

MULTI-STATION COOPERATION LEADS TO ANOTHER EFFICIENT BWTS RETROFIT INSTALLATION

GOLTENS GREEN IN THE NETHERLANDS AND CHINA TEAM UP FOR ALFA-LAVAL RETROFIT

A European tanker owner approached Goltens Green Technologies in The Netherlands to support the retrofit of an Alfa-Laval Pure Ballast BWTS system on their 6-year-old, 50,000 DWT, Chemical/Products Tanker.

SCANNING AND DESIGN:

Survey & 3D Scanning: Goltens resources from Europe attended the vessel to perform the ship check and conduct 3D scanning of the spaces considered for installation. As the retrofit being considered was a deckhouse on main deck, the survey had to extend beyond the main engineering spaces.

3D Modeling and Detailed Engineering: Using the 3D scan data, basic modeling of the system was completed and reviewed by the parties involved. Once approved Goltens' design engineers completed the detailed engineering packages required for the retrofit and worked to secure class approval for the retrofit on behalf of the customer.

INSTALLATION AND SUPERVISION:

The customer selected a repair shipyard in Shanghai to complete the retrofit installation and Goltens arranged for one of its BWTS Retrofit Engineering Supervisors to attend to support and oversee the installation.

To limit the time in drydock, the deckhouse was prefabricated by the shipyard prior to the vessel's arrival. With the scanning and design accuracy of +/- 2mm, the deckhouse and other components could be fabricated to tight tolerances allowing for an efficient and highly accurate installation.

Once the vessel was in the drydock, the installation was successfully completed in only 14 days including site preparation and COVID related delays.

PROJECT FACTS:

Ship Type: Install Location: BWTS Maker: Ballast treatment system:

BWTS RETROFIT

Chemical/Products Tanker Shanghai, China Alfa-Laval Pure Ballast 3.2 1500 m3/h



Figure 1: Chemical/Products Tanker in drydock in Shanghai



Figure 2: 3D rendering of BWTS deckhouse design



Figure 3: BWTS Deckhouse after installation onboard





Figure 4: BWTS Deckhouse interior design layout (fwd view)



Figure 6: BWTS Deckhouse interior design layout (aft view)



Figure 8: CIP design location



Figure 10: UV System design



Figure 5: Interior of BWTS Deckhouse installed (fwd view)



Figure 7: Interior of BWTS Deckhouse installed (aft view)



Figure 9: CIP installed onboard



Figure 11: UV System design installed onboard per design





Figure 12: Power distribution and control cabinet design



Figure 13: Power distribution and control cabinet installed



Figure 14: Crew training on BWTS system



Figure 15: Class survey and inspection