NORLEDE

From Gas Driven To Electric Ferry Oslo Fjord

2.April 2019

Introduction

Norled is one of the country's largest ferry companies and operating 80 ferry and high speed ferry in connections from Oslo to

Troms (20 vessel under construction).

The company has 1200 employees and translates for 2,3 billion kroner annually. The administration has offices in Stavanger (headquarters) and regional office in Bergen and Oslo.

Norled is a wholly owned of DSD.

Norled is ISO 14001 and ISO 9001 certified and ISM certified and approved.

Internal audit is based on these two standards as a basis for requirements, along with guidelines in Norled's own management system in TQM.







Kongen, Dronningen and Prinsen



LNG powered passenger ferry go electric



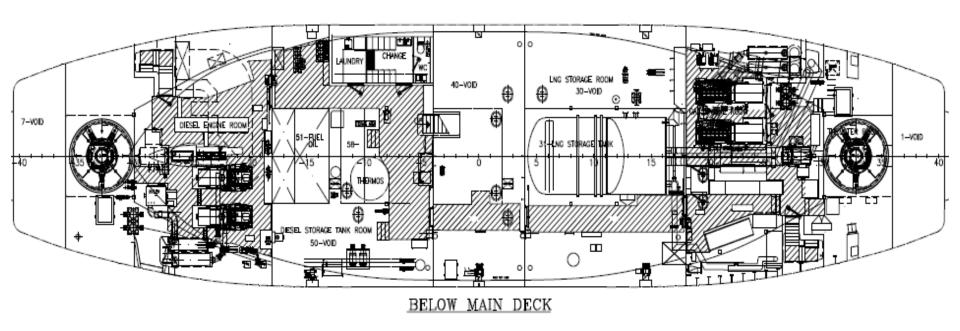


They are servicing the most heavily trafficked ferry connection in Norway with more than 2,7 million passengers annually and have been in operation since 2009.

Under normal operational conditions these ships will operate on gas only and biodiesel is only for back up. (20% reduction of CO2 and 85% reduction of Nox).

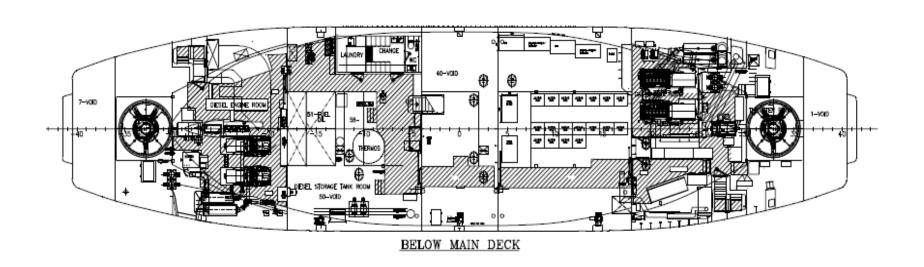


Replace gass system with battery system



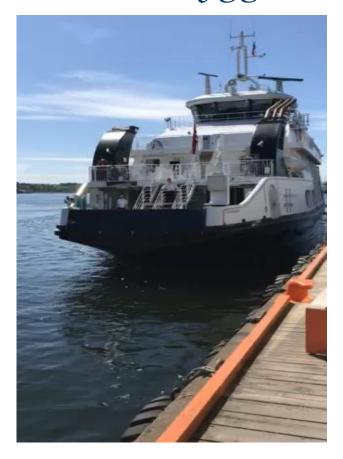


«new» HVAC with energy from seawater





APS Charger at Aker Brygge (4MV, 4200Amp)



Thanks for the attention!



