Asuka II

Japan's Largest Cruise Ship

Fiber Glass Systems | NOV

Asuka II Project Case Study

Project Background

Asuka II – 50,142 Gross Tonnage (Capacity: 872 Passenger) Cruise Ship, operated by NYK Cruises Co. Ltd, is the largest cruise ship in Japan. In January 2020, the vessel underwent a 45-day makeover whilst docked in Sembcorp Marine Integrated Yard (Admiralty Yard), Singapore. Asuka II is among the top-rated luxury cruise vessels serving the Japanese market.

The goal of this makeover was to include cosmetic upgrades such as a large open air bath, western style rooms, reading lounge, some restaurants were refurbished and Wi-Fi installed into all staterooms and public areas. Also, an SOx scrubber was installed to meet the IMO 2020 Environmental Regulation.

We were nominated to supply Bondstrand™ GRE (Glass Reinforced Epoxy) for the scrubber piping system.

Timeline

We started in November 2019 , with static stress analysis performed by our in house stress engineers. Our studies provided recommendations of piping support types and locations, allowing flexibility in the system. The studies were done using industry accepted Caesar II software. Results of the stress analysis were discussed with shipyard engineers and owner representatives.

Our piping engineers worked to simplify shipyard's piping design drawings and worked around space constraints and alongside our stress engineers. Due to a new system in confined spaces, it was inevitable the work was going to be complexed. Our engineers needed to be able to translate these complexities into spool drawings, to ensure the constructability of these complex spools. The final approved drawings were completed in January 2020. Spools were fabricated and hydro tested in our Tanjung Langsat facility, packed and delivered in batches as instructed, to Sembawang Shipyard from end of January to mid February.

The spools were delivered directly to the vessel Asuka II for installation by the yard's resident contractor. We trained and certified the resident contractor prior to the spools arrival.

We collaborated closely with Sembcorp Marine Integrated Yard throughout the execution period of the project. We ensured that design, fabrication, delivery, installation and testing was completed within the schedule allocated for the vessel during this makeover.

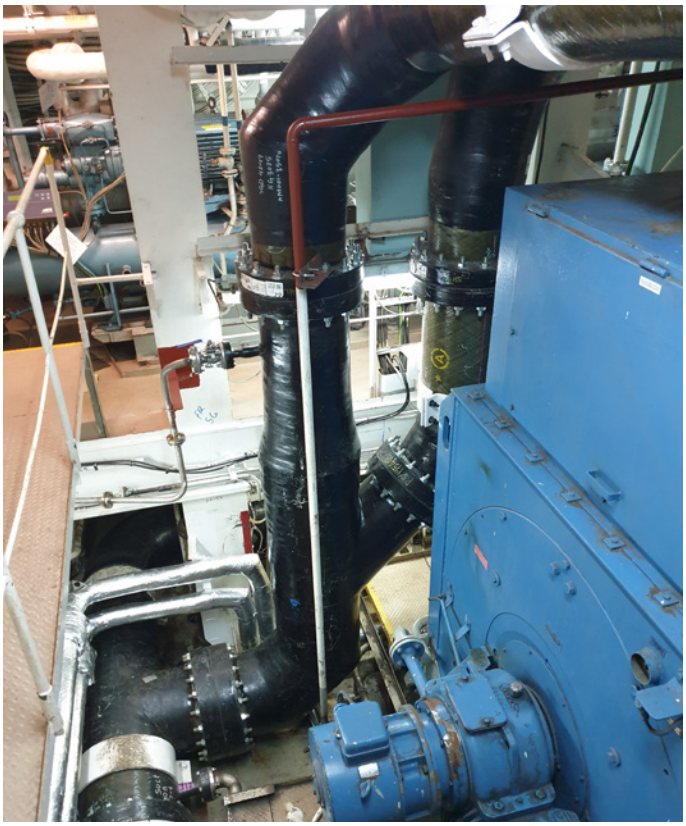
In total, 315 Bondstrand GRE Spools were prefabricated and installed on Asuka II and completed within a short time frame.

Our Solutions

We were chosen by the owner and shipyard to supply the critical GRE Spools, because of its many benefits, such as, weight saving, minimal maintenance, safe and effective installation processes. These were important drivers for consideration.

Benefits of Bondstrand Scrubber Piping System

- Corrosion resistant, an important factor in the harsh marine and offshore environment.
- Lightweight, typically ¼ to ⅙ the weight of metallic alternatives.
- Safer installation process due to its easy handling in confined spaces and without the need for hot work.
- Fast installation as designed and manufactured offshore
- We are a one-stop solutions provider, offering engineering, design, prefabricated pipe spool products, installation and testing capabilities on time and within budget. For vessels sailing worldwide our Global Service Network, offers the added advantage of prompt response with products and services any where and any time.



Bondstrand Scrubber Piping on Asuka II. All works were completed in very complicated and confined areas.

Corporate Headquarters
7909 Parkwood Circle Drive
Houston, Texas 77036
USA

Fiber Glass Systems
17115 San Pedro Avenue, Ste 200
San Antonio, Texas 78232 USA
Phone: 210 477 7500
Fax: 210 477 7560