

A complete water lubricated stern tube package for the world's biggest carbon fibre sloop

CASE STUDY



Baltic Yachts, located in Finland, is the world's leading boatbuilding yard specialising in high quality carbon fibre yachts of up to 60 metres (197 feet) in length. The company approached Wärtsilä Shaft Line Solutions to provide a complete water lubricated package solution for its 'Baltic 175 Pink Gin VI' project, the world's biggest carbon fibre sloop ever built.

The scope of the package covered the water lubricated stern tube bearings mounted in composite sleeves, a water lubricated stern tube seal, bearings and the alignment of the entire propulsion system, including the main engine, the gearbox, and the stern tube bearings. The composite sleeves were required since the yacht,

with an overall displacement of only 235 tons, was to be optimised for lighter weight. Most importantly, Baltic Yachts required a partner with the experience and expertise to deliver a reliable, efficient, and highly sophisticated total package.

THE WÄRTSILÄ SOLUTION

The contract requirements were fulfilled with the supply of Wärtsilä EnviroSAFE stern tube bearings, and the Wärtsilä Enviroguard PSE stern tube seal. The EnviroSAFE composite bearings offer an environmentally sustainable solution with a lower operational cost, which was a major requirement of the customer. The lightweight composite Enviroguard PSE stern tube seal is comprised of hard running interfaces for abrasion resistance.

The seal can be serviced without the need for removing the shaft and without docking of the vessel. The service interval recommendation is 5 years.



More importantly, the installation of a water lubricated stern tube package prevents any potential environmental risks, especially for vessels operating in environmentally sensitive areas, and reduces lifecycle cost by extending the operational life of the seals and bearings.

THE OUTCOME

The complete Wärtsilä solution was delivered to the yard in the latter half of 2016 and the final alignment of the propulsion system was successfully completed in the summer, 2017. The project demanded a highly qualified supplier capable of delivering a total package for a large, state-of-the-art carbon fibre yacht. The benefits of the Wärtsilä solution included:

- Everything delivered from a single-source supplier, thus minimising scheduling risks, and ensuring full integration and alignment of the complete system.
- An environmentally sustainable solution fully compliant with the 2013 US EPA Vessel General Permit with a long life expectancy.
- A cost effective, efficient, and reliable solution meeting the low weight requirements of the project.

“The Pink Gin VI project has been both innovative and demanding. This is why we selected Wärtsilä for the water lubricated seal and bearings package, and for ensuring full alignment of the propulsion system. We needed a partner with the experience and in-house expertise to deliver a light weight, reliable, and environmentally friendly solution, and Wärtsilä more than fills these requirements. At Baltic Yachts we are focused on taking innovation and construction techniques to another level, and we aim to work with leading suppliers having the same ambitions.”

Baltic Yachts

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