

GOLTENS GREEN COMPLETES SECOND HYDE GUARDIAN BWT RETROFIT FOR SEABOARD MARINE

GOLTENS MIAMI AND NETHERLANDS TEAM UP FOR TRANSATLANTIC BWTS RETROFIT

Having completed a similar retrofit for the Seaboard Atlantic in 2014, Seaboard Marine, a major container operator in Miami, again contacted Goltens Green Technologies' specialists in Miami to undertake and manage the end-to-end retrofit of a Hyde Guardian HG250GC ballast water treatment system onboard the Seaboard Patriot.

Goltens' team in Miami met with Seaboard to discuss the timing and scope of this second ballast water treatment retrofit project. This one was different as it included completing the installation of the system during dry-docking in Rotterdam in October of 2015.

To drive project efficiencies, Goltens Green Technologies in Miami logically proposed that Goltens Green Technologies in The Netherlands manage this project. The project was started in June of 2015 with 3D scanning of the vessel while in port in Rotterdam.

HYDE GUARDIAN BWT SYSTEM RETROFIT SCOPE:

- 3D Scanning, Survey and Modeling
- Detailed engineering including pipe isometrics, foundation drawings and an installation manual
- Pre-fabrication of all required piping and materials
- Delivery of complete, prefabricated installation kit to shipyard in Rotterdam
- Electrical installation
- Project management and oversight of the installation in the shipyard
- Commissioning of the system with Hyde technical representative

BWT RETROFIT RESULTS:

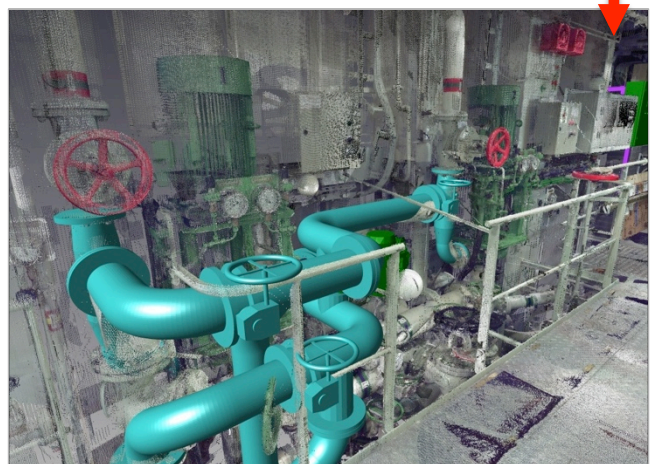
As planned, all piping and installation materials were delivered to the shipyard in September of 2015. Installation by the shipyard went smoothly and was completed and commissioned on time in October 2015. The installation was fully reviewed and approved by vessel's class, Bureau Veritas.

PROJECT FACTS: SEABOARD PATRIOT BWT RETROFIT

Ballast Water System: Hyde Guardian HG250GC
System Capacity: 255 m³/h
Customer: Seaboard Marine
Vessel Type: Container Vessel



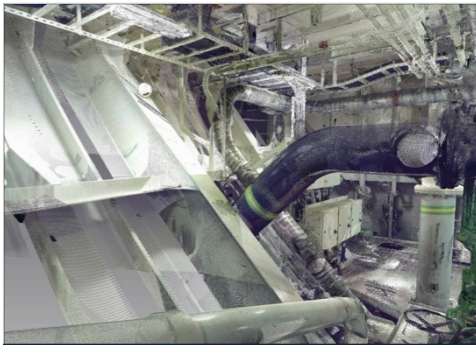
3D scan of Ballast Pump area – pre BWTS installation



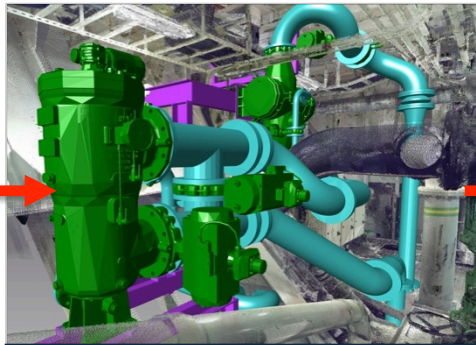
System model overlaid on 3D scan data



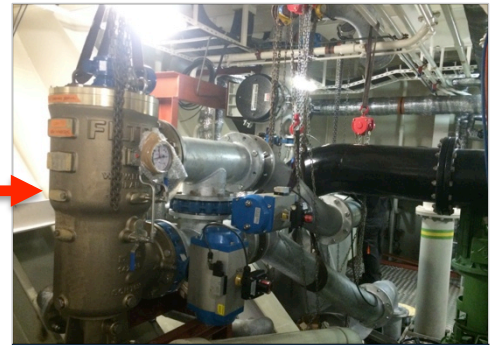
Hyde Guardian System installed per model/design



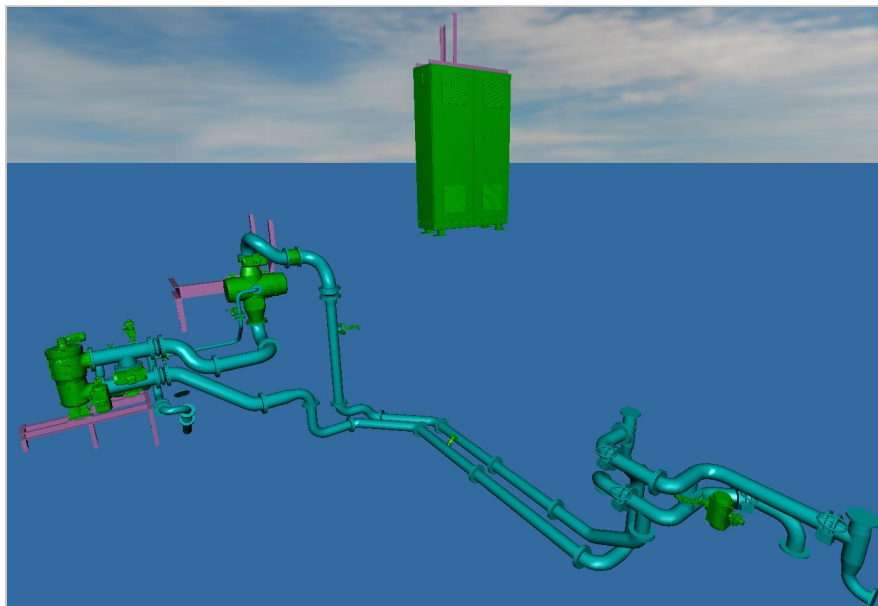
3D scan pre-system modeling



3D model of filter and piping



Filter/piping installation in progress



3D model of complete Hyde Guardian HG250GC system for Seaboard Patriot