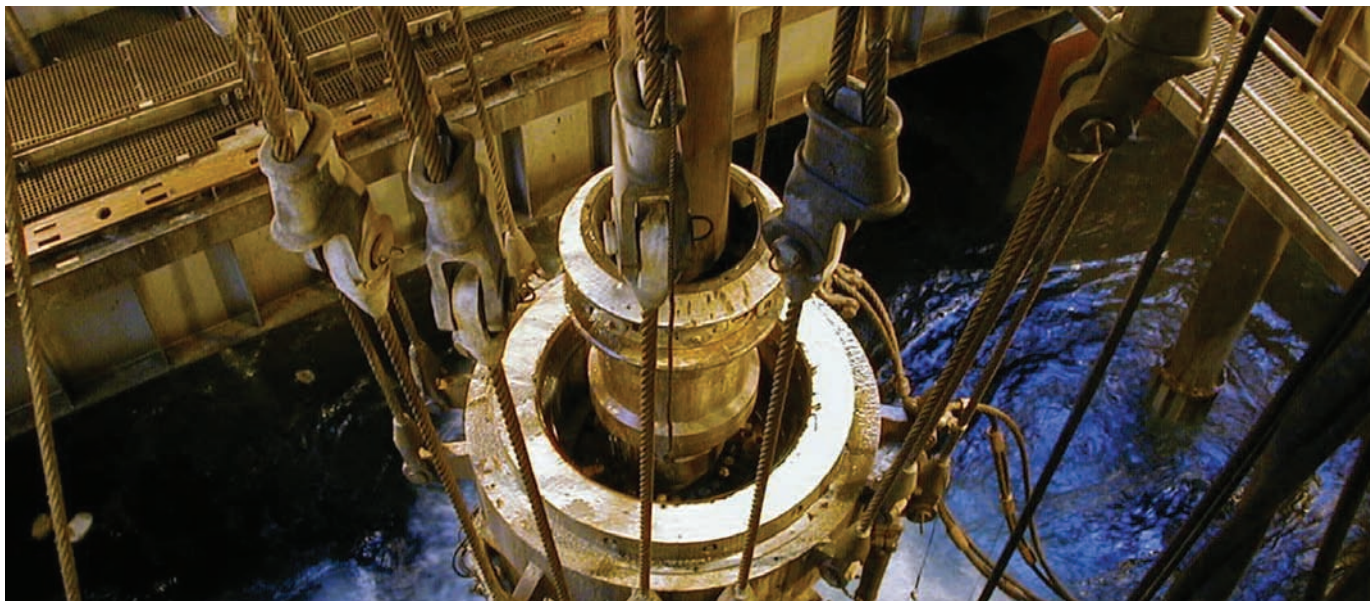


Riser Management System

Advisory and Monitoring System



KONGSBERG



Riser Management System (RMS) is the KONGSBERG riser, monitoring and advisory system helping you to maintain control of critical riser and wellhead parameters during varying sea current conditions.

Riser Management System

The KONGSBERG Riser Management System (RMS) is a real-time instrumented monitoring and advisory system helping you to maintain control of critical riser and wellhead parameters. RMS is an operational tool that provides the operator with the actual riser state and advice on the right decisions to make on how to optimize the operation. The system features numerous advances that will benefit the hazardous and technically challenging discipline of riser operations.

RMS benefits

- Reduce the risk of erroneous operations
- Reduce the down time
- Reduce equipment wear and tear by reducing loads on the riser

The next generation KONGSBERG RMS enables users to configure

easily and quickly the operational parameters for a new well location, such as tallies and operational limits. The new configuration and riser planning tool substantially increases the flexibility of the RMS. It is simple and easy to use, and reduces the time required to set up a well operation, as well as the planning of future well operations. Additionally, the time required to perform calibration is greatly reduced through the introduction of automated calibration and verification testing, made possible by sophisticated enhancements to the mathematical models within the new RMS.

The RMS monitoring and advisory system provides drilling, workover and DP operators with on-line riser information and advice for proper positioning. Based on sensor data and a mathematical model of the riser, RMS provides users with operational safety margins and alarming.



RMS provides

Innovative applications for safer and more efficient drilling and completion operations, thereby increasing operational envelopes; reducing riser stress and wellhead loads; cutting wear; and providing critical information for the drill vessel in operation. RMS contains the following monitoring and advisory functions:

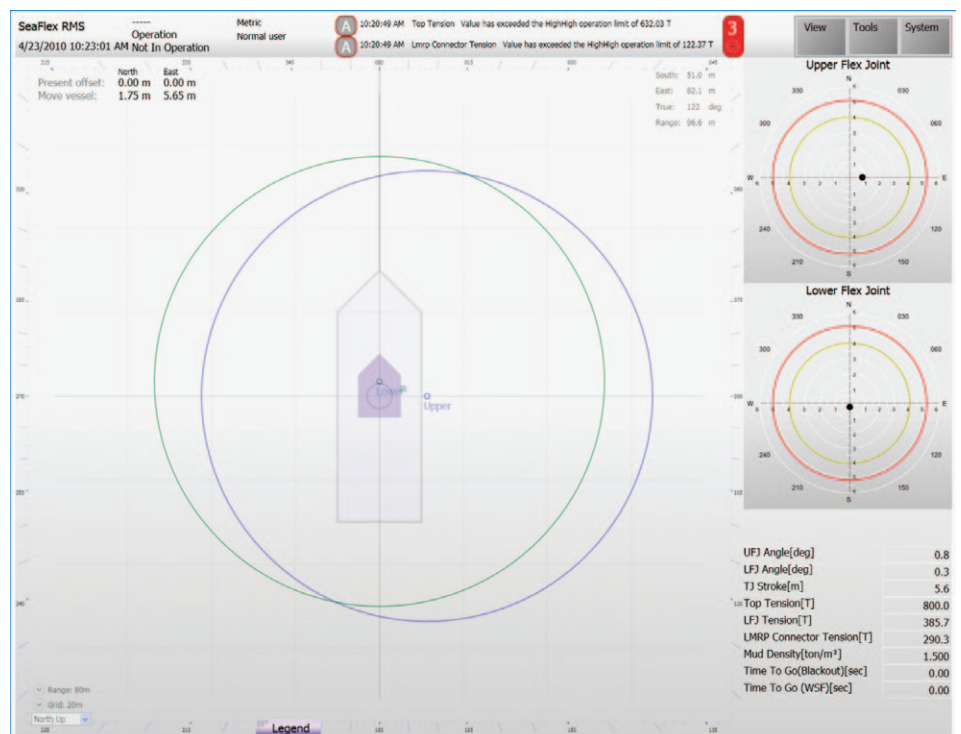
- Upper and lower flex-joint angle monitoring
- Top tension monitoring
- Riser stroke monitoring
- Connector loads monitoring
- Optimum position advice based on flex- joint angles
- Static riser calculator to test different operational strategies before a specific operation is carried out
- Logging of data and events
- Alarm and warning functions

RMS can be supplied as a stand-alone system or integrated with KONGSBERG Dynamic Positioning systems and Position Mooring Systems. If integrated with the Kongsberg Dynamic Positioning system, the Riser Position Reference (RPR) system can be provided as an add-on to RMS to serve as a back-up position reference system for use in dynamic positioning.

References

RMS systems have been in operation since 1997 and user experiences have provided valuable input to the continuous development of the product.

KONGSBERG RMS systems are in operation on a significant number of vessels. Dolphin Drilling, GlobalSantaFe, Ocean Rig, Odebrecht, Petrobras, Queiros Galvao, Saipem, Seadrill and Stena Drilling are amongst those companies which have deployed the Kongsberg RMS system to ensure safer and more efficient operations.



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