Improved efficiency and accurate position control
Innovative split hoist system from Bosch Rexroth ready for market

- Flexible installation, suitable as add-on for existing hoisting systems
- No interference with existing installation
- Works above and below sea level

Bosch Rexroth, the leading company in drive and control solutions, has developed a new ‘split hoist’ heave compensation system. It combines active heave compensation (AHC) and passive heave compensation (PHC) elements with a sophisticated control system enabling AHC functionality to be added to new and existing hoisting installations. Using a modular and mobile design, the new split hoist system is especially interesting for use with existing multi-part reeved hoisting equipment.

The new split hoist heave compensation system supports a much higher working load, while also improving system efficiency by as much as 80%. A passive in-line heave compensator, supports the load and passively compensates for some of the ship’s movement. The passive in-line system is hoisted and held by an existing winch or crane.

An actively controlled winch, typically mounted on the ship’s deck, then compensates for the remaining movement of the load. A motion reference unit measures movement of the vessel, and the system reacts to control the load’s position relative to the seabed. In this way, the system requires only 20% of power compared to conventional AHC systems.

Contact for journalists:
Bosch Rexroth B.V.
Vincent Stahlecker
5281 RV Boxtel NL
Tel.: +31 411 651 682
Vincent.stahlecker@boschrexroth.nl
Press Release

The new system was developed and designed fully in-house by Bosch Rexroth, and a first prototype has been built. With the help of Seaway Heavy Lifting, who also showed interest in the concept, the prototype was tested in real life conditions.

“We had to overcome a number of technical and operational challenges for the split hoist system in the two and a half years from concept to construction,“ said Patrick Verbakel, Technical Sales Manager Offshore. “Numerous simulations and tests were carried out to confirm the prototype could achieve the expected performance, and to ensure it would comply with the required safety standards.“

In June 2017 further testing will be carried out, again with help of Seaway Heavy Lifting, for offshore deep water operation. While these operations have been simulated and thoroughly analyzed, real-life testing will provide proof of concept.

The crane vessel Oleg Strashnov will be fitted with the split hoist heave compensation system to test performance and collect data. The control system is designed to control load position down to 2000 m below sea level, based on vessel position and forces on the cables.

“It has been a very interesting and successful project,“ said Patrick Verbakel. “In addition to bringing a new solution to the market, we have also increased our know-how and experience in several areas, including passive compensation systems. We are certain that the clear benefits of the Bosch Rexroth split hoist system will appeal to customers with demands for lifting a wide range of applications, possibly even exceeding 1,000 metric tonnes.“

Economical, precise, safe, and energy efficient: drive and control technology from Bosch Rexroth moves machines and systems of any size. The company bundles global application experience in the market segments of Mobile Applications, Machinery Applications and Engineering, and Factory Automation to develop innovative components as well as tailored system solutions and services. Bosch Rexroth offers its customers hydraulics, electric...
drives and controls, gear technology, and linear motion and assembly technology all from one source. With locations in over 80 countries, more than 29,500 associates generated sales revenue of approximately 5 billion euros in 2016. To learn more, please visit www.boschrexroth.com

The Bosch Group is a leading global supplier of technology and services. It employs roughly 390,000 associates worldwide (as of December 31, 2016). According to preliminary figures, the company generated sales of 73.1 billion euros in 2016. Its operations are divided into four business sectors: Mobility Solutions, Industrial Technology, Consumer Goods, and Energy and Building Technology. As a leading IoT company, Bosch offers innovative solutions for smart homes, smart cities, connected mobility, and connected industry. It uses its expertise in sensor technology, software, and services, as well as its own IoT cloud, to offer its customers connected, cross-domain solutions from a single source. The Bosch Group’s strategic objective is to create solutions for a connected life, and to improve quality of life worldwide with products and services that are innovative and spark enthusiasm. In short, Bosch creates technology that is “Invented for life.” The Bosch Group comprises Robert Bosch GmbH and its roughly 440 subsidiaries and regional companies in some 60 countries. Including sales and service partners, Bosch’s global manufacturing, engineering, and sales network covers nearly every country in the world. The basis for the company’s future growth is its innovative strength. At 120 locations across the globe, Bosch employs 59,000 associates in research and development. Additional information is available online at www.bosch.com, www.iot.bosch.com, www.bosch-press.com, www.twitter.com/BoschPresse.