

Press Release

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New double-ended ferry serving the North Sea island of Norderney – Safe and eco-friendly maneuvering in shallow, high-sediment water using Voith Schneider Propellers

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Ferries operated by Norden-Frisia AG have been serving the East Frisian island of Norderney for many decades. Navigation in these coastal waters poses special challenges: in some areas the waterway only leaves a few centimeters below the keel and the water contains a significant amount of swirled-up sand. A new sister ship of the double-ended ferry MS Frisia IV equipped with Voith Schneider Propellers (VSP) is to enter service in summer 2015. The shipping company again chose Voith Schneider Propellers as these are ideally suited for the specific operating conditions in shallow tidelands. Delivery is scheduled for September 2014.

The shipping company Norden-Frisia AG had already selected a VSP propulsion system for the Frisia IV which has been serving the route between Norddeich and Norderney since 2002. This propulsion concept proved successful and will now also be used for the new vessel. The ferry will be built by the Cassens shipyard in Emden. With a length of 74.3 meters and a beam of 13.4 meters, she will be slightly longer than her sister ship. The newbuild with a draft of 1.75 meters is designed to carry 1,340 passengers and 60 cars. She will reach a speed of 8 knots in shallow water and 12 knots in deeper water.

Environmental compatibility for operation in the Wadden Sea National Park is ensured by the Blue Angel symbol for “eco-friendly vessel design” (RAL-UZ 141) and an exhaust gas aftertreatment system consisting of an SCR catalyst and particulate filter.

Furthermore, one VSP will be operated using biodegradable EG 2-150 oil. This field test is carried out in close cooperation between the shipping company, Voith and the oil manufacturer and highlights the consistent approach to increased eco-friendliness by using biodegradable fluids and

lubricants. The field test will be used to validate the biodegradable oil prior to granting final approval for its use in VSPs.

The four type 16R5 EC/100-1 Voith Schneider Propellers used ensure excellent maneuvering and propulsion characteristics even in the very shallow Wadden Sea. As the water is high in sediments in this area, the VSPs are equipped with special ceramic-coated ring seals to prevent damage caused by suspended sediments.

The propulsion concept is diesel-electric. The VSPs are driven by speed-controlled electromotors. Voith also supplies bow tooth couplings connecting engine and VSP, thus eliminating the need for intermediate gearboxes and additional shafts. The drivetrain is therefore more compact and efficient and eliminates another source for noise. On the Frisia IV, the VSPs have already proven to be the drivetrain component with the least noise emissions. This is of major importance as the lounge deck is located directly above the machine rooms.

Voith also supplies its newly developed electronic control system which permits combined operation. Blade pitch and output speed are now optimally matched in all operating situations. The resulting hydrodynamic efficiency pays off in terms of low fuel consumption and a minimization of harmful emissions. Voith also provides support with regard to the hull design at both vessel ends to reduce salt water spray onto the deck cargo.

The East Frisian island of Norderney is currently served by five ferries from the mainland port of Norddeich. The crossing to Norderney takes approximately one hour.

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Voith Turbo, a Group Division of Voith GmbH, is a specialist for intelligent drive solutions and systems. Customers from highly diverse industries such as oil and gas, energy, mining and mechanical engineering, ship technology, rail and commercial vehicles rely on advanced technologies from Voith Turbo.

Voith sets standards in the markets energy, oil & gas, paper, raw materials and transportation & automotive. Founded in 1867, Voith employs more than 43 000 people, generates €5.7 billion in sales, operates in over 50 countries around the world and is today one of the largest family-owned companies in Europe.

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