

LSGO MODIFICATION OF FUEL AND COOLER SYSTEM ON SEVEN Q-FLEX LNG VESSELS WITH NO DOWNTIME

3D SCANNING, PRE-FABRICATION, INSTALLATION AND TESTING TO ENSURE COMPLIANCE WITH 2015 SECA LEGISLATION & ENGINE OPTIMIZATION

Goltens was engaged to undertake the retrofitting of 7 Q-Flex LNG with Low Sulphur Gas Oil (LSGO) cooling systems and controls. The vessels were all under charter by the same operator but owned by different owners (3 and 4 respectively).

The key objective of the projects was to attain operational SECA compliance and main engine reliability for each vessel in 2015. The cooler installation and piping modification objective is to ensure that after manual changeover from HFO to LSGO that a minimum viscosity of 2% is attained in the LSGO fuel, subsequently optimising engine reliability, operability and maintainability.

Goltens conducted a 3D laser scan on board one sister vessel to determine space integration of cooler and piping layout into purifier room. The scope of supply consisted of installation of new fresh water cooler, additional installation of fresh water piping, modification of existing Fuel supply system and supply of all in line components.

The on board survey enabled Goltens to draft both general arrangement drawings and generate isometric drawings to provide accurate pre-fabrication of piping, which in turn reduced the project installation schedule on board.

Upon customer and class approval of Drawings, Goltens completed fabrication of all vessels piping. The installation schedule was satisfactorily conducted in close cooperation and dialogue with both the equipment manufacturer and the vessels' owners.

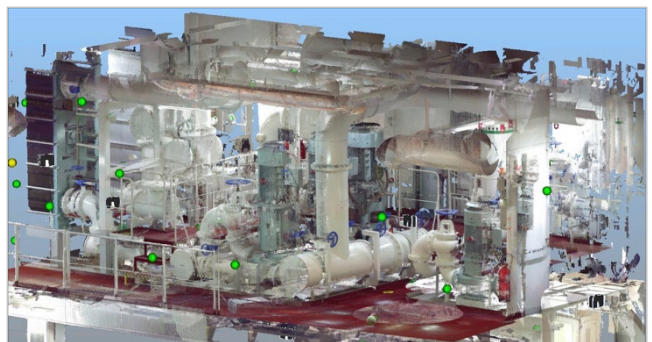
The installations were all satisfactorily completed at anchorage or on ballast voyage between Asia and UAE and Europe and UAE.

PROJECT FACTS: LSGO COOLER INSTALLATION

Vessel Type:	Q-Flex LNG
Number of Vessels:	Seven
Engine Make/Model:	MAN-B&W 6-S70ME-C x2
Work Location:	Voyage and UAE



Onboard 3D laser scanning



3D Scan Data in engine room for FW tie in connection



Prefabrication of system piping according to drawings

LSGO FUEL & COOLER SYSTEM WORKSCOPE:

- 3D Scanning & Modelling
- Detailed Engineering
- Procurement of all piping and in line components
- Prefabrication of all piping and structural components
- Tank cleaning of selected LSGO tank Onboard fabrication and installation of bunker Line modification
- Installation of new coolers & foundations in purifier room
- Installation of new LSGO and FW piping
- Installation of all new pipe supports
- Pressure testing of all new systems

LSGO FUEL & COOLER SYSTEM RETROFIT RESULTS:

Goltens completed the required scopes by implementing a fast track solution, involving 3D scanning, prefabrication, installation and testing to meet the customers' SECA requirements.

All seven Q Flex vessels were completed in service without any loss of scheduled cargos.

Customer has recommended Goltens' support to conduct similar future projects with other key LNG and Tanker operators.



Installation of fresh water piping and cooler support



LSGO Cooler installed onboard