Reference Project

Maersk Cunene

Maersk Line

Project Overview and Details

Maersk Cunene is a 4,500-TEU Wafmax type container ship built in 2011. It is part of a fleet of 22 vessels introduced by Maersk Line to serve the growing West African market.

With its length of 250 m, 13.5 m draught and 37 m beam, Maersk Cunene is specifically designed to meet the maximum size allowable in West African ports, thereby achieving peak efficiency.

In line with Maersk's ambition to decarbonize logistics, this vessel uses 30 percent less fuel per container moved than the industry average on the Asia-Africa trade.

Solution

Frese has delivered our very first OMEGA Compact DN150 to Maersk Cunene in a proof-of-concept partnership.

The OMEGA Compact is a 3-way rotary valve, which provides simple, accurate, and reliable temperature regulation for both diverting and mixing applications in high and low temperature cooling systems.

Like all Frese products it is designed with energy savings as a central target. It is optimized for minimum pressure drop and is therefore market leading in terms of high kV values. For typical marine cooling water systems this will result in 30-50% pump energy savings related to the valve.

However, the main energy saving potential comes from the valve's near-zero leakage rate. In fact, the Class IV (0,01%) leakage rate of the OMEGA Compact is unique in the market and is due to Frese's LeakGuard ™ technology, which prevents internal leakage, even over time.

This reduces fuel oil consumption on the main engine in low temperature cooling systems, as well as on boilers in high temperature cooling systems.

Frese and Maersk Line estimate the fuel saving potential to be 20-30 MT per year form this simple valve replacement.

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