



Because your pipelining project deserves  
the skill and experience of the real specialist!





*Our specialists are trained to design systems suitable for shoplining and -coating. Our goal is to assist the client's engineering team with the design of pipework that can be lined. This should preferably be done as early as possible. Engineering assistance is available for design of shop prefabricated cement-, epoxy lining and coating, rubber- and plastic linings and PE coating.*

Lined and coated pipeline systems require a specific design for each type of lining or coating. Our specialists are trained to design systems suitable for shoplining and -coating. Our goal is to assist the client's engineering team with the design of pipework that can be lined. This should preferably be done as early as possible. Engineering assistance is available for design of shop prefabricated

cement-, PTFE-, rubber- and epoxy lined systems. A good design will reduce the total costs of the system and eliminate rework.

Advice about prefabricated lined- or coated pipesystems is sent to the client. General arrangement drawings and detailed pipespool fabrication drawings are made using a CAD system. The main elements of the design are high

quality and integrity and low costs of the system from fabrication to installation and the feasibility to apply the lining and coatings.

Design and construction of pipework is done to international design codes.

Available welding techniques for prefabrication of pipespools are SAW, SMAW, GTAW, GMAW, FCAW, etc.





...Design and prefabrication...

## ...Cementlining...



Internal cementlining of pipesystems protects the inner steel surface from corrosion and provides excellent hydraulic properties. High purity of the cement, sand and potable water are the perfect elements for a protective lining in drinkingwater systems.

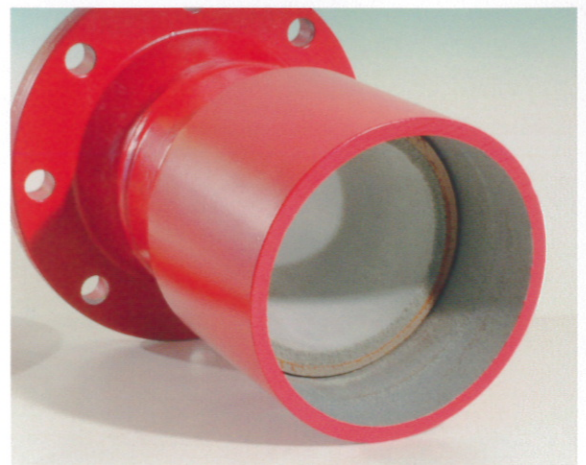
High sulphate resistant cement types in combination with high density and low permeability of the cementlining make Conpipe's cementlining extremely suitable for conveying (sea)water that contains aggressive elements. Cementlined

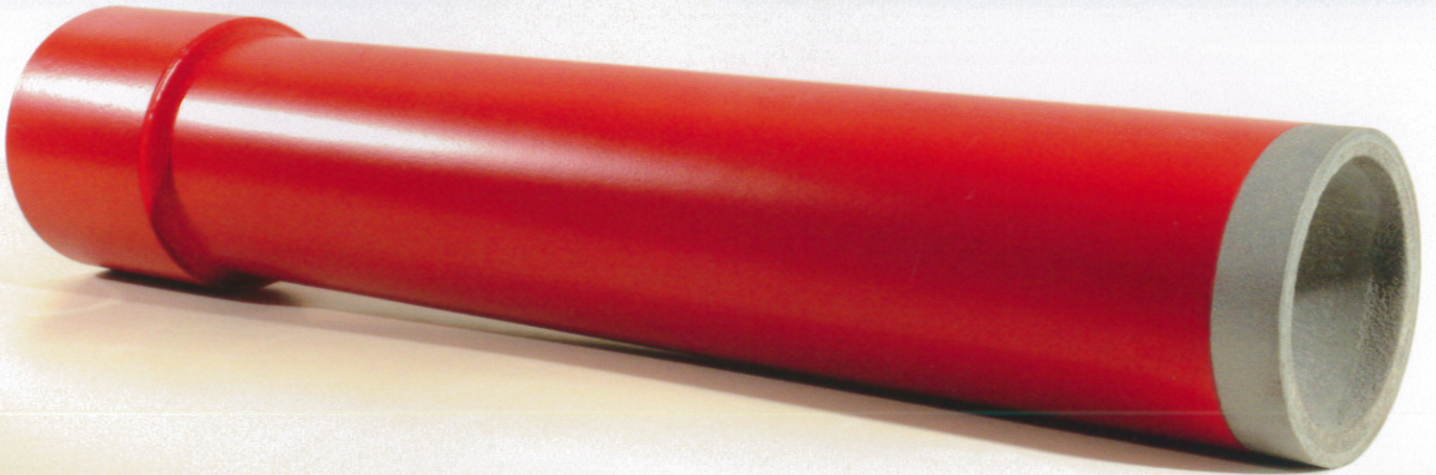
pipesystems, mainly used in drinkingwater, coolingwater and firewater applications, are relatively cheap and have a very long lifetime.

Shop applied cementlining can be produced using different techniques.

For straight sections of pipe, nps 3" - nps 84", a high capacity cementlining machine spraying pre-mixed cementmortar is utilised to uniformly distribute the cement mortar against the inner pipe surface.

The pipe will be centrifuged on the same machine to produce a





dense lining and to obtain a smooth surface of the lining. The length is limited to 18 m per pipe. Fittings and flanges of any size are lined by handtrowelling, spraygun or combination thereof. Special configurations are lined following the lining sequence instructions of the engineering department. The mix design is based on the requirements of the client and (inter)national cementlining standards and specifications. In special occasions additives can be added to the mix to obtain specific properties of the cementlining.

One of the most important parts of a cementlined system is the joint. The two types of joints recommended by Conpipe are the butt-weld joint for size >24" and sleeve joint for any size of pipe.

For petrochemical complexes the traditional sleeve joint made from pipe or plate is welded to one end of the pipe or fitting in the factory, where the second weld is made in the field.

Conpipe's sinmast jointing compound is applied to seal joints between the mating pipes. Shop welding of sleeve circumferential- and longitudinal welds is done by submerged arc welding.

A thorough inspection during installation is a must. Conpipe's cementlining specialists and inspection engineers can be sent to the site during installation to do the actual jointing and/or inspect the joints made by other contractors.



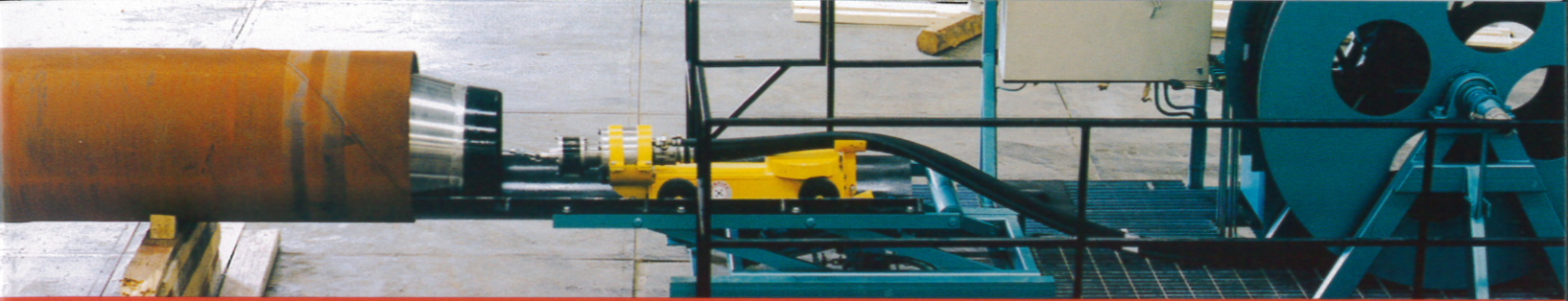


Cementlining in the field or in stockyard with special designed equipment is done by Conpipe in cases where renovation of an existing pipeline is required or for economical reasons. Handling and transportation of large bore above 1200 mm cementlined pipes may cause damage to the lining.

In-Situ lining can be done anywhere in the world. Equipment and crew are sent to the site for

lining of sections of pre-installed underground or above ground pipework. The lining will meet the same requirements as lining applied in the shop.

Pipes over 24" in diameter are lined by the so-called man-entry method. The machine operator travels along the pipe with the lining machine. The cementmortar is sprayed against the pipewall and smoothed by a rotating trowel



## ...In-Situ cementlining activities...

blades or static dragtrowel.

In case of smaller sizes only the lining machine is sent into the pipes. Limitations in the pipe length that can be lined In-Situ depend on the size and position of the pipeline.

To overcome the necessity of shipping the pipes to our factory in Holland. The pipes can be shipped to the site.

There they can be cementlined by

the stockyard-lining method.

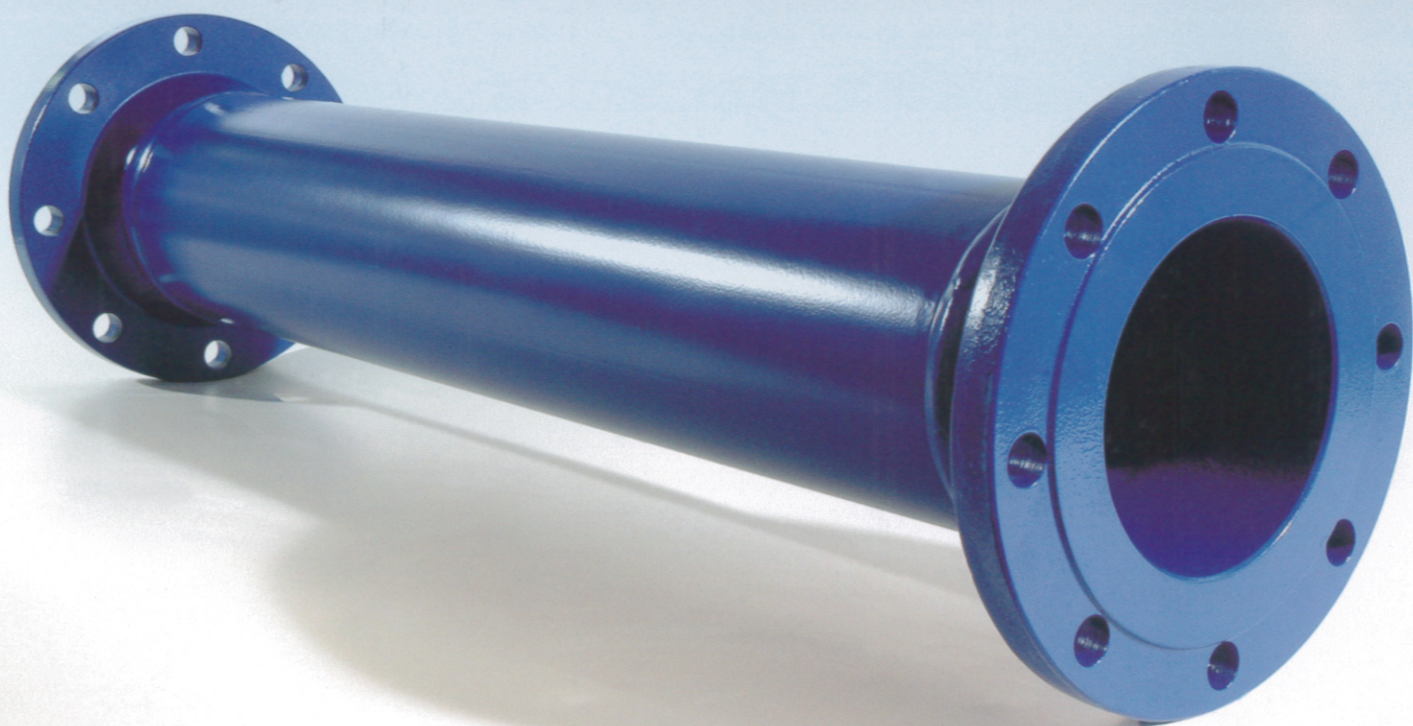
The lining machine is brought to the stockyard where the pipes are stored in windrows.

A bridgeplate, carrying an In-Situ cementlining machine, travels along the windrows. It stops at every pipe-end.

The lining machine is sent inside the pipe to apply the cementlining like the In-Situ lining process.



...Epoxy lining / coating...







Conpipe International has facilities for the application of liquid epoxy coating systems for the interior and exterior of steel pipelines.

The products used are generally high technology paints based on epoxy or polyurethane polymers, or other lining materials such as glassflake with resins such as polyester, vinylester or epoxy

depending on the service requirements. Typical applications include heavy-duty service conditions. Excellent resistance to immersion in salt-water, extreme temperature areas and wear and tear.

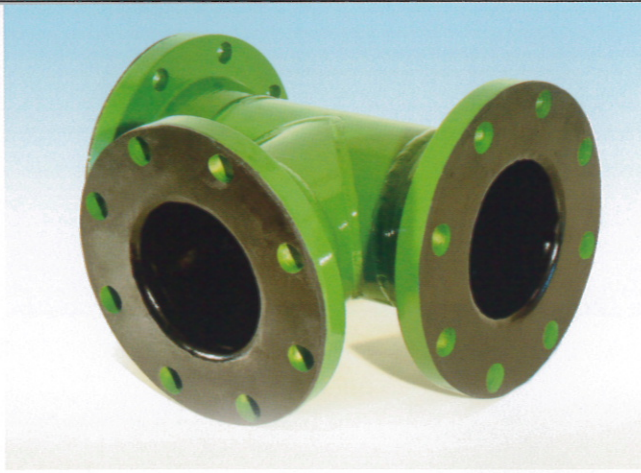
In order to apply these materials for optimum results, great care must be taken in the

proper preparation of the surface. It is this area that will determine the lifespan of the applied coatings. To ensure that this is carried out properly Conpipe International has a complete range of blasting equipment and accessories.

We carry out the preparation and coatingwork conforming to international standards specified.



 **CONPIPE**  
INTERNATIONAL B.V.



Conpipe International's high quality rubber lining pipework with several types of high quality rubber is the optimal protection for metal under severe conditions.

In- and external blast cleaning, internal rubber lining, vulcanising

and external paintcoating are standard manufacturing activities that are carried out in-house.

Two large steam autoclaves, 1.9 m. x 14 m. and 4 m. x 11 m., are available to vulcanise (cure) the rubber lining.

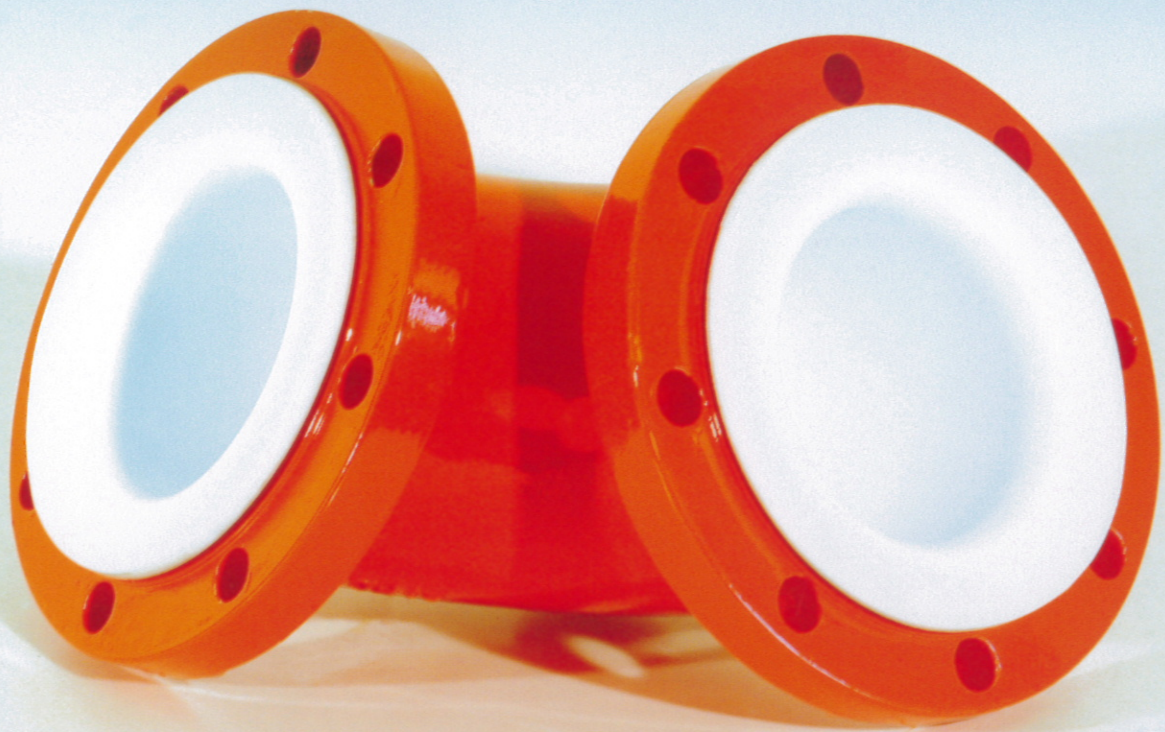
The quality of the applied lining is checked dimensionally, visually and by sparktest.

The lining and design of the pipework meet the requirements of most international standards i.e. DIN 28051 and DIN 28055.



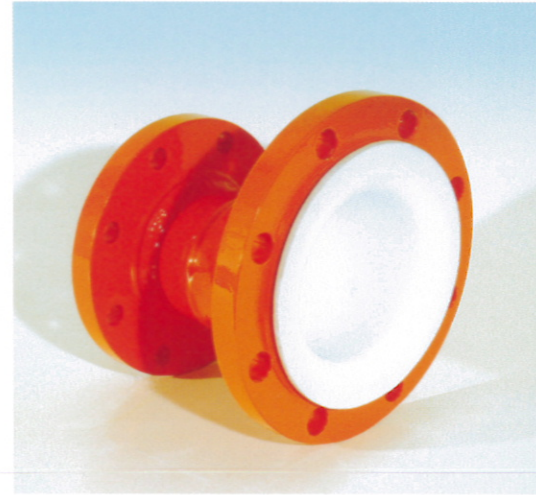


...Rubber lining...



...Plastic linings in PTFE/PFA/PP/PVDF...





Highly corrosive medium carrying pipework require high quality linings to protect the steel.

Conpipe International offers expertise in manufacturing and lining of steel pipework, ranging from nps 1/4" to 24", to interna-

tional standards providing a long service life. Plastic linings in PTFE / PFA / PP / PVDF can be applied.

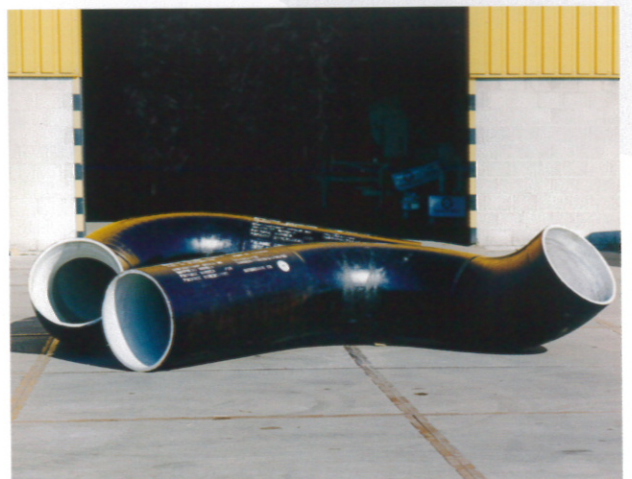
All the linings are tested 100% for leaks and hydrotested, dimensionally and visually. High quality corrosion resistant

linings are produced to meet our client's requirements.

All plastic lined piping is externally cleaned by blast cleaning and paintcoated. Plastic lined pipework is produced with flanged ends as standard configuration.



...Polyethylene (PE) coating...



Corrosion and erosion drastically reduce the life-time of the steel pipework and equipment in many industrial applications. Durable linings are required to protect the steel from chemical attack and wear.

Underground pipelines need protection against corrosion. Conpipe has production facilities

for external polyethylene coating of pipes and fittings. The steel surface is cleaned by blast cleaning to SIS 055900 grade SA2.1/2.

The pipes and fittings are subsequently coated with PE. Our facilities are designed for external PE coating from 89 mm up to 2200 mm in diameter and 12-14 m in length.

Specials, spools and fittings are coated by hand application, pipes are coated automatically. Conpipe can supply PE coating produced by either sinter method or three layer extruded method to international standards and client specifications.

The PE-coating is 100% tested for holidays by high voltage sparktesting.





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Conpipe International is a worldwide operating company which manufactures pipe systems by means of the most advanced production methods for drink water companies in their raw water projects and water treatment plants, off-shore companies, oil & gas and petrochemical industries. Conpipe International's systems can

be supplied in any desired configuration, pipe- diameter and wall thickness. Conpipe International has made it its business to meet any international quality assurance and quality control requirement. In addition Conpipe International offers its customers free storage of all materials and parts which have been landed or are to be shipped

during the whole contract period. Mobile cranes and forklift trucks are available on the storage yards, overhead and wall cranes in the workshops for all handling of materials up to 40 tons of weight.

Conpipe International's systems can be delivered either exworks, F.O.B. harbour or C.I.F. place of destination.

