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DESIGN & INSTALLATION OF BWTS ERMA FIRST FIT 2x3000 & APT MODULE

Successful completion for 300,000 DWT CRUDE OIL TANKERs

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Introduction

Proud to announce that ALPHA MARINE CONSULTING P.C. (AMC) has been selected from a top market Maker ERMA FIRST, as the dedicated ballast engineering partner for a group of VLCCs Vessels, for the retrofit of FIT 2x 3000 + APT Module, Systems. The Firm has been dealing with Ballast and Scrubber Retrofits the last three years, having delivered almost 180 vessels (design) and 60 vessels (installations) on behalf of leading Shipping Companies, utilizing the experience gained from Newbuildings and Conversions sectors towards providing cost effective, efficient and well implemented solutions. AMC Retrofits Team undertook and implemented the demanding design (scale and time wise), including the 3D Scanning Surveys onboard, Concept Design and Detailed Engineering by adopting a multi-engineer approach to complete the task in a short timeframe, ensuring the highest standards and meticulous attention to the detail.

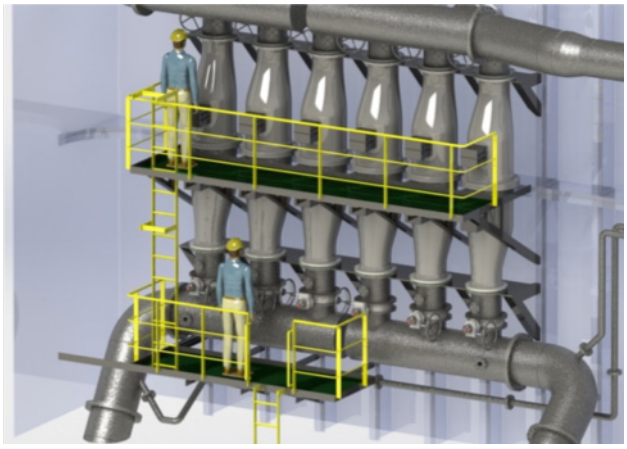

Figure 2: BWTS integration in Ship Model – Electrolytic Cells

BWTS successful Design & Installation

ERMA FIRST versatile reference list and technology for large size vessels and AMC's knowledge and operational experience were contributing factors to the success of this high-scale project. The corner stone of such achievement lies upon the excellent cooperation of the two companies and their internal objectives to deliver a sound product and well implemented installation solution to their Clients.

Figure 1: BWTS integration in Ship Model – Main Filters

Design Aspects

Most of the design challenges were pertained to limited available space of the Pump Rooms in these type of vessels compared to the size of the equipment, hence new out-of-the-box ideas should be implemented while achieving at the same time compliance with equipment design parameters, proper integration with the vessels' arrangements and unimpaired cargo and ballast operations for crew.

The vent ducts at the vicinity of the lower floor were rerouted for accommodating the main filters and subsequently minimizing the piping lengths (and costs) as well as expected pressure drop. Six (6) vertical Electrolytic Cells were installed on upper decks and duly interconnected, after a well optimized pipe routing. As per Client's decision an additional system was finally selected and installed in Engine Room, connecting the APT with the rest of the Ballast system through appropriate loop seal arrangements on Upper Deck. Due to the type and extent of modifications a number of outfitting drawings were prepared and installed towards facilitating access and maintenance of the equipment components. The final designed deliverables were included in AMC's and ERMA FIRST's comprehensive installation drawing package and handed over to the yard for prefabrication and installation.

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