Johan Sverdrup Field Centre (Norway)

Project description

The discovery of the Johan Sverdrup field has been made in 2010 and counts among one of the largest oil discoveries ever made on the Norwegian continental shelf. Named after the father of Norwegian parliamentarism, the Johan Sverdrup Field Center was discovered in 2010 as a direct result of Edvard Greg discovery made in 2007, which had proven the possibility of continuous oil-water contact over the entire southern part of the Utsira High.

The field covers an area of approximately 200 km^2 on the Utsira High in the central part of the North Sea and and is being developed in multiple phases.

The project of interest is composed of four platforms connected together by three steel bridges. Each bridge is designed to withhold the enormous movements coming from the platforms, driven by extreme waves.

mageba scope

mageba is supplying RESTON®POT bearings to support the platforms' connecting bridges while accomodating specified movements and rotations. Moreover, four different systems of mageba's ROBO®CONTROL structural health monitoring technology evaluate the bearings' performance through:

- Inclination sensors
- Load measuring sensors
- Wire displacement sensors
- Inductive displacement sensors

The 12 ROBO®CONTROL acquisition units are installed at each bearing in the hazardous area of the field's platforms and collect the data from the different sensors. A central computer server processes the measurements in real time for further analysis and graphical presentation. All data is finally sent to the field's general control room.

Highlights & facts

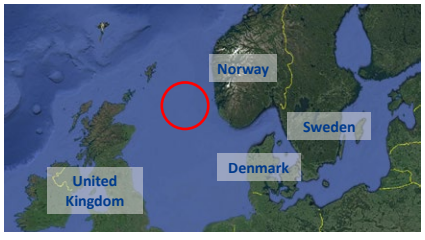
mageba products:

Type:	RESTON®POT bearings of type TF and TE ROBO®CONTROL monitoring system „Advanced“
Installation:	2016–2017

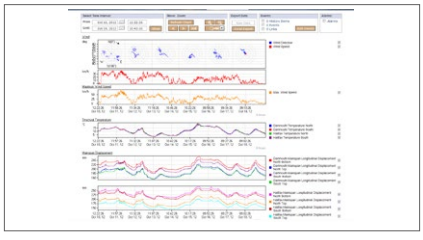
Structure:

Area:	Utsira High, 140 km west of Stavanger
Country:	Norway
Completed:	2017
Type:	Offshore platform
Owner:	Statoil, Lundin Norway, Maersk Oil, Petoro, Det norske oljeselskap
Contractor:	Aker Solutions ASA

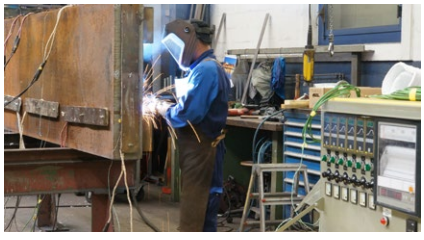
Location of Johan Sverdrup oil field in the North Sea



Example of data presentation on a computer



Bearing production in Switzerland: the massive sliding plates feature 5.5 t weight and 3.2 m



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