



Mandals Inversion Lining of Polyethylene (PE) and Hytrel (HY) is ideal for pipe rehabilitation.

Mandals Inversion Lining is an extremely flexible polymer coated hose, designed for relining and renovation of all kinds of leaking transfer pipes. This includes pipes for drinking water, methane gas, sewer or industrial chemicals.

Advantages of Inversion Lining renovation system

- Very cost efficient compared to changing the entire pipe.
- Renovation of long pipe sections, length depending on diameter.
- No excavation needed to connect service lines.
Can be opened from the inside by remote controlled robot drilling.
- Connecting service lines can be done in a traditional way.
- Minimal obstruction of traffic.
- Minimum reduction of pipe cross section area.
- Increased flow capacity because of less pipe wall roughness.
- Resistant to vibrations and settings underground.
- Resistant to leaks even at high internal pressure.
- Easy to pass even sharp bends (low R/D ratio).
- Totally maintenance free.

The outer polymer layer of 1,2 mm is extruded on a strong circular polyester weave, ensuring the achievement of two crucial parameters:

- 1) A uniform polymer distribution around the lining circle.
- 2) Excellent adhesion of polymer to the textile weave.

The lining itself is installed into the host pipe by reversion, using either compressed air or water as a pressure medium. Prior to the installation, the lining is coated inside by a liquid epoxy resin, which is permanently attaching the reverted lining to the inner pipe wall. The installation of Mandals Inversion Lining requires special installation equipment and highly skilled crew, and is carried out by specialized contracting companies. If needed we can put you in contact with such companies.

The strong polyester yarn in the weave provide the longitudinal and circumferential strength, whilst the outer polymer layer ensures impermeability and chemical resistance to the conveyed fluid.

Two standard polymers are available:

- Polyethylene (PE) lining is suitable for renovation of drinking water pipes, sewer lines and other transfer pipes for water based fluids.
- Hytrel (HY) lining is suitable for renovation of gas pipes (natural gas) at low or medium pressure.

Mandals Inversion Lining covers a nominal internal pipe diameter range from DN100 up to DN300. Five standard dimensions are available, but also special non-standard dimensions can be delivered on request. Section lengths up to 1000 meters per bobbin.

Mandals Inversion Lining - standard dimensions

Nominal Pipe Internal Diameter		Wall Thickness		Weight PE lining		Weight HY lining		Burst Pressure	
inch	mm	inch	mm	lbs/ft	kg/m	lbs/ft	kg/m	psi	bar
4	100	0,07	1,70	0,32	0,48	0,32	0,48	174	12
6	150	0,07	1,85	0,47	0,70	0,54	0,81	145	10
8	200	0,08	1,95	0,77	1,15	0,81	1,20	145	10
10	250	0,08	2,00	0,91	1,35	1,02	1,52	145	10
12	300	0,09	2,15	1,18	1,75	1,31	1,95	145	10