

## Press Release

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### **First Voith Water Tractor with Fully Electronic Control System in Operation in Japanese Waters**

November 2012

**Shipowner Fukushima Kisen based in Iwaki on the east coast of Japan has commissioned the first Voith Water Tractor (VWT) with a fully electronic control system (ECS). On the ECS version, the hydraulic unit is no longer separate but is installed on the rotor casing foundation of the Voith Schneider Propeller (VSP). Not only does this save space, but it also simplifies maintenance and increases reliability.**

The new VWT Shinano has been designed for harbor assistance and escort duties. The tug was constructed by Niigata Shipbuilding based in Niigata, Japan, and is equipped with two size 32 R5 ECS/265-2 VSPs with an input power of 2600 kW each. The owner, Dr. Nakamura, operates a fleet of different harbor assistance and escort tugs in the port city of Iwaki.

In addition to the new control system, the VWT Shinano is equipped with a Voith Turbo Fin to increase indirect tow-rope pull, in particular when escorting. The vessel is also fitted with a Voith roll stabilization system.

With this first installation of the fully electronic control system in a VWT, Voith was also able to optimize the hydraulic components of the VSP propulsion system. While these components had previously been installed separately, they are now integrated into the propulsion system, thus saving space. This in turn results in a reduction in energy consumption due to the direct control of the proportional valves and the elimination of a separate hydraulic unit.

In addition to this economic advantage, the operators also benefit from the higher maintenance-friendliness and the increased reliability resulting from this design: Components of the cooling unit, the pump systems (mechanically

driven main pump as well as electrically driven standby pump) and the lube-oil and control oil reservoirs are integrated into the rotor casing area and are easily accessible. Reliability is increased by the integration of the lube-oil and control oil reservoirs into the rotor casing area. Regarding the control stand, a completely new design was introduced to comply with the latest technical requirements such as display functions.

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**Voith Turbo, the specialist for hydrodynamic drive, coupling and braking systems for road, rail and industrial applications, as well as for ship propulsion systems, is a Group Division of Voith GmbH.**

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