

ENHANCE ROD LIFE IN CORROSIVE APPLICATIONS

COMPOSITE-COATED CONVENTIONAL SUCKER ROD

Trusted in Aerospace, Trusted in Your Well

FROM AIR TO OIL, A REVOLUTIONARY CORROSION-PROTECTION SOLUTION

Using material trusted in the engineering of commercial and military aircraft, Lifting Solutions has developed and lab tested a new patent-pending, composite-coating system for steel sucker rods that significantly extends rod life in corrosive applications. In artificial lift applications, especially rod-driven applications, corrosion fatigue is a common, costly sucker rod failure, typically initiated by a corrosion-pit stress riser and propagated by the cyclic loading nature of the equipment. Composite-coated conventional sucker rod involves the adherence of a synthetic fiber and heat-curing epoxy to a steel sucker rod, which prevents well fluids from propagating and causing damage. This proprietary coating is ready for field trials and has been tested in hot water, hot oil, acid, and brine solutions. To ensure product integrity and success in the field, functional testing with rod elevators and stress impact has also been completed.

Technology

Coating

- 0.010-in. (0.25 mm) thick composite coating made of synthetic fiber and heat-cured epoxy adhesive
- Damage resistant
 - Positively adheres to metal
- Temperature resistant to 250°F in well fluid
- Cost effective
- Available for all size and grades of rods including pony rods

Rod Guide-able

- Guides can be applied over the coating in any spacing or configuration to suit the application (rotary or reciprocating)





Specifications

Composite-Coated Conventional Sucker Rod Specifications	
Grade	All
Diameter	All
Length	25 ft, 30 ft, and pony rods
Coating Specifications	
Manufacturer	Lifting Solutions
Type	Synthetic fiber/epoxy composite
Thickness	0.010 inches (0.025 mm)
Max Downhole Working Temperature	Corrosion coating capable of withstanding temperatures up to 250°F
Lab Testing Summary	
Delamination	Positively adheres to steel
Swelling and Hardness	<ul style="list-style-type: none">• 204°F hot oil soak for 196 hours• 200°F hot water soak for 196 hours• HCL soak• NACL soak
Swell, Hardness, Push Out, Stretch, and Elevator Lift Testing	Explored the bond characteristics of the coating to the metal rod to determine and prove that the coating (performance characteristics) is suitable for field trials
Field Handling	
Same requirements as published by Norris, Tenaris, and Weatherford	