PROMA

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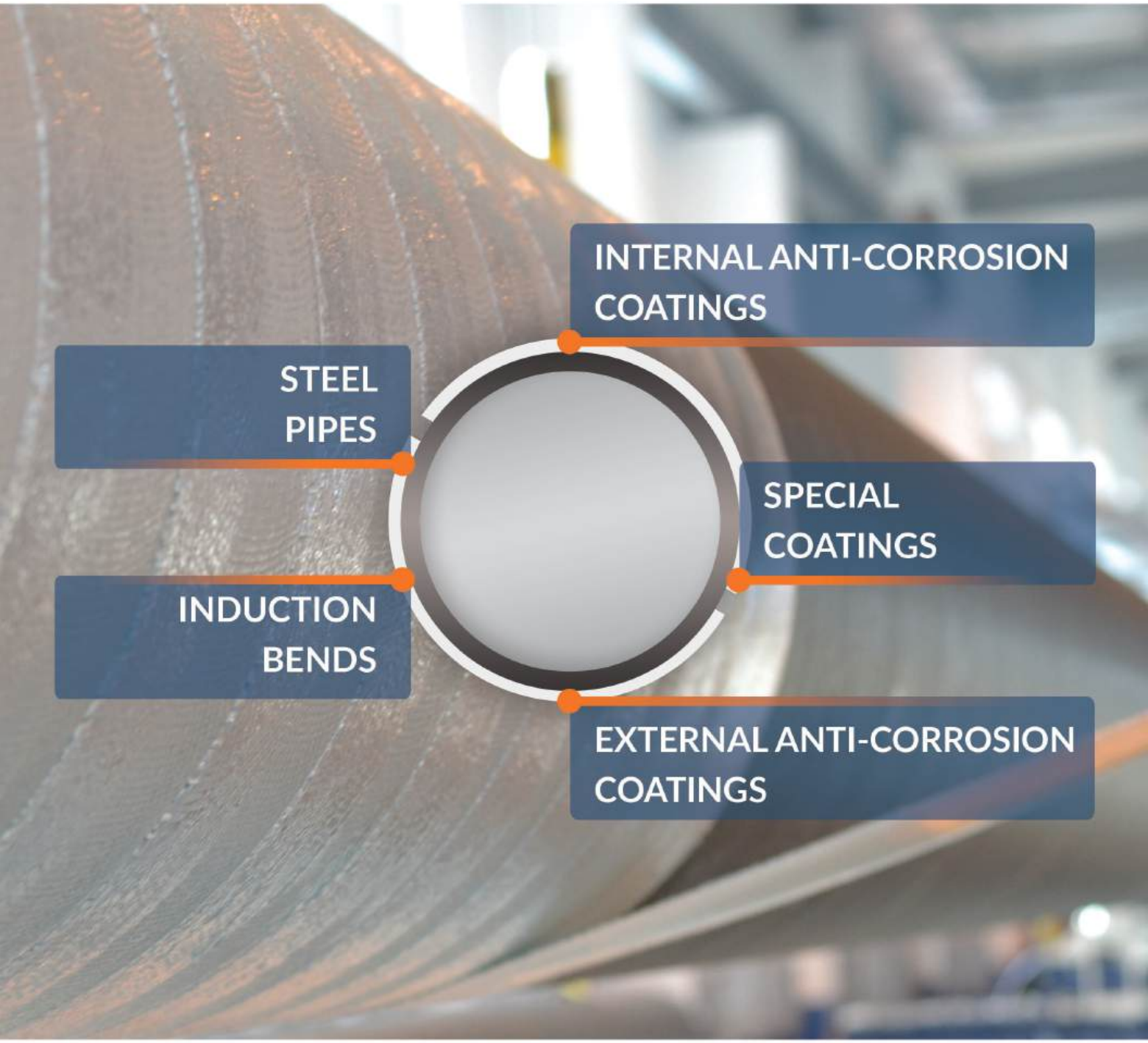

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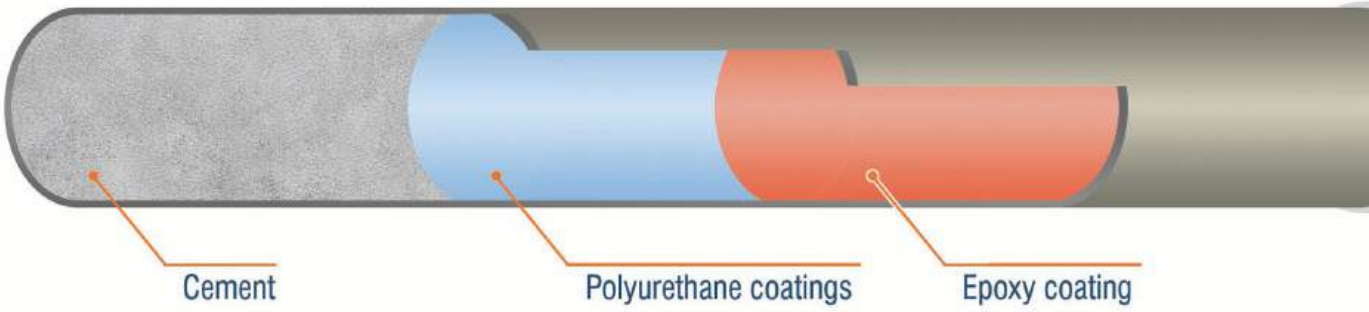
PRODUCT SUPPLY OPTIONS



INTERNAL ANTI-CORROSION COATINGS

Epoxy coatings for gas transmission

Diameter range: 219.1 mm to 1220.0 mm; lengths from 8 to 16 m.
Manufactured in accordance with EN 10301 and API RP 5L2 or customer specification.

Product features:

- coating continuity and tightness
- significant reduction of internal pipe surface roughness (from approx. 10 μm to 1–2 μm)
- Protection of the internal surface

Polyurethane coatings for drinking water, industrial water, or wastewater transmission

Diameter range: 219.1 mm to 1220.0 mm; lengths from 8 to 16 m.
Manufactured in accordance with EN 10290 or customer specification.

Product features:

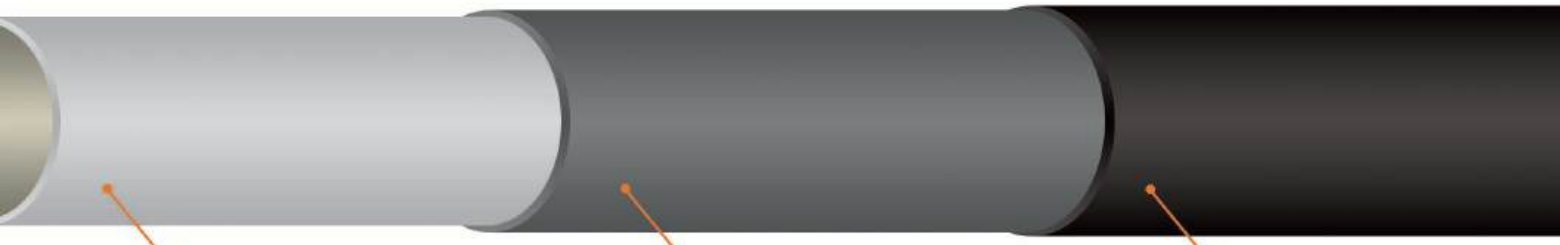
- Reduced water flow resistance due to a smooth internal surface
- Excellent anti-corrosion protection of the internal pipeline surface (adhesion above 10 MPa, electrical resistivity of coating 1.7×10^{10} Ωm^2)
- Reduced weight of pipes used for pipeline construction
- Simple and reliable technology for protecting welded joints on site

Cement linings for drinking water, industrial water, or wastewater transmission

Diameter range: 323.9 mm to 1220.0 mm; lengths from 8 to 16 m.
Manufactured in accordance with DIN 2614, DIN 2880, EN 10298 or customer specification.

Product features:

- Corrosion resistance, including aggressive waters, through the use of sulfate-resistant cement, ensuring several decades of service life
- Full resistance to chemical agents such as ozone and chlorine
- No tendency to incrustation (corrosive buildup), improving pipeline operating efficiency
- Very high abrasion resistance, allowing high media flow velocities
- Full strength of the cement lining within the elastic deformation range of the steel pipe
- The chemical composition of the cement lining (cement and quartz sand) does not adversely affect drinking water quality



EXTERNAL ANTI-CORROSION COATINGS

Single-layer external epoxy coatings

Diameter range: 21.3 mm to 323.9 mm; pipe lengths from 6 m to 14 m.
Manufactured in accordance with EN ISO 21809-2 and CAN/CSA-Z245.20 or customer specification.

Product features:

- Tightness and continuity of the coating
- High mechanical resistance

Three-layer external coatings 3LPE and 3LPP

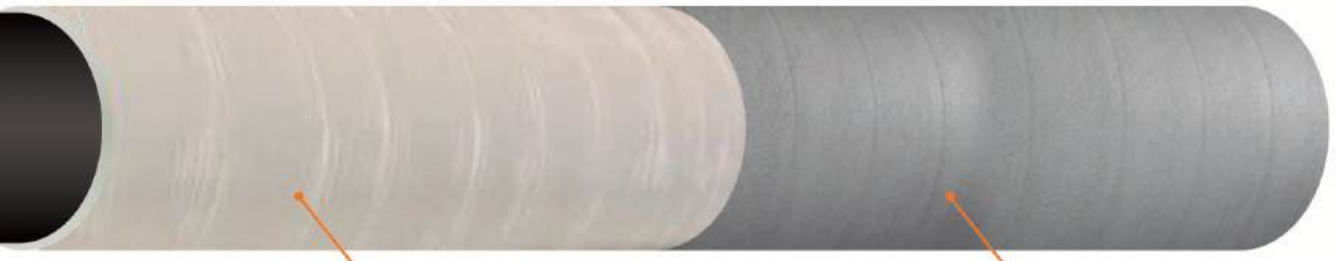
Diameter range: 21.3 mm to 323.9 mm; pipe lengths from 6 m to 14 m.
Manufactured in accordance with EN ISO 21809-1, DIN 30670 and DIN 30678 or customer specification.

The three-layer anti-corrosion coating consists of:

1. Epoxy layer with thickness from 60 to 125 μm
2. Polyethylene adhesive layer with thickness min. 150 μm
3. Polyethylene or polypropylene layer with thickness from 1.8 to 10 mm (depending on technology and customer requirements)

Product features:

- Tightness and continuity of the coating (25 kV)
- Adhesion to steel pipe up to 500 N/cm
- High UV resistance
- High impact resistance



SPECIAL COATINGS

Glass-fiber reinforced resin laminates

Glass-fiber reinforced resin laminates are used as protection of anti-corrosion coating during drilling operations (HDD, Direct Pipe) in pipeline construction.
Diameter range: 88.9 mm to 1220.0 mm; lengths from 8 to 16 m.
Manufactured in accordance with a National Technical Assessment or customer specification.

Promglass (Standard)

PROMGLASS® glass-fiber reinforced laminate applied at the factory consists of fiberglass fabric strips of appropriate weight and width impregnated with resin containing specially formulated additives. The production process ensures high coating compactness and eliminates the risk of delamination and discontinuities.

Promglass®Super-Bond

PROMGLASS® Super-Bond is a new and innovative solution on the European market. The laminate provides an innovative chemical bond with the anti-corrosion coating surface, ensuring adhesion across the entire surface. PROMGLASS® Super-Bond provides all mechanical properties of the standard laminate and additionally offers shear strength exceeding 100 N/cm² and chemical adhesion over the entire coating surface.
Product features:

- Minimum laminate thickness: 1 mm
- Impact resistance: above 10 J/mm
- Resistance to low temperature and mechanical impacts: above 5 J/mm
- Indentation resistance: below 0.05 mm
- Tensile strength: above 75 MPa
- Laminate elasticity: min. 100 MPa
- Shore D hardness: above 65
- Shear strength: PROMGLASS®: above 50 N/cm²
  PROMGLASS® Super-Bond: above 100 N/cm² (from diameter DN400)

Fiber-cement coating

The external fiber-cement coating (FZM) is used to protect polyolefin coatings against damage during: pipe laying in rocky areas, backfilling of pipes, filling trenches with rocky or crushed material with sharp edges.
Outside diameter range: 114.3 to 1220 mm; pipe lengths from 6 to 16 m.
Manufactured in accordance with DVGW GW 340 or customer specification.

Product features:

- Layer thickness: min. 7 mm
- Compressive strength: min. 25 MPa
- Flexural strength: min. 2.5 MPa
- Impact resistance: no cracks or spalling, impact energy 150 N

The coating saves project execution time and significantly reduces various logistical costs. It also has a substantial positive impact on environmental protection by eliminating the need to replace native soil with additional bedding materials. Product certificate and technical approval are available.

FITTING COATINGS

EXTERNAL COATINGS

Anti-corrosion polyurethane coatings

Diameter range: 21.3 mm to 1220.0 mm; for all types of fittings and valves
Manufactured in accordance with EN 10290 or customer specification.

Product features:

- Tightness and continuity of coating (up to 20 kV)
- Adhesion to steel pipe above 7 MPa
- High UV resistance
- High impact resistance

INTERNAL COATINGS

Epoxy coatings for gas transmission

Diameter range: 219.1 mm to 1220.0 mm; for all types of fittings
Manufactured in accordance with EN 10301 and API RP 5L2 or customer specification.

Product features:

- Tightness and continuity of coating
- Significant reduction of internal surface roughness (from approx. 10 μm to 1–2 μm)
- Protection of the internal surface

Polyurethane coatings for drinking water, industrial water, or wastewater transmission

Diameter range: 219.1 mm to 1220.0 mm; for all types of fittings
Manufactured in accordance with EN 10290 or customer specification.

Product features:

- Reduced water flow resistance due to smooth internal surface
- Excellent anti-corrosion protection of the internal pipeline surface (adhesion above 10 MPa, electrical resistivity of coating 1.7×10^{19} Ωm^2)
- Reduced weight of pipes used for pipeline construction
- Simple and reliable technology for protecting welded joints on site

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STEEL PIPES AND INDUCTION-BENDS

STEEL PIPES

Steel pipes manufactured in accordance with standards: EN ISO 3183, EN 10208-1,2, EN 102016-1:4, EN 10217, EN 10210, EN 10219.

Seamless pipes (S)

Outside diameter range: 21.3 to 508.0 mm
Wall thickness: 2.6 to 25.0 mm

High-frequency welded steel pipes HFW (HFI)

Outside diameter range: 114.3 to 406.4 mm
Wall thickness: 2.0 to 25.0 mm

Longitudinally welded steel pipes SAWL

Outside diameter range: 406.4 to 1420.0 mm
Wall thickness: 6.30 to 25.0 mm

Spirally welded steel pipes SAWH

Outside diameter range: 323.9 to 1420.0 mm
Wall thickness: 5.0 to 22.2 mm

INDUCTION-BENDS

Induction bends for gas and oil pipelines manufactured from seamless pipes, longitudinally welded pipes, and spiral welded pipes.

Manufactured in accordance with EN 14870-1, ISO 15590-1
Diameter range: 114.3 to 1420 mm
Bending radius: 5D–15D
Bending angle: 5° to 180°

Bends available with external polyurethane coating in accordance with EN 10290 and internal epoxy coating in accordance with EN 10301 and API RP 5L.

Proma Sp. z o.o., headquartered in Zawadzkie, specializes in applying protective coatings to steel and cast iron transmission pipes.

We offer a wide range of mechanical protection coatings and anticorrosion coatings. Our strategy is to meet the highest requirements of our customers through professional service provided by qualified staff, flexibility in the proposed solutions, and the highest quality of delivered products and performed services.

Confirmation of the effectiveness of our strategy is the achievement of Intertek certifications, national technical assessments, and approvals.

Continuous supervision and quality control at every stage of production guarantee our customers products of the highest standard.