PRIMUS LINE

The prime solution for pipes.

Oil

Gas

Water

Industry

Primus Line® – Flexible technology for the trenchless rehabilitation of pressure pipes

- ✓ Crude oil gathering pipelines
- ✓ Crude oil transmission pipelines
- ✓ Crude oil loading/offloading pipelines
- ✓ Refined petroleum pipelines
- ✓ Refined petroleum loading/offloading pipelines
- ✓ Process water mains
- ✓ Fire fighting mains

Designed,
developed and
made in Germany

PRIMUS LINE® OIL

APPLICATION

Pipeline rehabilitation made easy

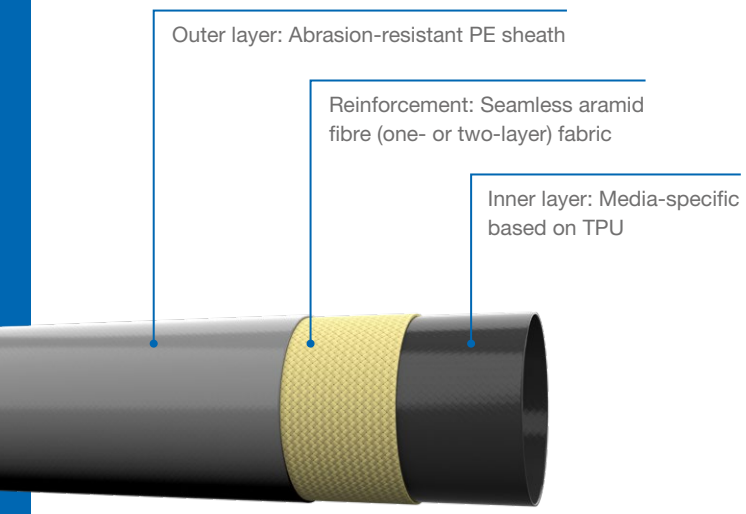
Primus Line® is an innovative technology for the trenchless rehabilitation of pressure pipelines for different media such as oil, water and gas. The process is based on a flexible high-pressure hose and a connecting technology, which has been developed specifically for this system.

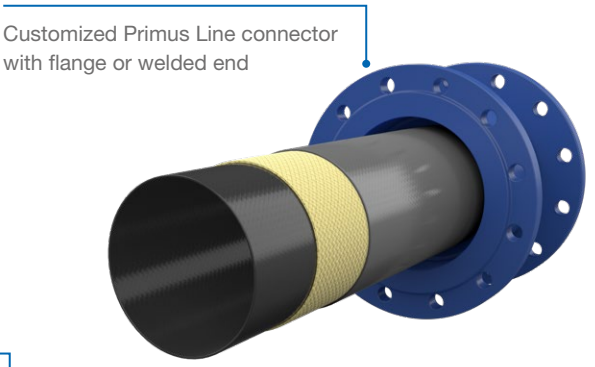
The oil industry is facing new challenges as a result of damage to steel pipelines caused by internal corrosion. Possible leakages might cause significant environmental damage; they also mean increased costs or even loss of reputation for network operators.

Primus Line® is suitable for the renovation of oil pipelines due to the medium-specific inner layer and acts as a corrosion barrier between the transported fluid and the host pipe.

Fluids to be transported cover media from categories such as crude oils, fuel oils, oil slag and other refined products (for detailed information please request our Chemical Resistance Sheet).

FEATURES

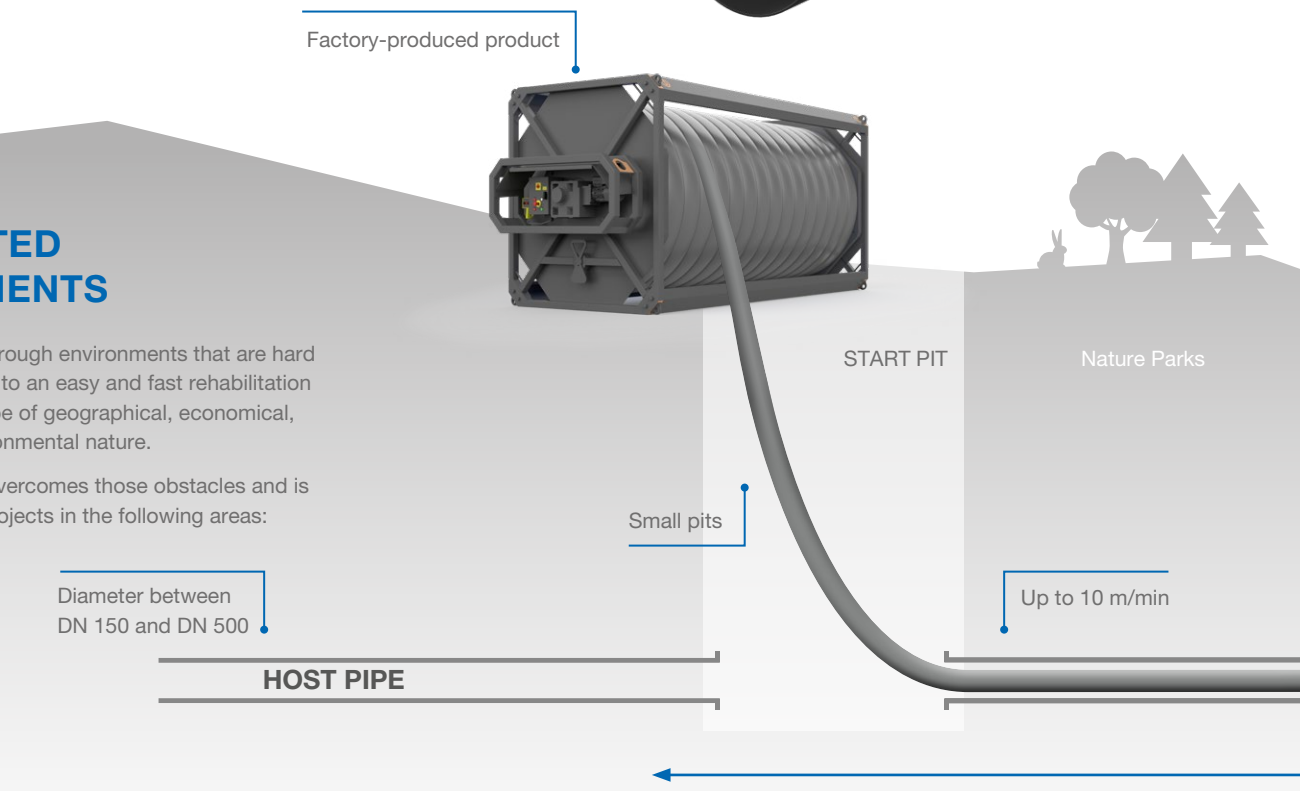




MOST SUITED ENVIRONMENTS

Pipelines often run through environments that are hard to access. Obstacles to an easy and fast rehabilitation of ageing pipes can be of geographical, economical, architectural or environmental nature.

Primus Line® easily overcomes those obstacles and is uniquely suited for projects in the following areas:



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Safe and reliable

- 100% quality control during the manufacturing process and before shipping
- No curing, steaming or adhesion process
- Independent of weather conditions during installation
- 50+-year lifetime

Operational Advantage

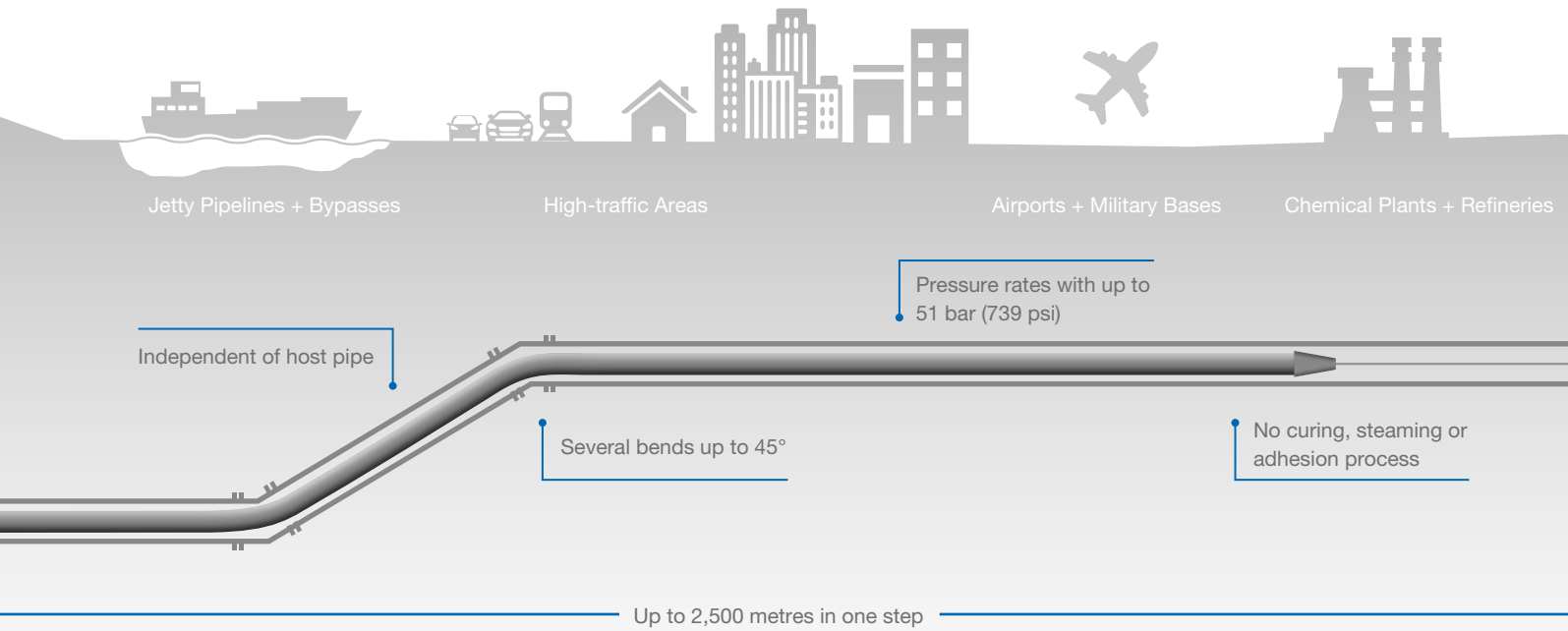
- Minor installation footprint
- Minimum use of equipment
- Decreased impact on traffic

Technical Advantage

- Installation through multiple bends of up to 45°
- Withstands thermal expansion of the host pipe and seismic movement
- Fully flexible seamlessly woven aramid fabric
- Customized connectors enable optimal integration into your system

Cost Advantage

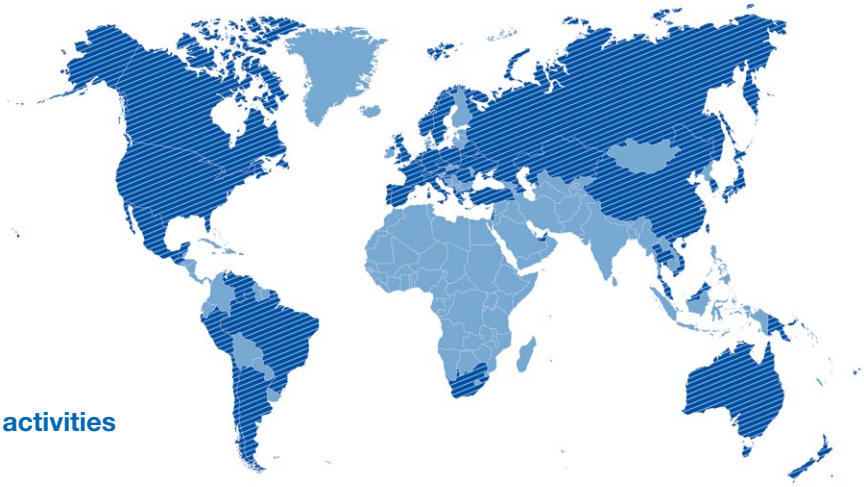
- Quick re-commissioning for minimal time of service interruption
- Installation speeds of up to 10 metres per minute
- Up to 2,500 metres per pull
- Low pre-investment for installers
- Small pits and reduction of road work



Headquarters in Germany

Branch offices in Australia, China, Canada and the USA

Installation Partners worldwide



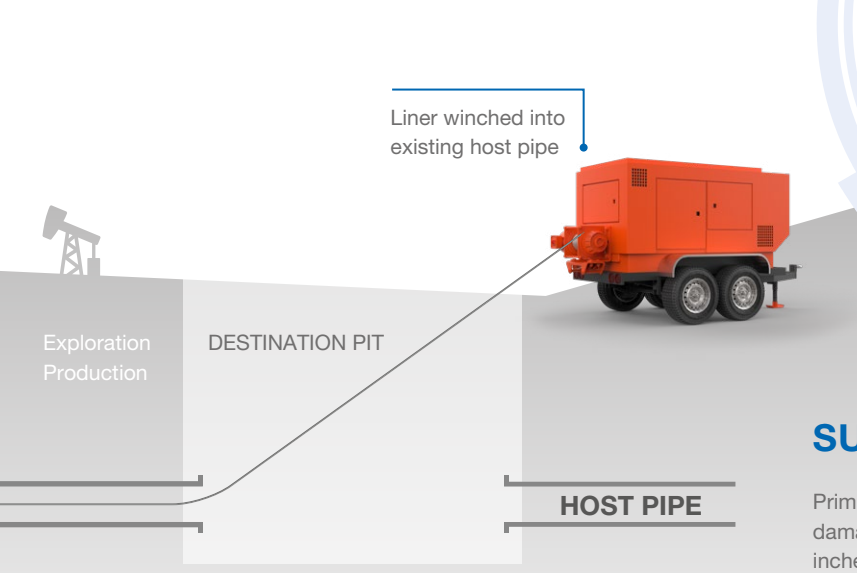
Global Primus Line activities

APPLIED WORLDWIDE

Rely on experience!

Rädlinger has been active in the construction industry for more than 55 years.
Today, Rädlinger primus line GmbH is part of the Werner Rädlinger Group with about 400 employees. With more than 15 years of experience in trenchless pipeline rehabilitation and projects in more than 40 countries, Primus Line® belongs to the leading technologies in the field of trenchless pressure pipe rehabilitation in the world.

Primus Line relies on Germany as production site.
A global partner network and own branches in Australia, China, Canada and the USA grant a fast and smooth project handling on site.



SUITABILITY OF PRIMUS LINE®

Primus Line® is most suitable for a quick and reliable rehabilitation of damaged pressure pipes between DN 150 and DN 500 (6 inches - 20 inches). Thereby, several bends can be traversed while achieving installation lengths of up to 2,500 m (8,200 feet).

REFERENCES

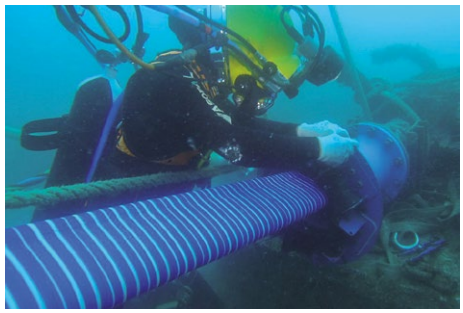
SUBSEA JETTY PIPELINE

Palermo, Italy

Renovation of a diesel pipeline underwater

Total length: 830 m, one section
2 x 45° bends, 1 x 30° bend
Operation pressure: 10 bar

Primus Line® system: DN 250 MD



JETTY PIPELINE

Pembroke, Great Britain

Renovation of a multi media pipe, 670 m inserted in one shot, later on separated in position of the dilatation joints of the jetty

Operating pressure: 10 bar
Total length: 670 m, 4 sections

Primus Line® system: DN 400 MD

GATHERING PIPELINE

Meppen, Germany

Rehabilitation of hard to access oil pipeline under oilfields in moorland area

Total length: 2,200 m, seven sections
2 x 45° bends

Primus Line® system:
DN 250 HD, DN 200 HD

GATHERING PIPELINE

Poza Rica, Mexico

Rehabilitation of crude oil pipeline in rain forest area, 10 m below ground level

Total length: 1,030 m, three sections

Primus Line® system:
DN 200 MD

FIRE FIGHTING MAIN

Vienna-Schwechat, Austria

Rehabilitation of fire fighting pipeline under refinery

Operating pressure: 16 bar
Total length: 1,300 m

Primus Line® system:
DN 200 MD, DN 250 MD,
DN 300 MD, DN 400 MD

PRODUCT PORTFOLIO

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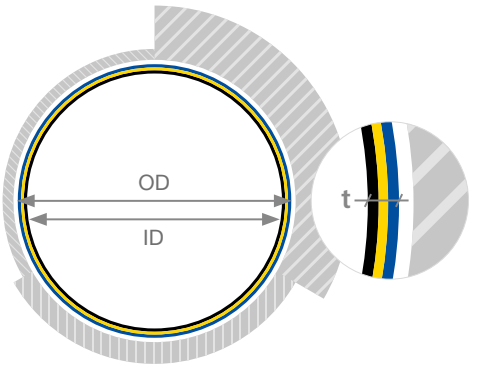

	Primus Line® low pressure						Primus Line® medium pressure								Primus Line® high pressure							
	single-layer hybrid design						single-layer aramid design								double-layer aramid design							
	OD	t	ID	burst	MOP water	weight water	OD	t	ID	burst	MOP water	weight water	MOP oil/gas	weight oil/gas	OD	t	ID	burst	MOP water	weight water	MOP oil/gas	weight oil/gas
	mm	mm	mm	bar	bar	kg/m	mm	mm	mm	bar	bar	kg/m	bar	kg/m	mm	mm	mm	bar	bar	g/m	bar	kg/m
Primus Line® DN 150	134	6.0	122	63	25	2.1	134	6.0	122	140	56	2.2	35	2.4	-	-	-	-	-	-	-	-
Primus Line® SD 150	150	6.0	138	54	20	2.4	150	6.0	138	120	48	2.4	30	2.7	155	8.0	139	206	82	3.3	51	3.6
Primus Line® DN 200	183	6.0	171	47	18	2.9	183	6.0	171	100	40	3.0	25	3.3	187	8.0	171	173	69	4.0	43	4.4
Primus Line® SD 203	205	6.0	193	42	16	3.3	205	6.0	193	84	33	3.4	21	3.8	-	-	-	-	-	-	-	-
Primus Line® DN 250	237	6.0	225	38	15	3.8	237	6.0	225	75	30	4.0	18	4.4	241	8.0	225	128	51	5.3	32	5.8
Primus Line® SD 261	261	6.0	249	30	12	4.2	261	6.0	249	64	25	4.4	16	4.9	-	-	-	-	-	-	-	-
Primus Line® DN 300	284	6.0	272	30	12	4.6	284	6.0	272	64	25	4.8	16	5.3	288	8.0	272	110	44	6.4	27	6.9
Primus Line® DN 350	-	-	-	-	-	-	312	6.0	300	50	20	5.2	12	5.9	-	-	-	-	-	-	-	-
Primus Line® DN 400	-	-	-	-	-	-	354	6.0	342	46	18	6.0	11	6.7	357	8.0	341	82	32	8.1	20	8.8
Primus Line® DN 450	-	-	-	-	-	-	408	6.0	396	40	16	7.0	10	7.8	-	-	-	-	-	-	-	-
Primus Line® DN 500	-	-	-	-	-	-	454	6.0	442	40	16	7.7	10	8.6	-	-	-	-	-	-	-	-

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