Offshore Oil Operation Slashes Installation Cost by 80% With Swagelok® FK Series Fittings

The Challenge

Cone and thread fittings in a critical offshore application have labor-intensive installation and unacceptable performance.

The Solution

Swagelok medium-pressure FK series fittings, featuring simplified installation and more reliable performance.

When cone and thread fitting performance issues were identified as being responsible for a series of chemical injection leaks in an important deepwater offshore platform in the Gulf of Mexico, the operator sought out a new fitting solution to correct the issue. Speed and ease of installation were critical considerations in choosing the replacement.

The oil producer evaluated whether to continue with common cone and thread or to use medium-pressure FK series fittings from Swagelok®. After extensive testing, the winner was clear: FK series with its patented design, fast installation, and unmatched reliability.

In a side-by-side test, Swagelok FK series fittings were installed five times faster than cone and thread fittings. In addition, FK series fittings are installed with standard tools, leading to fewer installation errors and enhanced overall performance.

In a follow-up test, the oil producer used FK series fittings in a challenging application involving an asphaltene inhibitor with pressures up to 20,000 psi. Asphaltene inhibitors can be difficult to contain, especially at high pressures, but the FK series fitting held up to the demanding conditions with zero leaks or other performance issues.

“FK fittings are replacing cone and thread on our Gulf of Mexico assets, and our new global spec will drive FK adoption to other regions,” said one of the oil producer’s lead technical authorities.

The results were clear. The operator changed the global spec to include FK and immediately deployed 10,000 Swagelok FK series fittings for more reliable connections across two of its largest deepwater assets. Since entering production in 2017, there have been no performance issues, and the operator continues to realize major time and cost savings.

To learn more about how Swagelok medium- and high-pressure products can simplify installation and improve reliability, contact your local authorized sales and service center.