Upgraded fuel pump design offers new possibilities

Svanehøj has increased the pressure in its DW Fuel pump by 50%. It is one of several upgrades that optimise the pumping solutions for two new VLGCs being built at Hyundai Heavy Industries.

SVANEHØJ
catch the waves

When Hyundai Heavy Industries (HHI) delivers two dual-fuelled Very Large Gas Carriers (VLGC) to Trafigura in 2021, it will be with an upgraded fuel pump solution from Svanehøj.

Svanehøj's R&D team has optimised the fuel pump's patented design to increase the pressure in the pump by as much as 50%. This innovation means a significant saving for the customer.

"We had to put together a pump solution that could handle a pressure of 25 bar for this project. Our fuel pump was originally designed to handle a pressure of up to 20 bar, and we therefore investigated the possibility of increasing the pump pressure. With a few simple changes to the intermediate chambers in the pump cylinder, we have succeeded in increasing the differential pressure to 30 bar," explains Martin Andersen, Key Account Manager at Svanehøj.

The result is an optimised solution, as the customer will be able to reduce the number of high-pressure pumps from two to one. The pumps are approx. 23 metres long and installed directly in the cargo tank, so deck tanks are not required.

Customised solutions
The increase in pressure in the fuel pump is one of several upgrades that meet the specific needs of the new VLGCs.

Based on experience from another LPG carrier project, Svanehøj has changed the composition of materials on parts of the fuel pump, so that the pump can supply the main engine with LPG while at the same time it can be used for sampling ammonia. Therefore, the yard does not have to install a dedicated sampling pump.

The cargo pumps are also fitted with a new inducer, which was originally developed for ethane ships. The benefits are lower NPSH and higher flow.

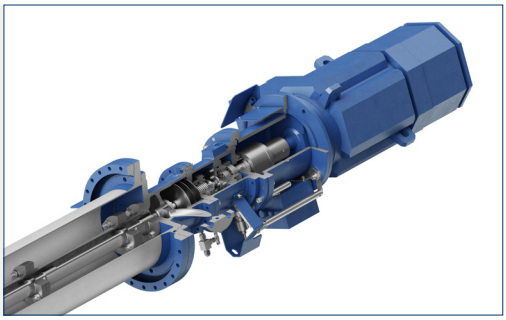
"This case is an excellent example of Svanehøj being able to develop custom solutions that meet the needs of both our customers and the market,"

Martin Andersen, Key Account Manager at Svanehøj.

Want to know more?
The Svanehøj DW fuel pump is a classic multistage centrifugal pump which enables ships to comply with both current and future requirements, as it is fully compatible with all liquid gas fuels as well as synthetic carbon-free electrofuels. By placing all sensitive components such as the electric motor, seals and bearing systems outside the tank, Svanehøj has reduced maintenance costs considerably and removed one of the primary contributors to temperature rise and boil off gas. The pump is designed for a 25,000 hour / 5-year service interval. But if needed, the motor, bearing, and pump can be easily accessed at any time between regular service dockings – regardless of tank content and the liquid level inside the tank.
More info at: https://www.svanehoj.com/business-area/fuel-pumps-en/

Svanehøj will deliver:
- 2*8 deepwell cargo pumps, DW250/200-3-K+IA (with screw inducer for extra low NPSH)
- 2*2 booster pumps, NMB150e
- 2*2 deepwell fuel+sampling pumps, DW Fuel (Marine)

Facts about the project
Vessel type: VLGC
Client: Babcock LGE
Shipyard: Hyundai Heavy Industries
End customer: Trafigura



SVANEHØJ Danmark A/S
Fabriksparken 6,
9230 Svenstrup J

+45 9637 2200
svanehoj@svanehoj.com
www.svanehoj.com

SVANEHØJ
catch the waves