Flexible Joints for Workover, Completion and Intervention Risers

10K Completion Workover Riser Flexible Joint

OTC Spotlight on New Technology™ 2018 Award Winner

Product Information

LORD® Flexible Joints can be deployed with Intervention Workover Control Systems (IWOCS) and the associated riser system to accommodate the motion of the intervention/workover vessel relative to the subsea wellhead. A flexible joint can replace a stress joint in this application, supporting the tension in the riser and containing pressure, yet offering a much lower bending stiffness. When used to replace a traditional bottom stress joint, the significantly lower moment imparted to the wellhead allows the operator to perform more workovers per well, thereby extending the life of the field.

Flexible joints can also be deployed at the surface in a riser-based intervention system. The entire flexible joint is just over five feet in height, enabling smaller intervention vessels to operate a top-tensioned riser without a stress joint or a telescopic joint. Using a vessel of opportunity lowers costs compared to performing high-pressure interventions with a drilling rig.

Features and Benefits

- Features unique dual-barrier design
  - Seal bearing provides first barrier and is optimized for high-pressure containment and fluid resistance
  - Load bearing optimized for low rotational stiffness and fatigue strength
  - Load bearing functions as a redundant seal to improve reliability and capability over a single-bearing design
  - Provides a failsafe mechanism unavailable with a stress joint, conventional flexible joint, or other components of the riser system
- Rated to 10,000 psi and hydro-tested to 15,000 psi
- Lower bending stiffness reduces wellhead fatigue, extending field life
- Increased flexibility of riser system widens weather window
- Compact height (just over 5 feet) enables use on smaller intervention vessels
- DNV-certified to API RP17G
- Field-proven: some units have been in service for over a year
- High-pressure high temperature (HPHT) versions available (>350°F)
- We apply aerospace-proven processes and quality systems to Oil & Gas products to ensure each part performs consistently and reliably
ABOUT LORD CORPORATION
Founded in 1924, LORD Corporation is a diversified technology and manufacturing company commercializing highly reliable adhesives, coatings, vibration control and motion management devices and systems, and sensing technologies. Our dedicated teams collaborate with customers to provide innovative solutions, reduce risk and increase the value of their products.

Employees: More than 3,000 worldwide

Operations: LORD operates 19 manufacturing facilities and 10 R&D centers worldwide. Dedicated teams provide customers with easy access to products and technical expertise — whenever and wherever they are needed.

CORE SCIENCES AND TECHNOLOGIES
Continuing the company's tradition of ingenuity and inventive spirit, we continue to develop technologies to meet the needs and challenges of an ever-evolving global marketplace.

• Surface Science
• Polymer Science
• Material Science
• Mechanical Design
• Dynamic Systems
• Control Systems
• Wireless Sensing
• Energy Harvesting
• Inertial/Orientation Technologies
• Displacement Sensing

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