

WORLD PIPELINES[®]

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Maats Pipeline Equipment:
**The future
for pipeline
construction**



MAATS PIPELINE EQUIPMENT

STRENGTH, PERFORMANCE & RELIABILITY
UNDER ALL CIRCUMSTANCES



Oil and gas industry

APTec has provided pipeline solutions on a worldwide scale to the oil and gas industry. There are a number of methods to recovering oil and gas, and these can produce specific, yet similar, effects to the corrosion of pipelines internally. Three specific methods include primary, secondary and tertiary recovery methods. Primary recovery is when oil is recovered as a result of expansion of reservoir fluids, which are naturally pressured within the producing formation. Secondary recovery involves techniques in which external fluids (highly corrosive) are injected into a reservoir to increase the pressure and production. Tertiary recovery seeks to alter the properties of the oil in ways that facilitate additional production. This can be seen from chemical flooding and miscible displacement involving carbon monoxide (CO₂), hydrocarbon and nitrogen injection. All three can produce chemical properties that can internally corrode and degrade the integrity and wall thickness of a steel pipeline. Other services, such as sour gas lines, salt water and water cut oil, can be highly detrimental to pipelines if not monitored or protected properly, and these are common applications that are benefiting from liner technology to date.

Internal lining system

The SURE-Liner system is an internal pipe lining process that involves the insertion of a tight fit HDPE plastic liner pipe inside the steel pipe, thereby taking advantage of the

mechanical strength of the steel pipe with the combined corrosion and abrasion protection of the liner. The HDPE liner pipe is manufactured to ASTM and ISO industry standards for PE4710 and PE100. To obtain a tight fit, SURE-Liner pipe is sized larger in diameter than the inside diameter of the steel pipeline, and is radially compressed (rolled down) during the insertion process. The liner is simultaneously pulled by one of the company's winches or wireline units and pushed through the Powered Roller Reduction Box with its hydraulic capabilities, ensuring a seamless insertion process. The SURE-Liner pipe then returns to its original shape to create the tight fit liner system.

Powered roller reduction equipment

The newest generation of powered roller reduction equipment has provided APTec with more pushing power, longer pull lengths, fewer bell holes and connections, and – most importantly – less stress on the pipe during the insertion process. The length of pulls depends on the size of pipe, topography, bends and condition of the host pipe.

Advanced flange connection

A standard flange connection has been a staple for the liner business throughout its existence. However, for higher pressure and temperature applications, APTec has developed the most advanced flange connection using the internal pressure of a double O-ring, creating a dynamic seal to satisfy unconventional pipeline needs. ☺



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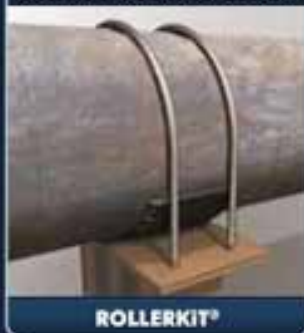
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