



Photos: Marko Hänninen, www.faktaomfartyg.com

CUSTOMER

NorthLink Orkney and Shetland Ferries Ltd, Scotland

BACKGROUND

The M/S Hjalmland (main picture) and M/S Hrossey (top left) ferries are two identical sister ships that were built in 2002 at Aker Finnyard in Finland. They were launched in August the same year and operate on the Aberdeen–Stormness–Kirkwall route.

Each ferry is powered by 4 x MaK 6M43 diesel engines, delivering a total of 21,600 kW (29,000 hp) to two controllable pitch propellers. The ferries reach a speed of 24 knots carrying 600 passengers in 300 cabins.

APPLICATION

Each propeller shaft is equipped with a Dellner SKD 4x100 pressure applied disc brake, operating on a $\varnothing 1,050$ mm (41.3 in) brake disc.

The primary function of the brake is to hold one of the propeller shafts while the other propeller is still operational. This can be either for maintenance or for when the ferry is operating in single propeller mode.

The pitch of the propeller that is not operating is positioned to generate minimum water resistance before the shaft is locked by the brake. Pressure for the disc brakes is provided by an intensifier which delivers 166 bar (2,408 psi) of hydraulic pressure with 7 bar (101 psi) pneumatic inlet pressure.