# Maersk Peregrino FPSO improves crude oil tank handling using newest tank monitoring and control technology from Emerson

# RESULTS

- Newest tank monitoring and control technology
- Continuous reliable operation in a redundant real time network
- Improved tank measurements
- · Better control of modified valve control system

### **APPLICATION**

FPSO

**CUSTOMER** Maersk FPSO, Copenhagen, Denmark

# CHALLENGE

A retrofit of a VLCC (Maersk Nova) into a state-of-the-art FPSO (Maersk Peregrino) is a huge challenge. The retrofit took two years - over 15 million man-hours. It was a huge amount of work, communication and coordination. Many components combined system changes and/or updates – delivered from many suppliers all over the world. Integration flexibility and delivery time were key factors, as well as the focus on implementing products able to withstand high temperature.

The Maersk Peregrino is a large scale production and storage unit for crude oil operating in Brazilian waters. The handling process of crude oil in this case is very complex because the oil handled by Maersk Peregrino is only flowing when the temperature is above 70 degrees centigrade and all work regarding the oil handling has to be done within specific enhanced safety regulations.

#### **SOLUTION**

Emerson provided a solution consisting of a retrofit and an upgrade of existing systems and added new systems in close dialogue with the shipowner. There was a need of installation of new tanks and tank splits, and here Emerson assisted with knowhow and the newest in tank monitoring and valve remote control technology. The scope included new controllers and a communication Ethernet ring, as well as Modbus connections to UMS and IAS systems.



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A large modification of the valve remote control system, including new solenoid cabinet new valve actuators in various types and sizes, also the brand-new high-torque BRCF 16000HT, providing better control of ballast and cargo.

A vast upgrade of the cargo monitoring system with added temperature measurements in all cargo tanks enable easy access to data and reliable measurements in crude oil tanks.



**Emerson Process Management** 

Damcos A/S Aaderupvej 41, 4700 Næstved T: +45 5578 7200 F: +45 5578 7272 E-mail: Damcosdk@Emerson.com www.emersonprocess.com/Aperio For a complete list of contacts, please visit www.emersonprocess.com/mtm/contacts



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