REDA Coil
Coiled tubing-deployed ESP system
Alternative ESP Deployment Method Minimizes Costs and Deferred Production

Conventional ESP systems are conveyed by production tubing and require workover rigs for ESP replacements. Rig availability is often limited, especially in offshore and deepwater applications, significantly constraining operations and increasing expenses. Even when a rig is available, moving it and the added time needed incur high costs.

**Alternative deployment eliminates need for workover rig**

The REDA Coil® coiled tubing-deployed ESP system is a cost-effective alternative to the conventional deployment method. The system requires no rig intervention to change out an ESP.

**Configuration and assembly streamline deployment**

The use of a horizontal Christmas tree enables the ESP to be run and retrieved directly through the wellhead without removal of the tree or flowlines.

Because the system is deployed with coiled tubing, the ESP assembly is inverted, with the motor at the top. The power cable, which is preinstalled inside the coiled tubing, is connected to the motor via the lower connector.

**Rigless deployment imparts key benefits**

The REDA Coil ESP system’s coiled tubing deployment enables operators to replace ESPs immediately without waiting for a rig and to significantly save on operating costs.

**Larger flow area increases production**

In the REDA Coil ESP system, fluid flows through the large annulus either between the coiled tubing and permanent production string into which the ESP is deployed or—when no permanent production string is required by the operator—between the coiled tubing and casing.
In this inverted configuration, a center tandem motor is located at the top of the string, and the pump is at the bottom.

Motor base

The motor base creates a Y-point at the bottom of the motor. The torque generated by the motor is transmitted through the motor base to the bottom intake protector and to the pump below.

Bottom intake protector

The bottom intake protector isolates well fluids from the motor, balances internal and external motor pressure, and accommodates rapid pressure changes between the intake and discharge pressure because the production path in the inverted string is annular.

Discharge head

The discharge head provides an annular path for the fluid to be discharged and has an internal shaft to transmit the torque from the motor above to the pump below.

Motor

A center tandem pump, located at the bottom of the ESP string, has a shrouded intake and discharges into the annular area between the production tubing and the coiled tubing.

Coiled tubing lower connector

Real-time downhole monitoring gauge

Coiled tubing

Motor

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Phoenix xt150 downhole monitoring system

Real-time monitoring
Using the ESP coiled tubing-deployed power cable to transmit data to the surface, the Phoenix* xt150 downhole monitoring system provides accurate, continuous monitoring of pressure, temperature, current leakage, and vibration. Each measured parameter can be programmed with an alarm and shutdown threshold to help protect well integrity and ensure that the system is operating to its fullest potential.

www.slb.com/phoenix

REDA Maximus ESP System

Center tandem motor with simple, reliable connections

The REDA Coil system uses a REDA Maximus* ESP system motor, which has exclusive MaxJoint* ESP flange connection technology. This technology ensures pressure-tight seals, preventing trapped air, contamination, and fluid leakage. The center-tandem motor eliminates the need for a motor lead extension. A special motor base made up below the motor transmits torque to the pump.

www.slb.com/maximus

Center tandem pumps with shrouded intake system

The REDA Coil ESP system fits with G, S, and H pump series, all available in a wide variety of materials and configurations ideal for nonabrasive to extremely abrasive well environments.

www.slb.com/pumps
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