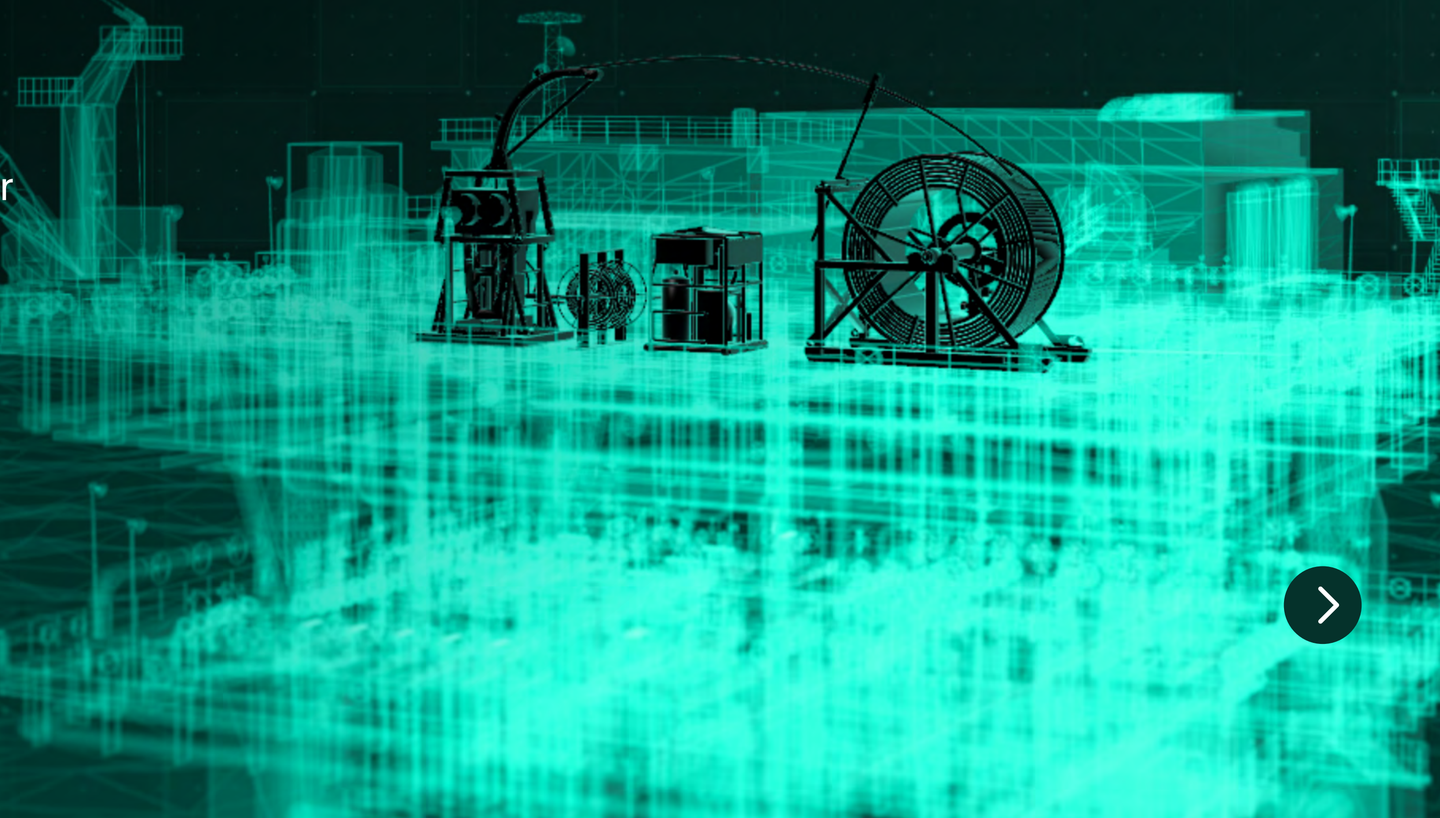
Baker Hughes

TransCoil rigless-deployed ESP system

Save time, cut costs, reduce risk

Installing an ESP is one of the best ways to increase production and boost ultimate recovery. But waiting on a rig to show up is frustrating. And so is paying for rig time to install and retrieve an ESP.

Wouldn’t it be nice if you could reliably install an ESP without the frustration and cost of a rig?



No matter how you cut it, a rig adds time, cost, and complication.

GET IN LINE.

Too often, **you may have to wait weeks—or even months**—to get a rig onsite for an ESP installation or retrieval. In new field developments, **every day you use a drilling rig to install an ESP system puts you a day behind in your drilling program**, deferring future production and returns. And inherent **hazards of rig operation can turn an already frustrating operation into an HSE incident.**

SETTLE FOR LESS.

In offshore assets, **intervention rig costs and risks often outweigh the potential gains of an ESP system.** The result is thousands of barrels of **oil being left behind in mature offshore fields.**

ASSUME THE RISK.

Downhole **wet-connect technologies are notoriously unreliable.** And motor lead extensions can be damaged during standard ESP installation on tubing. Either of these issues can **lead to premature ESP replacement, driving your lifting costs higher.**

30%

OF ESP REPLACEMENTS ARE DUE TO ELECTRICAL PROBLEMS.

FACT

Get rid of the rig...

and improve ESP system reliability at the same time

The TransCoil™ rigless-deployed ESP system delivers all the production and reserve recovery enhancements of a traditional ESP with no rig-related headaches, saving time and money while drastically reducing risk. And the production tubing can stay in the well.

Eliminating the rig is just half the battle. By connecting an inverted ESP system directly to the power cable, the TransCoil system eliminates the power cable-to-motor connection and an in-well electrical connection, removing the weakest link in an ESP system. And if you have problems with an in-well wet connection, you're back to waiting on a rig to deal with the problem.

TransCoil™

Rigless-deployed ESP system

Deploy and retrieve the ESP with coiled tubing under live-well conditions

- Eliminates time spent waiting on a rig
- Cuts ESP installation time by 50%
- Reduces risks associated with killing the well

Install an ESP in mature offshore assets where rig costs have prohibited intervention

- Eliminates rig costs required to install and retrieve the tubing and completion
- Eliminates downhole wet connections, and all costs to mitigate wet-connect failures
- Lowers overall lifting costs with a reusable power cable

Choose an ESP system that eliminates the most common failure points

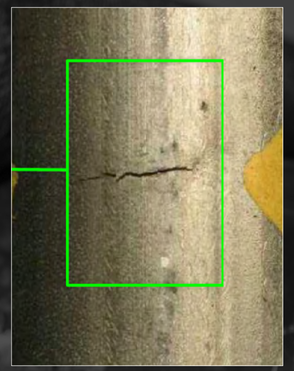
- Replaces the motor lead extension entirely— the single weakest conventional ESP systems component
- Protects the power cable inside the coiled tubing during installation and operation
- Enables reliable ESP installation later in the life of the well, eliminating system installation at the time of completion

Why trust it when you can test it?

READ THE TESTING AND ANALYSIS REPORT

BENDING FATIGUE

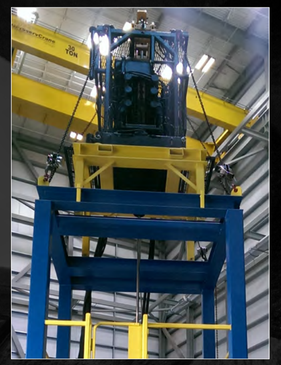
The TransCoil system withstands up to 180 trips in and out of the well.



QUALITY AND INTEGRATION

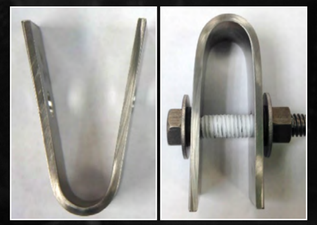
Each component is tested separately and together before the system is deployed. If any component doesn't measure up, it gets rebuilt or replaced.

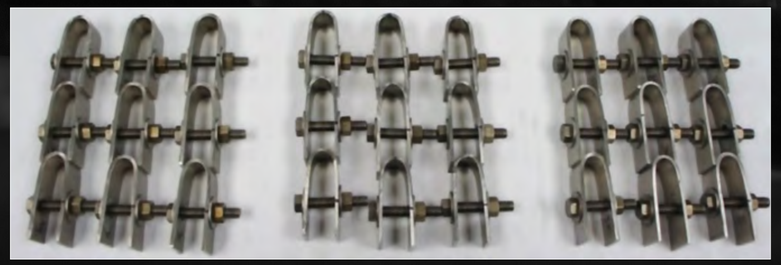
- Pumps
- Motors
- Seals
- Connection assemblies
- Gauges
- Electrical cabling and connections



CORROSION

Based on experimentation with various materials, the TransCoil ESP system has solutions for H_2S saturation levels as high as 15%.

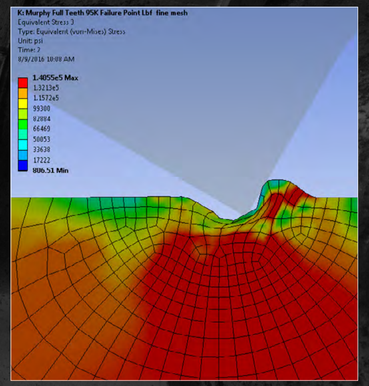




FINITE ELEMENT ANALYSIS

Finite element analysis was performed on all components that are exposed to tension and bending during installation or operation over the life of the ESP system.

This analysis helped us identify and compensate for high-stress areas, and reduced the overall weight of the system without sacrificing strength.



And why bring back the rig when you need a safety barrier?

READ THE PRODUCT SHEET

In applications where you need an API-qualified safety barrier above your ESP—**and want to maintain all the benefits of a totally rigless operation**—the Torus™ insert safety valve is the answer to your dilemma.

It's the ***only*** insert safety valve that accommodates coiled tubing and doesn't require a rig for installation.

The TransCoil system, paired with the Torus insert safety valve, gives you fail-safe protection, the production benefits of an ESP, and the **speed and efficiency of rigless operations.**

By using a sliding sleeve to control flow instead of a flapper, the Torus valve maintains a permanent conduit for coiled tubing through the valve, enabling rigless ESP deployment with the protection of an API 14A-qualified barrier.

Torus™

Insert safety valve

The TransCoil system features an **inverted ESP** with the motor on top connected directly to the power cable. This revolutionary design **eliminates the motor lead extension entirely, removing the weakest connection in traditional ESP systems.** The rigless-deployed ESP system **enables deployment under live well conditions, eliminating the need to kill the well,** and any potential costs for dealing with wet-connect failures.

CLICK OR TAP THE TABS FOR ASSEMBLY DETAILS.

SAFETY VALVE ASSEMBLY

DEPLOYMENT ASSEMBLY

ESP ASSEMBLY

SEAL STACK ASSEMBLY

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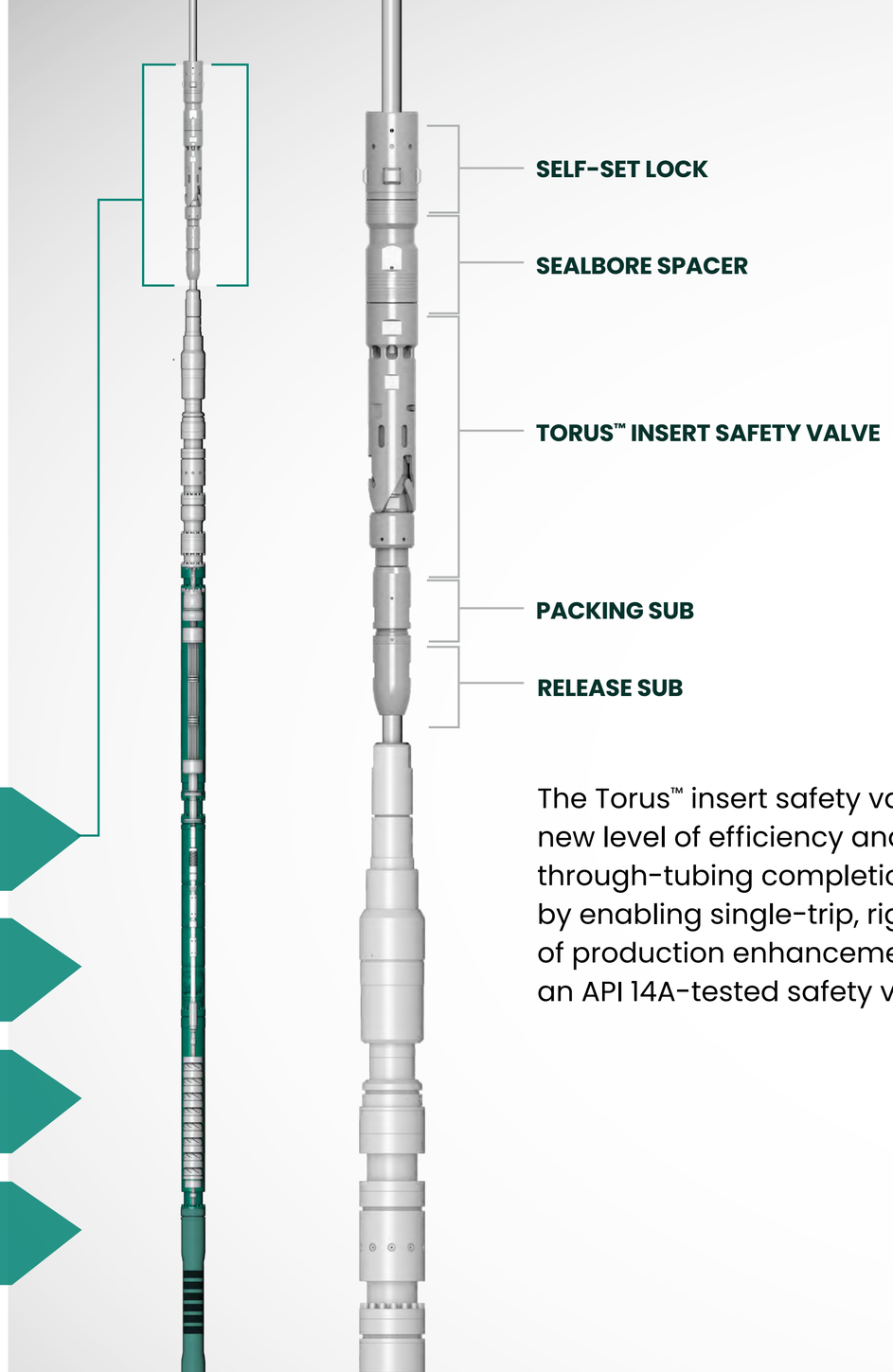

The Torus™ insert safety valve delivers a new level of efficiency and flexibility in through-tubing completion operations by enabling single-trip, rigless deployment of production enhancement equipment with an API 14A-tested safety valve.

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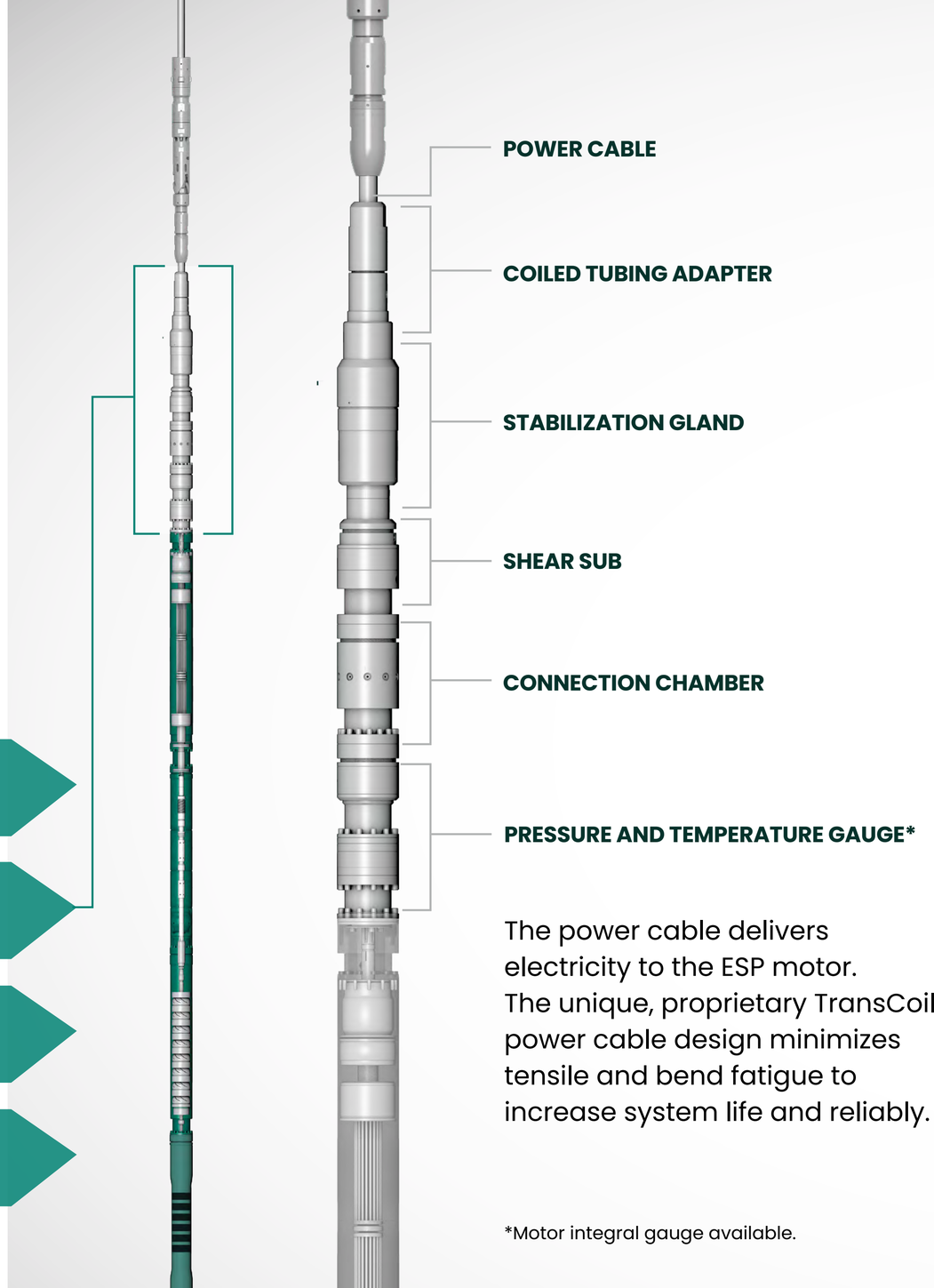

The power cable delivers electricity to the ESP motor. The unique, proprietary TransCoil power cable design minimizes tensile and bend fatigue to increase system life and reliably.

*Motor integral gauge available.

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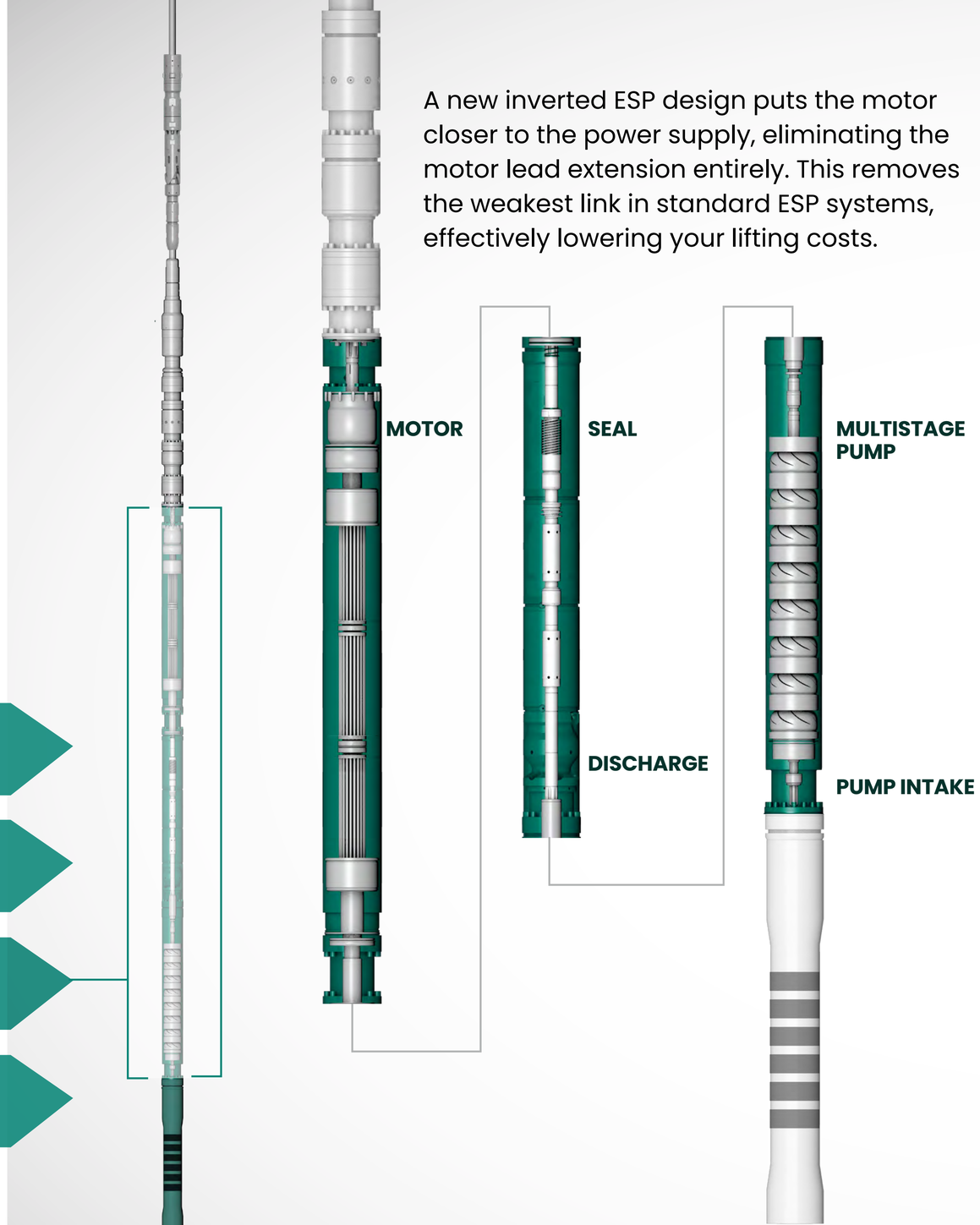
A new inverted ESP design puts the motor closer to the power supply, eliminating the motor lead extension entirely. This removes the weakest link in standard ESP systems, effectively lowering your lifting costs.



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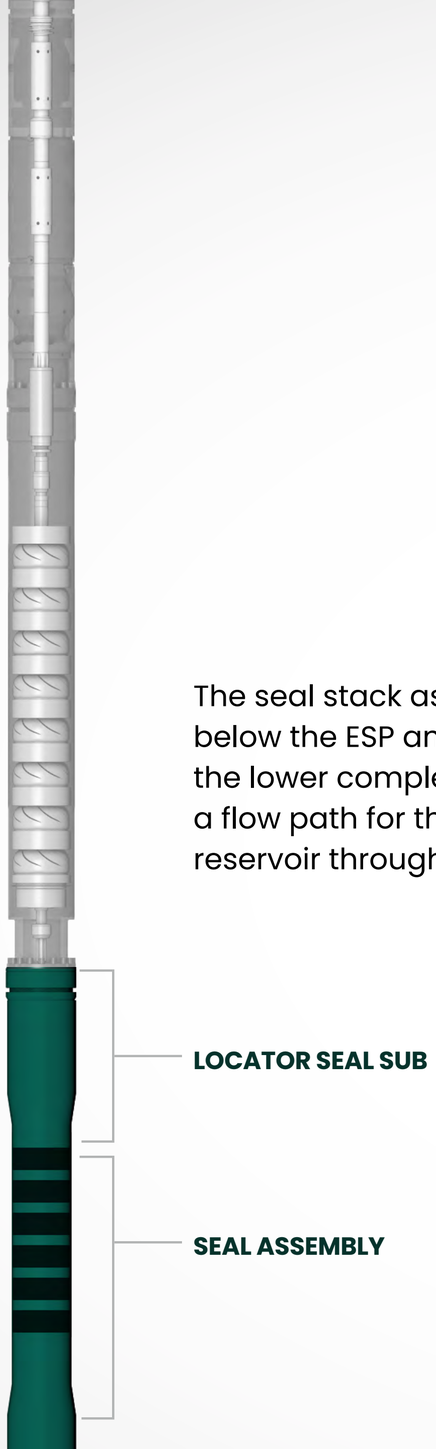


The seal stack assembly sits below the ESP and engages with the lower completion to provide a flow path for the fluid from the reservoir through the pump.

CASE STUDY: MIDDLE EAST

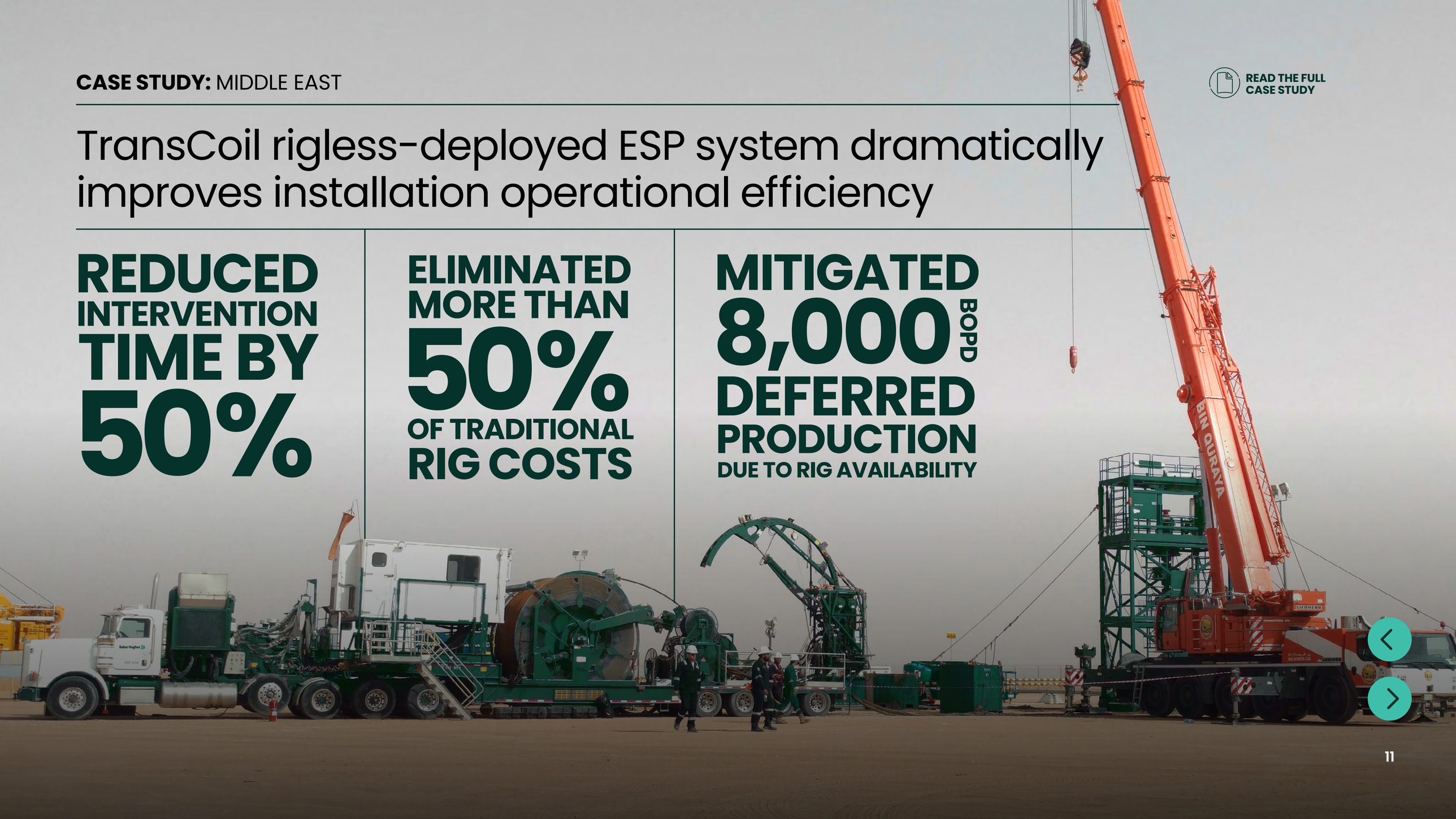
READ THE FULL CASE STUDY

TransCoil rigless-deployed ESP system dramatically improves installation operational efficiency

REDUCED INTERVENTION TIME BY 50%

ELIMINATED MORE THAN 50% OF TRADITIONAL RIG COSTS

MITIGATED 8,000 BOPD DEFERRED PRODUCTION DUE TO RIG AVAILABILITY



CASE STUDY: OFFSHORE MALAYSIA

READ THE FULL CASE STUDY

TransCoil rigless-deployed ESP system extended economic life of mature deepwater field

REDUCED WORKOVER COSTS BY 50%

BROUGHT 2,300 BFPD BACK ON PRODUCTION

IMPROVED TOTAL PRODUCTION BY 637 BARRELS OF FLUID PER DAY

INCREASED REVENUE BY $6,300 USD PER DAY

No wait.

Use a rigless-deployed ESP system to save time and money while reducing risk.

No waste.

Install an ESP system to recover offshore oil you might otherwise abandon due to prohibitive intervention costs.

No worries.

Choose an alternatively deployed ESP design that dramatically increases reliability while reducing HSE risk.

Contact your Baker Hughes representative today and find out more about how the TransCoil rigless-deployed ESP system can help boost production and recovery in your wells—without adding the time, cost, and complication that come with rigs.

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