



Petroleum Services

COATING SYSTEM

UNITED SERVICES EGYPT

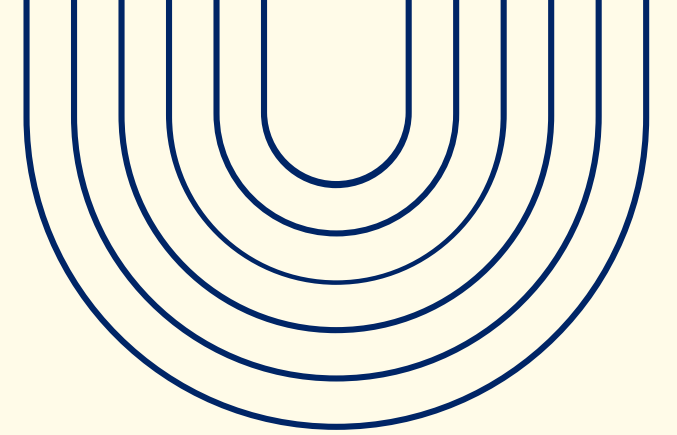


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Corrosion is the main enemy to new and brown wells.

Areas of application:

- Inner Casing
- Control Line
- ESP Equipment
- Tubing
- Elbows
- Tees
- Shroud and Outer Conductors





System Procedures:-

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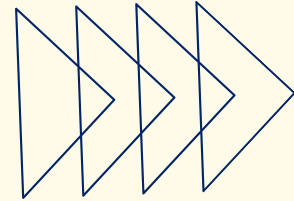
SUBSTRATE :	TYPE:	Carbon steel
	TEMPERATURE	-20 °C to +180 °C

SURFACE PREPARATION				
Pre-Cleaning	Cleaning	Surface Profile	Water Soluble Salts	Steel and Welding Imperfections
SSPC-SP1 + HP Washing	SSPC-SP5	50 -75 µm	≤2 µg/cm2 (20 mg/m2)	Grade P2 - ISO 8501-3

PAINT SYST EM		
Coat	Type of Paint	DFT (µm)
1	HB Liquid Phenolic Novolac Epoxy	500
Total DFT		500

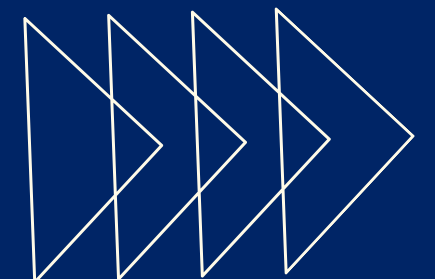


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Using (HB Liquid Phenolic Novolac Epoxy) which is a special coating material as a recoating substance for protection.

Recoating Process:





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ESP (AFTER RECIEVING)





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DURING SAND BLASTING





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AFTER SAND BLASTING





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After Coating





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After Coating





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System Procedures:-

- 1. Fully Cured coating shall be 100% holiday tested according to NACE SP0188 and shall be free of Holidays.**
- 2. Detail Application procedure, coating repair procedure & project specific ITP shall be submitted.**
- 3. The approved application procedure shall be qualified by PQT.**
- 4. Coated Pipes shall be protected by appropriate means during storage against UV for approximate one year.**
- 5. Collar / Sleeve passing test over the coated casings shall be carried to control the maximum 1100 μm DFT.**



System Procedures:-



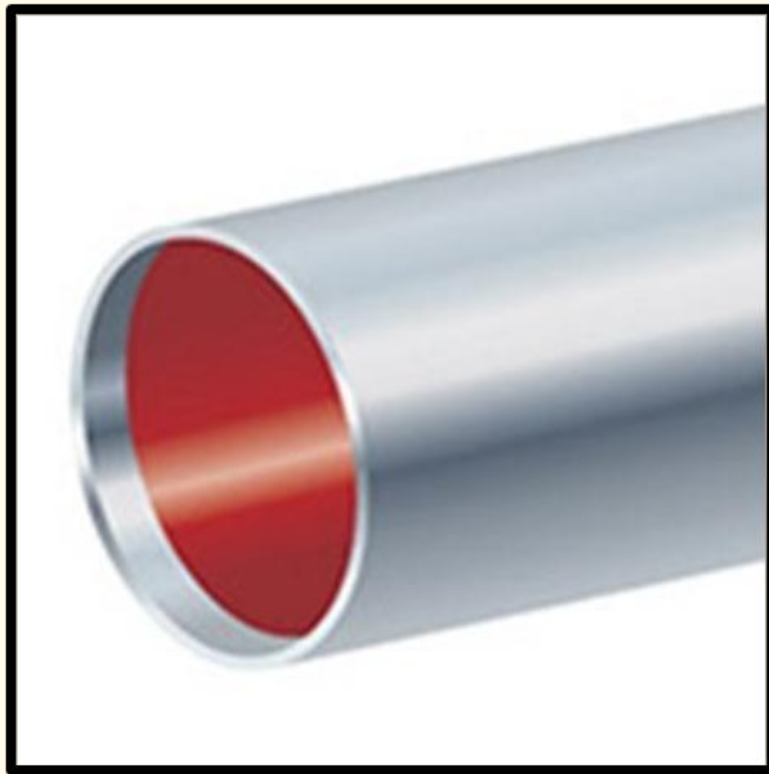
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- 7. Defects in the finished coating due to Holiday testing, application process, transportation, handling and storage in the coating plant or in the storage area as well as those which have been subjected to destructive testing shall be repaired to approved repair procedure.**
- 8. The defect area shall not exceed 10 cm² and the total number of defects / holidays being repaired shall not exceed one defect per meter length of pipe unless otherwise specified. If the size or number of defects exceeds these limits the affected pipe shall be stripped and recoated**
- 9. Holidays and areas requiring small spot repairs shall be cleaned by a surface grinder or by disc sanding the areas with medium grit (80 to 100) carborundum cloth, to remove dirt, scale, rust, damaged coating or any other foreign material. All dust produced by the cleaning and feathering shall be wiped off with an appropriate solvent-soaked cloth before patching commences.**
- 10. All pipes that have been repaired shall be fully re-examined in accordance with the ITP & quality control procedures.**



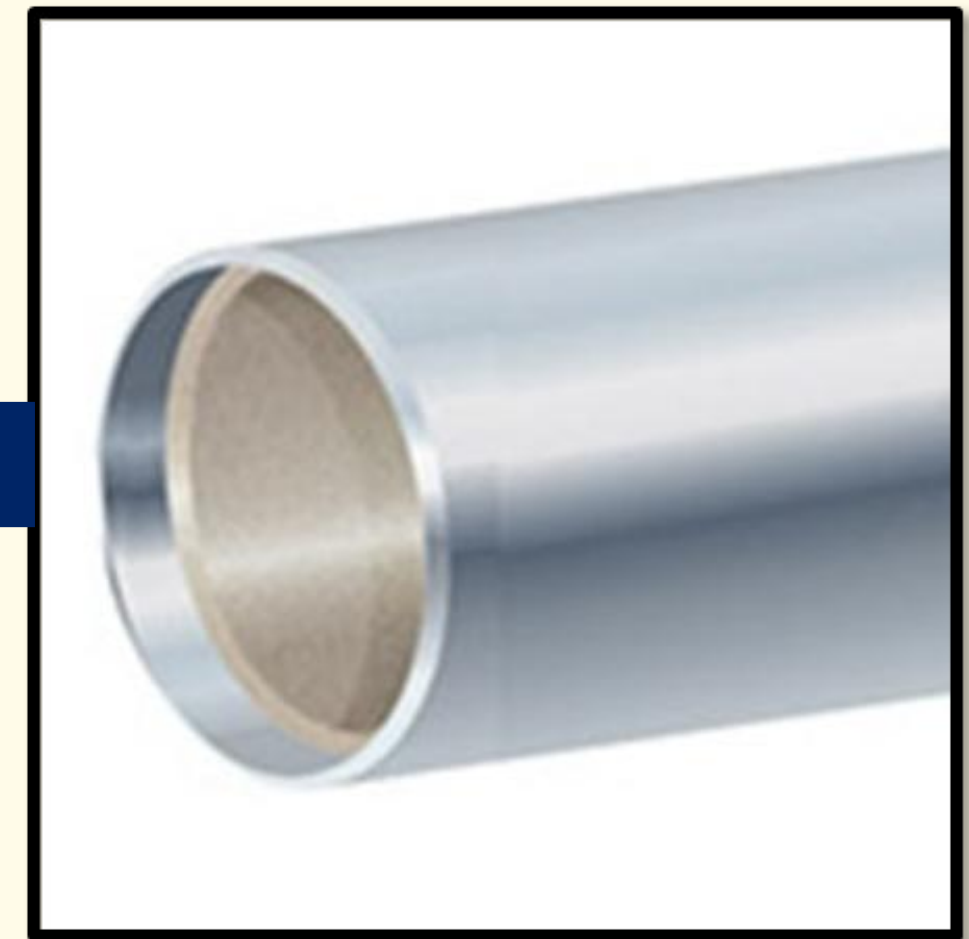
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Maximizing Flow efficiency for pipelines around the



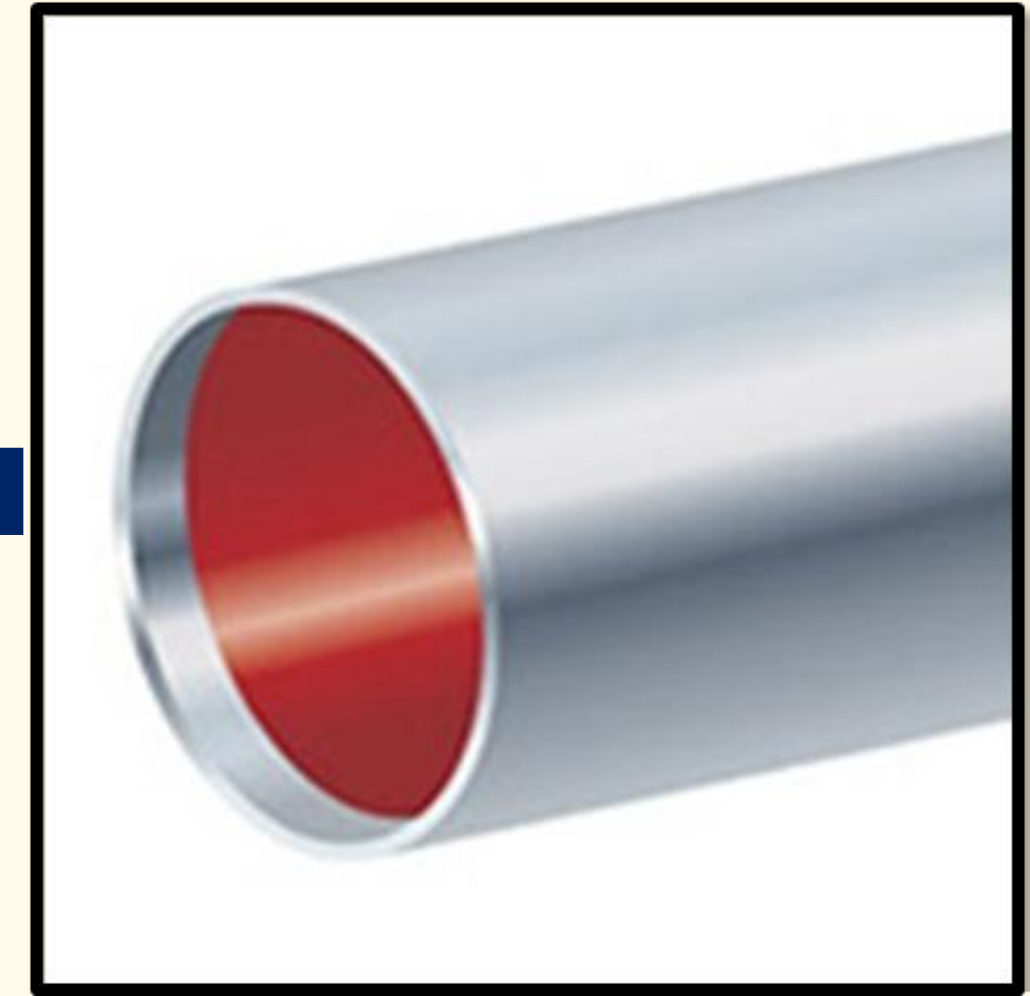
·USE's internal pipe coating services provide flow efficiency and corrosion protection for natural gas, water, condensation, and production pipelines. From polyurethane to FBE coating, we stand out among internal pipe coating companies with end-to-end solutions.

·USE™ FEC is a thin-film epoxy coating applied in natural gas pipelines to smooth the internal pipe surface for improved flow.

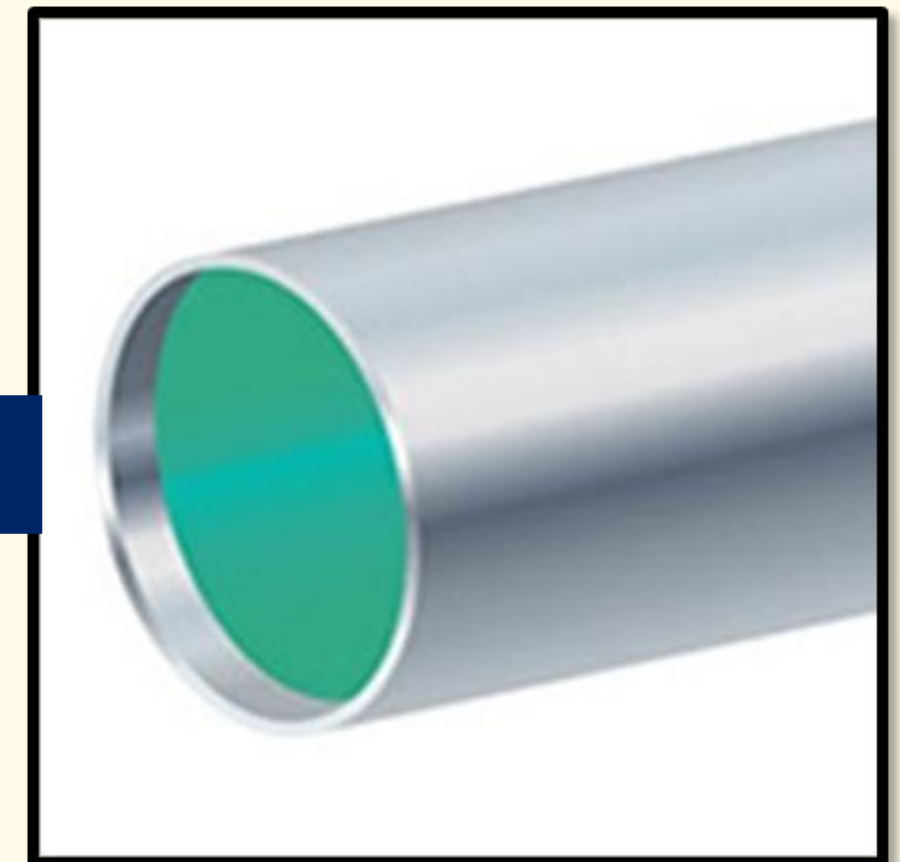




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.™ Cement Mortar Lining (CML) is a centrifugally-applied continuous lining of dense Portland cement mortar with a smooth and uniform finish. This product provides an economical form of internal corrosion and abrasion protection for oilfield tubulars and line pipe.

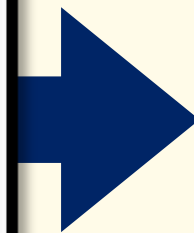
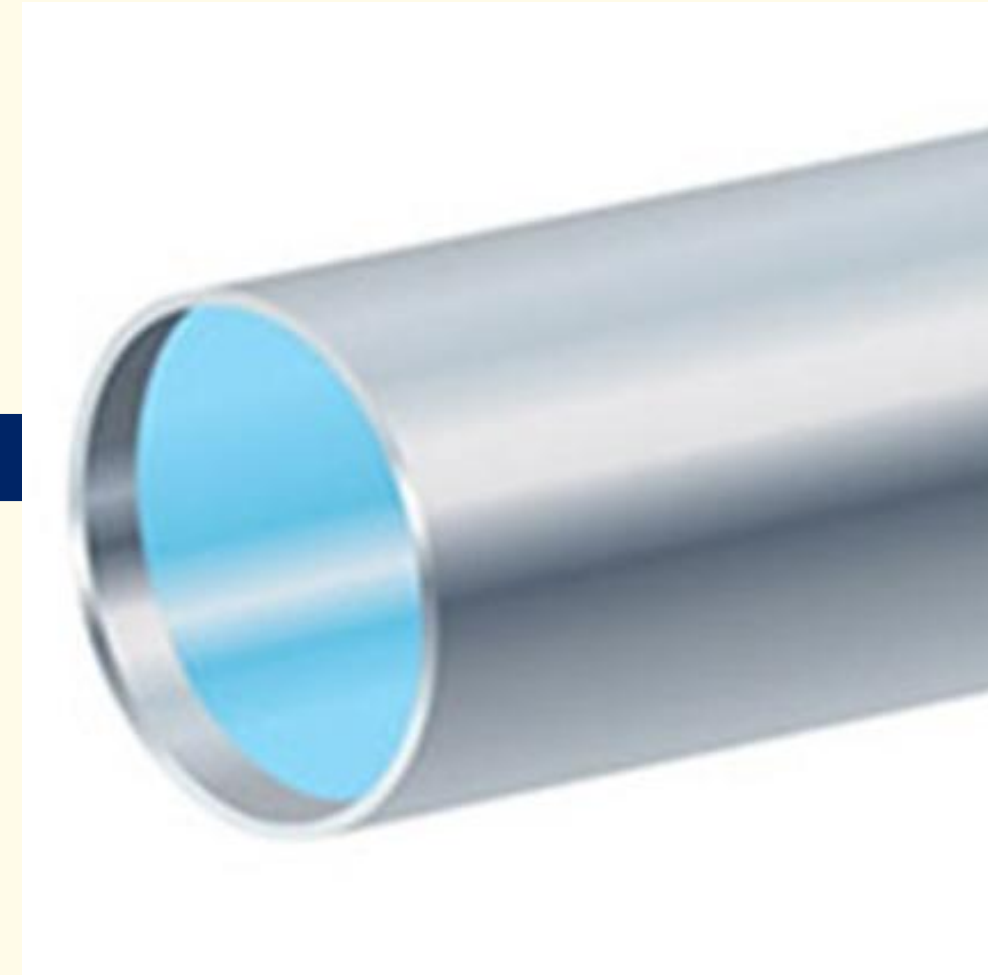
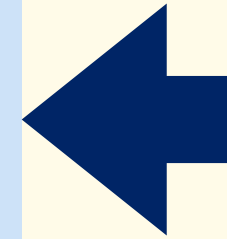


.™ SF is a thin-film epoxy coating applied in natural gas pipelines to smooth the internal pipe surface for improved flow. SureFlo SF is a solvent-free formulation designed to meet strict environmental regulations.



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·STM FBE is a plant-applied fusion-bonded epoxy lining for steel pipes where smooth surface and maximum flow is required for gas pipeline.

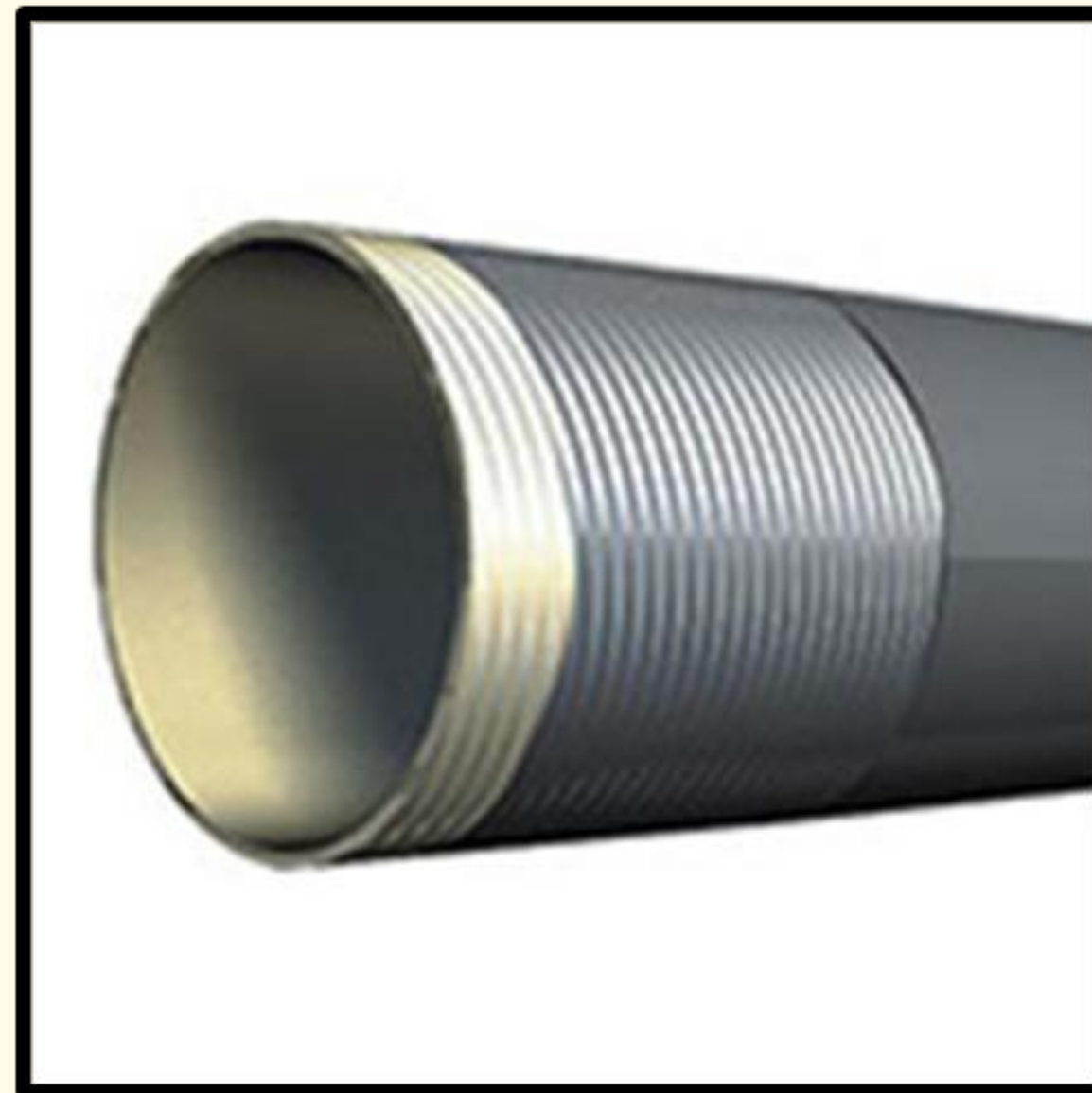
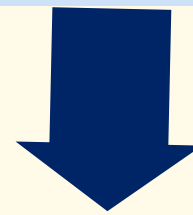


·WaterGuard is a 100 percent solids, two-component, solvent-free, rigid polyurethane protective lining, specifically designed for corrosion and abrasion resistance for the long-term protection of water pipelines. It is compliant with NSF/ANSI 61 (potable water) and AWWA C222 standards.



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·WaterGuard is a 100 percent solids, two-component, solvent free, high-build epoxy lining system used to provide corrosion protection for the internals of steel pipes. Various material options are available for applications including potable and field water, process water, sewage, salt water, wastewater, crude oil and white oils.





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THANK YOU