



don't crack under pressure

Reference installations of PE 100 pipes

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Overview of reference installations

- "1400 mm PE 100 pipe installed in Shetland Islands", 2001
- "710 mm wastewater pressure pipe made of PE 100", 1999
- "Alpine village Grindelwald - 25 bar PE 100 drinking water distribution", 1998
- "First natural gas distribution made of PE 100 pipes for 12 bar", 1998
- "The biggest underwater PE 100 pipe disposing of treated municipal effluent in Greece", 1996

A special thanks to all the authors of the member companies, who have documented the individual cases and to all involved pipe manufacturers and contractors!

1.400 mm PE 100 pipe installed in Shetland Islands

- Protection pipe for oil exploration at Shetland Islands
- Pipe production at Pipelife Norge AS
- 163 m one piece pipe
- Transport over 1,000 km by towing on the water only in 3 days



PE 100 was chosen thanks to

- Large diameter → Excellent extrusion properties
- Easy transport on water → Lower transport cost
- PE 100: Borstar® HE3490-LS

163 m one piece PE 100 pipe

- PE 100 1,400 mm pipeline
- Wall thickness 100 mm
- 430 kg/m pipe weight
- Extrusion output rate 1 m/h

710 mm wastewater pressure pipe made of PE 100

- Portugal's Foz do Arelho submarine-outfall pipeline
- Environmental protection against waste water contamination
- Installation of a 2.2 km submarine-outfall made of PE 100
- Basic bid was in concrete and PVC



PE 100 was chosen thanks to

- **Quick and unproblematic installation**
→ Lower installation cost
- **Operational safety** → excellent lifetime
- **Easy handling** → improved safety
- **PE 100: Vestolen® A 6060 R black**

2.2 km submarine-outfall pipeline

- **PE 100 710 mm pipeline**
- **27.2 mm wall thickness**
- **Operation pressure 6.3 bar**
- **31 Mio. litre/day of max. hydraulic capacity**

Alpine village Grindelwald - PE 100 water distribution

- Switzerland's Grindelwald started 100 years ago to install public water transportation due to a major fire accident
- Present installation amounts to 42 km
- Earlier used PE 80 and cast iron pipes needed to be replaced



PE 100 was chosen thanks to

- **Easy jointing → Lower cost by butt-and flange jointing**
- **Easy laying and high flexibility → No heavy building machines**
- **Lowest maintenance - Decrease maintenance cost**
- **PE 100: Hostalen® CRP 100**

Over 1 km fall pipeline in two parts

- **PE 100 125 - 180 mm pipeline**
- **Operation pressures up to 16 bar (SDR 11) and up to 25 bar (SDR 7.4)**
- **Mainly butt-welded**

First gas high pressure PE 100 pipeline for 12 bar, Vladimir, Russia

- Vladimir Oblast in Western Russia
- Russia is one of the mayor natural gas producers in the world
- Natural gas represents 53% of the entire Russian energy market
- The use of PE for gas distribution started beginning of the 1960s



PE 100 was chosen thanks to

- High corrosion durability
→ Low cost of maintenance
- Better flowing qualities
→ Lower friction losses
- PE 100: Finathene[®] XS10B

1 km connection pipe

- PE 100 160 mm pipeline
- Operation pressures up to 12 bar (SDR 7.4)
- Stick length of 12 m
- Butt-welded

The biggest underwater PE 100 pipe disposal of treated municipal effluent in Greece

- Greece's Patras municipality decided in 1996 for a biological cleaning site
- Large diameter PE 100 pipe to transport cleaned municipal effluent
- Jacketing concrete blocks to prevent system floating
- Highly appreciation by the end-user



PE 100 was chosen thanks to

- **Blue coloured pipes**
→ Immediately identification
- **Wall-thickness reduction**
→ Cost improvement
- **Reduced project cost**
→ Roughly 14% less than PE 80
- **PE 100: ELTEX® TUB124**

1.44 km transportation pipe

- **PE 100 1,200 mm pipeline**
- **SDR 26**
- **Operation pressure 6.3 bar**
- **Stick lengths of 14 m**
- **Jacketing concrete blocks**