mm
· 2.0 – 4.0 mm wall

Elbows, welded fittings and
fittings in accordance with
ASTM A 403

Elbows
· seamless, 90° and 45°
· long radius

Steel grades
· WP304/304L; WP316/316L;
· WP321H

Dimensions
· 1/4”–16” OD
· Sch 5 – Sch 160 wall
· welded, 90° and 45°
· long radius

Steel grades
· WP304/304L; WP316/316L

Dimensions
· 1/2” – 16” OD
· Sch 5 – Sch 40 wall

Caps

Steel grade
· WP316/316L

Dimensions
· 1” – 6” OD
· Sch 10 – Sch 80 wall

Reducers
· concentric, seamless

Steel grades
· WP304/304L; WP316/316L;
· WP321H

Dimensions
· 3/4” – 12” OD
· Sch 10 – Sch 160 wall
· welded, concentric, welded

Steel grades
· WP304/304L; WP316/316L

Dimensions
· 1/2” – 16” OD
· Sch 10 wall
· eccentric, seamless

Steel grades
· WP304/304L; WP316/316L;
· WP321H

Dimensions
· 1 1/2” – 6” OD
· Sch 10 – Sch 80 wall

Tees
· equal, seamless

Steel grades
· WP304/304L; WP316/316L;
· WP321H

Dimensions
· 1/2” – 12” OD
· Sch 10 – Sch 160 wall
· reduced, seamless

Steel grades
· WP304/304L; WP316/316L;
· WP321H

Dimensions
· 3/4” – 8” OD
· Sch 10 – Sch 80 wall
· equal, welded

Steel grades
· WP304/304L; WP316/316L

Dimensions
· 1/2” – 16” OD
· Sch 10 wall
Flanges of austenitic materials in accordance with DIN standards, in future all steel flange types standardized under EN 1092-1

Welding neck flanges
DIN 2632 (PN 10), DIN 2633 (PN 16), DIN 2635 (PN 40), Raised face shape C

Steel grades
· 1.4541
· 1.4571

Dimensions
· nominal diameter 10 – nominal diameter 500

Inspection certificate
· APZ 3.1 in accordance with EN 10204 (formerly APZ 3.1.B) with confirmation AD2000-W2, W9 and W10

Blind flanges
≥ DIN 2527, shape B, PN 10, PN 16 and PN 40

Steel grades
· 1.4541
· 1.4571

Dimensions
· nominal diameter 15 – nominal diameter 300

Inspection certificate
· APZ 3.1 in accordance with EN 10204 (formerly APZ 3.1.B) with similar to DIN 2327, shape B, drilled PN 10, reduced thickness

Steel grades
· 1.4541
· 1.4571

Dimensions
· nominal diameter 20 – nominal diameter 600

Inspection certificate
· APZ 3.1 in accordance with EN 10204 (formerly APZ 3.1.B) with AD2000-W9

Plain flanges
≥ DIN 2576, PN 10

Steel grades
· 1.4541
· 1.4571

Dimensions
· nominal diameter 15 – nominal diameter 500

Inspection certificate
· APZ 3.1 in accordance with EN 10204 (formerly APZ 3.1.B) with AD2000-W2, W9 and W10

≥ similar to DIN 2576, drilled, PN 10, reduced thickness

Steel grades
· 1.4541
· 1.4571

Dimensions
· nominal diameter 20 – nominal diameter 600

Inspection certificate
· APZ 3.1 in accordance with EN 10204 (formerly APZ 3.1.B) with AD2000-W9
Slip-on flanges and welding neck collars, in accordance with DIN 2673, PN 10

Steel grade
- 1.4571

Dimensions
- nominal diameter 15 – nominal diameter 300

Inspection certificate
- APZ 3.1 in accordance with EN 10204 (formerly APZ 3.1.B) with AD2000-W2, W9 and W10

Slip-on flanges and lapped flanges in accordance with DIN 2642, PN 10

Steel grades
- 1.4541
- 1.4571

Dimensions
- nominal diameter 15 – nominal diameter 500

Inspection certificate
- APZ 3.1 in accordance with EN 10204 (formerly APZ 3.1.B)

Slip-on flanges similar to DIN 2642, drilled PN 10, reduced thickness

Steel grades
- 1.4541
- 1.4571

Dimensions
- nominal diameter 20 – nominal diameter 600

Inspection certificate
- APZ 3.1 in accordance with EN 10204 (formerly APZ 3.1.B) with AD2000-W9

Slip-on flanges of lightweight metal G Al Si 12 (CU), bright and coated similar to DIN 2642, PN 10

Steel grades
- 1.4541
- 1.4571

Dimensions
- nominal diameter 15 – nominal diameter 500

Slip-on flanges

Flanges in accordance with ASTM A 182 (RF round flange)

Welding neck flanges
- 150 lbs

Steel grades
- F304L; F316L

Dimensions
- 1/2” – 12”
- Sch 10 and Sch 40

- 300 lbs

Steel grades
- F304L; F316L

Dimensions
- 1/2” – 8”
- Sch 10 and Sch 40

Slip-on flanges

Blind flanges
- 150 lbs

Steel grades
- F304L; F316L

Dimensions
- 1/2” – 12”

- 300 lbs

Steel grades
- F304L; F316L

Dimensions
- 1/2” – 8”
The Mapress pressfitting system creates the perfect permanent, leak-proof and non-detachable pipe joint by means of fittings pressed onto the pipe ends.
Mapress pressfitting system

**Mapress system pipes**
Mapress stainless steel system pipes of stainless Cr-Ni-Mo steel (1.4401) for industrial applications

- **Dimensions**
  - 15.0 x 1.0 – 108.0 x 2.0 mm

**Mapress pressfittings**
Mapress stainless steel pressfittings of stainless Cr-Ni-Mo steel (1.4401) for industrial applications

- **Dimensions**
  - 15.0 x 1.0 – 108.0 x 2.0 mm

**Fitting types**
- Couplings, slip couplings, female adaptors
- Valve connectors
- 90° and 45° elbows in various designs
- 90°, 60°, 30° and 15° elbows with plain ends
- Pre-formed pipebridges
- 90° angles in various designs
- Reducers
- Tees, equal and reduced
- Press nipples and straight union pressfittings
- Adapter flanges and plugs

**Mapress presstools**
- Electromechanical and manual presstools
- Pressing jaws and collars
- Marking device
- Pipe deburrer
- Test plugs
Technical information

Full comparison of the DIN and EN standards for pipes/tubes and accessories
### DIN and EN standards for pipes/tubes and accessories

<table>
<thead>
<tr>
<th>DIN standard</th>
<th>EN standard</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>2440/2441</td>
<td>10255</td>
<td>Threaded pipes</td>
</tr>
<tr>
<td>2444</td>
<td>10240</td>
<td>Hot-dip galvanized coatings</td>
</tr>
<tr>
<td>2460</td>
<td>10224</td>
<td>Steel pipes, pipe accessories and fittings for water and drinking water</td>
</tr>
</tbody>
</table>

**Steel pipes for water**

<table>
<thead>
<tr>
<th>Seamless pressure-resistant pipes/tubes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1629/1630</td>
</tr>
<tr>
<td>17175</td>
</tr>
<tr>
<td>17179</td>
</tr>
<tr>
<td>17173</td>
</tr>
<tr>
<td>17458</td>
</tr>
</tbody>
</table>

**Seamless pressure-resistant pipes/tubes**

<table>
<thead>
<tr>
<th>Welded pressure-resistant pipes/tubes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1626</td>
</tr>
<tr>
<td>17457</td>
</tr>
</tbody>
</table>

**Welded pressure-resistant pipes/tubes**

<table>
<thead>
<tr>
<th>Tubes for structural applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>59410</td>
</tr>
<tr>
<td>17121</td>
</tr>
<tr>
<td>59411</td>
</tr>
<tr>
<td>17120</td>
</tr>
<tr>
<td>4427</td>
</tr>
<tr>
<td>1615</td>
</tr>
<tr>
<td>2395</td>
</tr>
<tr>
<td>17455</td>
</tr>
<tr>
<td>17456</td>
</tr>
</tbody>
</table>

**Tubes for structural applications**

**Precision steel tubes**

<table>
<thead>
<tr>
<th>DIN standard</th>
<th>EN standard</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>2391</td>
<td>10305-1</td>
<td>Seamless cold-drawn precision steel tubes</td>
</tr>
<tr>
<td>2393</td>
<td>10305-2</td>
<td>Welded drawn precision steel tubes</td>
</tr>
<tr>
<td>2394</td>
<td>10305-3</td>
<td>Welded size-rolled precision steel tubes</td>
</tr>
<tr>
<td>2391/1630</td>
<td>10305-4</td>
<td>Seamless tubes for hydraulic and pneumatic pressure lines</td>
</tr>
<tr>
<td>2395</td>
<td>10305-5</td>
<td>Welded size-rolled square and rectangular precision steel tubes</td>
</tr>
</tbody>
</table>

**Line pipes for gas and flammable liquids**

<table>
<thead>
<tr>
<th>Line pipes for gas and flammable liquids</th>
</tr>
</thead>
<tbody>
<tr>
<td>2470-1</td>
</tr>
<tr>
<td>2470-2/17172</td>
</tr>
</tbody>
</table>

**Pipes/tubes for machining and mechanical engineering**

<table>
<thead>
<tr>
<th>Pipes/tubes for machining and mechanical engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-standardized</td>
</tr>
</tbody>
</table>

**Pipe/tube accessories**

<table>
<thead>
<tr>
<th>Pipe/tube accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>2950</td>
</tr>
<tr>
<td>2605, 2615, 2616, 28011</td>
</tr>
</tbody>
</table>

**Steel flanges**

<table>
<thead>
<tr>
<th>Steel flanges</th>
</tr>
</thead>
<tbody>
<tr>
<td>2630-2638, 2527, 2573, 2576, 2642, 2673</td>
</tr>
</tbody>
</table>

---

**ThyssenKrupp Materials Austria GmbH**

Ein Unternehmen von ThyssenKrupp Services

Freudenauener Hafenstr. 26  
A-1024 Wien

Tel. +43 1 72731 - 0  
Fax +43 1 72731 - 580  
E-Mail rohre@tksu.at