

**CONPIPE**  
WWW.CONPIPE.COM

# YOUR PIPE LINING SPECIALISTS

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COMPANY BROCHURE





## DESIGN & PREFABRICATION

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

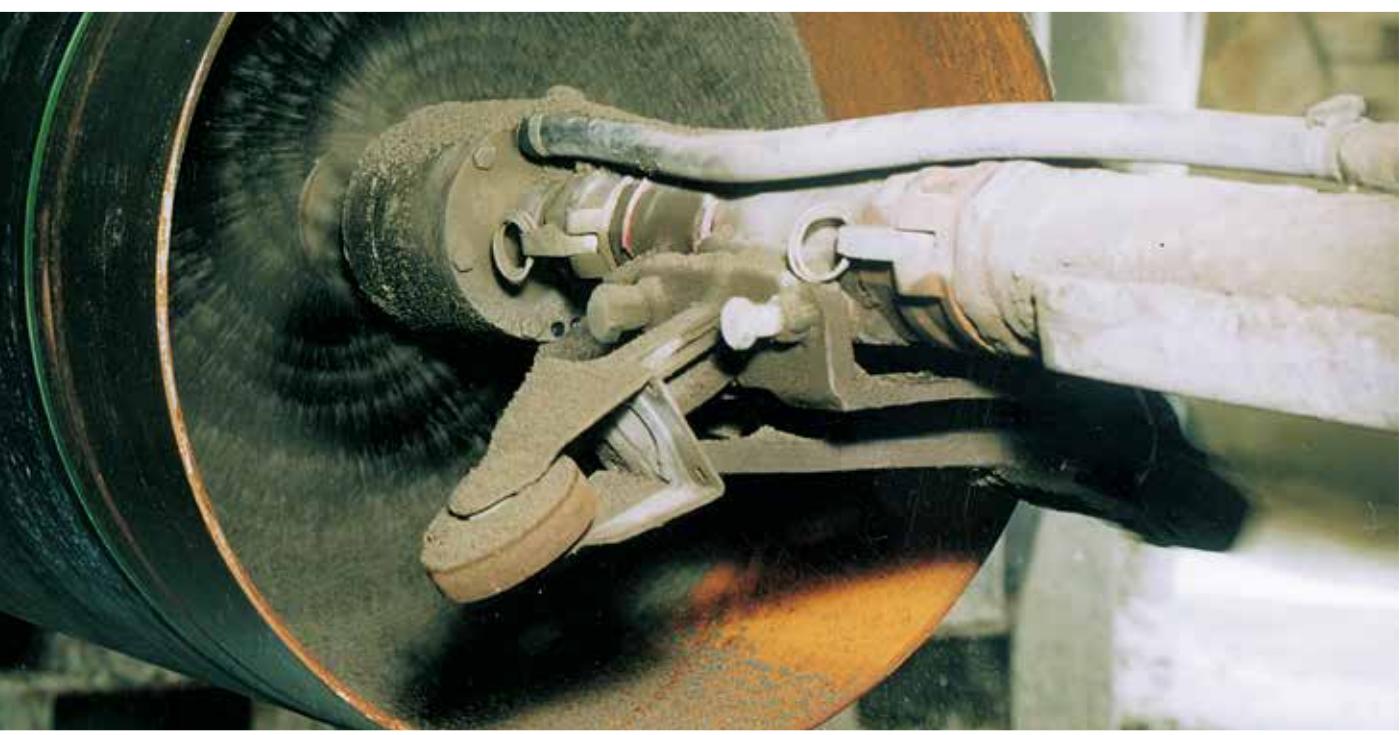
systems. A good design will reduce the total costs of the system and eliminate rework.

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.





## CEMENT-LINING

Internal cement-lining 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 cement-lining make Conpipe's cement-lining 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 cement-lining can be produced using different techniques. For straight sections of pipe, nps 3" - nps 84", a high capacity cement-lining 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 cement-lining standards and specifications. In special occasions additives can added to the mix to obtain specific properties of the cement-lining.

One of the most important parts of a cementlined system is the joint. The two types of joints recommended by Conpipe are the buttweld 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 joint 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 cement-lining 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.

Cement-lining 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.





## ON SITE CEMENT 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.

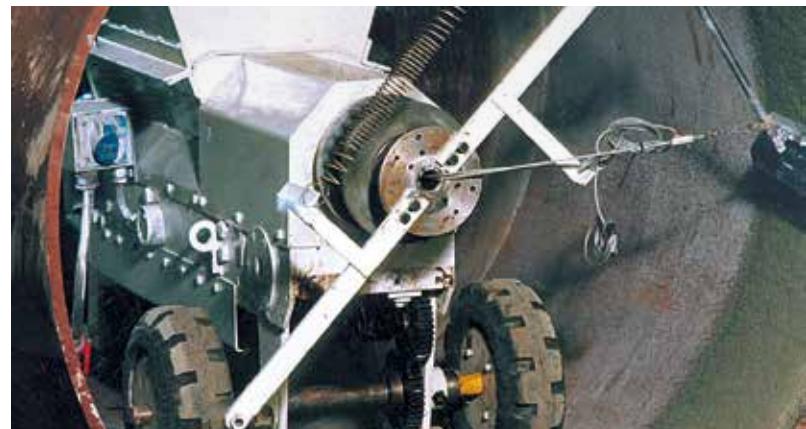
Pipes over 24" in diameter are lined by the so-called man-entry method. The machine operator travels along the pipe with the lining machine. The cementmortar is sprayed against the pipewall and smoothened by

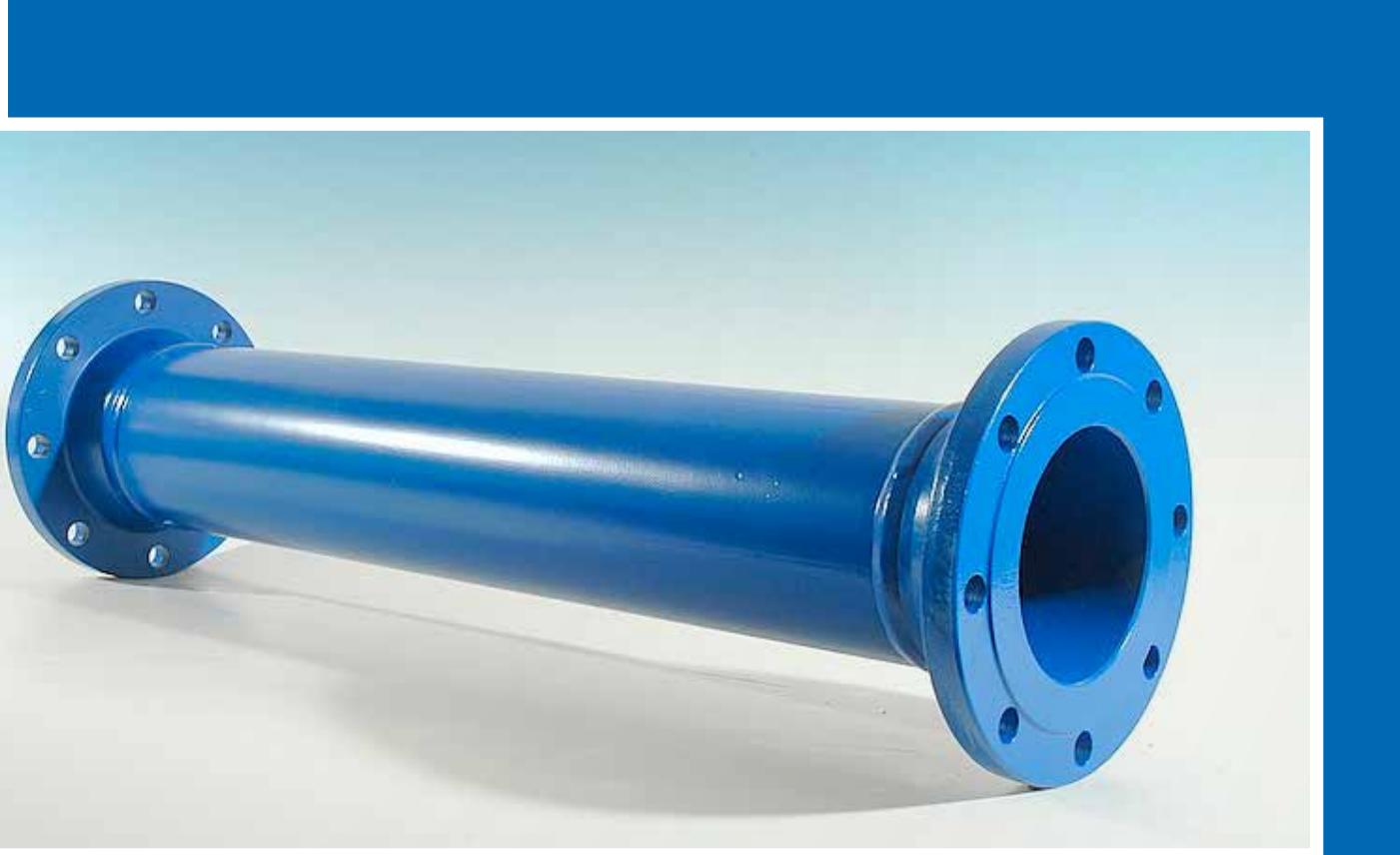
a rotating trowel blades or static dragtrowel.

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 cement lined by our mobile cement lining machine, which is developed similar to our factory set-up.

This set-up can line pipes from 4" upto 48" where the pipe after application of cementmortar 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.





## EPOXY LINING / COATING

Conpipe International has facilities for the application of 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 Fusion bonded epoxy powder linings.

Depending on the service requirements. Typical applications include heavy-duty service conditions. Excellent resistance to immersion in salt-water, extreme temperature area's 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 has a complete range of blasting equipment and accessories.

Conpipe has serviced this industry for a long time with quality engineered





products designed and produced to meet or exceed the exacting standards of all nationally recognized industry standards such as: AWWA, ASTM, ANSI, and others, as well as custom standards specified by the engineering community and our customers.

#### INTERNAL SLEEVE JOINT

All pipes and fittings can be connected by flanges or by an internal sleeve.

The sleeve will consist of a steel ring which has a heat resistant refractory tape which ensures that the heat during the welding process of the pipes will not affect the internal lining.

Prior to installation, Conpipe's special Mastic will be applied to ensure non movement and double waterproof connection to the system.





## RUBBER LINING

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.





## 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 international 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.



# OUR REFERENCES

 **BAPCO**







 **PDVSA GAS**



 **قطر للبترول**  
Qatar Petroleum



 **أوريك  
Orpic**



 **PETROPERU**



 **ConocoPhillips**



 **Vopak**

**MCDERMOTT**



**JACOBS**

**FLUOR.**



**SAMSUNG**



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**KBR**



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**Technip**



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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 ex-works, FOB , CIF or DAP according Incoterms.

