

Media Release

Voith Turbo

Mailing address:
J.M. Voith SE & Co. KG
Global Communications Voith Turbo
Alexanderstr. 2
89522 Heidenheim, Germany
Tel. +49 7321 37-9517
www.voith.com

SMM 2022: Voith makes maritime applications more sustainable

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- eVSP: Environmentally friendly and resource-saving thanks to electric propulsion concept
- rcVSP: Remote-controlled assist tugboats for more efficient mooring and casting off
- VSP X-Type: The proven propulsion concept in a new series

HEIDENHEIM, GERMANY. Better economy and greater sustainability – these are the megatrends that shipping companies and operators of maritime applications are focused on. For example, ports and shipping companies are searching for new ways to improve their efficiency and global competitiveness. In addition, legal regulations in many countries will require a significant reduction in emissions in the coming years. At the SMM, the world's leading trade fair for the maritime sector, from September 6 to 9, 2022, Voith will present innovative propulsion concepts such as the eVSP and the VSP X-Type series as well as smart technologies such as the rcVSP as pioneering solutions to these challenges.

eVSP: Environmentally friendly and resource-saving with minimal noise

With the new electric Voith Schneider Propeller (eVSP), Voith meets the rising demand for resource-saving and energy-efficient mobility concepts for maritime applications. The propulsion system combines the proven, decades-old VSP technology with the electric know-how from the Voith Inline Thruster (VIT). The result is a high efficiency and lower complexity, as the permanent-magnet synchronous motor is already integrated into the propeller. Another advantage is provided by the complete elimination of a gearbox, which reduces noise to a minimum and frees up valuable space in the ship.

The eVSP has all the advantages of a conventional Voith Schneider Propeller. The combination of propulsion and control in a single unit allows

ships to maintain their target position in rough waters. In addition, the VSP reduces ship roll, thereby increasing the comfort and safety of the passengers on board.

“With the electric Voith Schneider Propeller, we are making an important contribution to the electrification of the drive train in marine applications and thus to even more resource-saving shipping,” says Dr. Dirk Jürgens, Vice President Research & Development at Voith Turbo Marine. “The new eVSP was developed for all applications involved in the mobility transition, for example, offshore ships, tugboats and ferries.”

The eVSP offers ship operators flexibility in the selection of an energy source and a low-maintenance, robust design.

rcVSP: Safe and economical ship assistance through digitalization

“rcVSP” stands for “remote-controlled Voith Schneider Propeller,” a technology with which ship assistance and tugboat maneuvers can be carried out remotely. The goal is to make the work of the tugboats safer and more efficient. Use of tugboats is critical for successful ship assistance. However, the teams often work in dangerous conditions. The tugboats often operate right in front of the bows of the ships, which are often well over 300 meters long and 45 meters wide. Extremely high forces, which can exceed 100 metric tons during dynamic maneuvers, are exerted on the towlines. Even minor technical problems or maneuvering errors can lead to a line breaking or a collision between a huge oceangoing vessel and a tugboat. With the rcVSP, these tugboats work without crews. All maneuvering is done from a shore-based control center. Towline handover is accomplished automatically.

At the same time, the rcVSP contributes to minimizing the operating costs of a tugboat because with a remote-controlled tugboat fleet, there is no need for common rooms or sanitary facilities for the crew. Sound insulation and even the bridge can be done away with. This reduces the weight of these floating powerhouses, which makes them even more maneuverable and reduces energy consumption. There is also more flexibility in the design of the remote-controlled tugboats because, for example, a deckhouse for the towing gear is no longer needed.

VSP X-Type: Sustainability through increased flexibility and power density

With the VSP X-Type series, Voith presents the latest version of the proven Voith Schneider Propeller technology. The new compact line concentrates on the aspects of flexibility, hybridization and reduced emissions. A higher power density and an optimized drive train result in lower fuel consumption and thus greater sustainability. Voith’s new series

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also features improved service-friendliness and optimized service intervals. However, the VSP X-Type series still has all the advantages of the proven propulsion concept. For example, the fast response to control commands enables fast and precise maneuvering, even in adverse conditions. The VSP X-Type series therefore provides the basis for maximum safety for ships, tugboats and ferries as well as for passengers and the environment.

About the Voith Group

The Voith Group is a global technology company. With its broad portfolio of systems, products, services and digital applications, Voith sets standards in the markets of energy, paper, raw materials and transport & automotive. Founded in 1867, the company today has around 20,000 employees, sales of € 4.3 billion and locations in over 60 countries worldwide and is thus one of the larger family-owned companies in Europe.

The Group Division Voith Turbo is part of the Voith Group and a specialist for intelligent drive technology, systems as well as tailor-made services. With its innovative and smart products, Voith offers highest efficiency and reliability. Customers from highly diverse industries such as oil and gas, energy, mining and mechanical engineering, ship technology, rail and commercial vehicles rely on the advanced technologies and digital applications of Voith.

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eVSP



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Contact

Philip Baeuerle
Global Communication Manager Voith Turbo
Tel. +49 7321 37-9517
Philip.Baeuerle@voith.com

Twitter

https://twitter.com/voith_hydro
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