KAESER

SUCCESS STORY

Compressors on the high seas

Nitrogen production on modern tankers with the aid of KAESER screw compressors.

The Norwegian Storli shipping line has recently signed a contract with the Kvaerner Floro shipyard for the supply of two more chemical product tankers each of 37,500 tons cargo capacity (dwt). The basic design of the two new ships is the same as those already supplied to Storli and National Chemical Carriers of Saudi Arabia. The ships will be fitted with modern polymer membrane nitrogen generators.

Nitrogen production using hollow fiber technology

The new nitrogen generating plant developed by Kvaerner-Medal employs technology from the French Du Pont and Air Liquid companies. The concept is based on nitrogen production via air separation using polymer membranes. The system has a total production capacity of 4,100 m^3/h and consists of two nitrogen generators and FS, ES and CS screw compressors, air filters and receivers from KAESER. In the polymer membrane system hollow fiber technology is used to generate large volumes of nitrogen with a purity of 99,9 percent. The system supplies pure inert gas and nitrogen for inerting and blanketing. Inert gas and compressed air are also needed on tankers for other purposes, inert gas for tank drying and compressed air for maintenance work.

41,200 m^3 cargo capacity

The two new additions to the Storli fleet have a double hull throughout the entire cargo section and longitudinal cofferdams along the centerline. A further improvement is the addition of transverse cofferdams to separate cargoes of different specifications. Apart from the new nitrogen plant, the two ships have an enlarged refrigerated cargo capacity of 7,500 m^3, an increase of 2,500 m^3 over their predecessors. The Storli tankers have a length overall of 183.2 m, a breadth of 32.2 m, a height of 14 m and a draught of 10.65 m fully loaded. Cargo capacity is 41,200 m^3 or 37,500 tons on a fully loaded draught and they can reach a speed of 16 knots.

1: Bow Cedar, one of the cargo vessels of the Storli fleet.

2: High technology on the bridge.

3: Monitoring and navigation control center.

4: The inert gas plant.

16 different cargoes

The cargo tanks are totally separated from each other. Most are in acid resistant stainless steel and some of the smaller tanks are zinc coated. Each tank has submerged cargo pumps of stainless steel and is equipped with heating coils supplied by a pair of central 6,500 kW heaters. Fixed tankwash machines allow thorough cleaning of the tanks in the closed mode. All pumps for cargo, ballast and tank cleaning are operated from a control panel in the cargo control room. 16 crossovers for cargo vapor return enable simultaneous handling of 16 different cargoes in 32 tanks with full vapor emission control.