

Shaftline Conversion from Oil to Water Saves Dredge Owner Money

Installed with RiverTough Propeller Shaft Bearings for Abrasive Waters



Installation of Thordon RiverTough propeller shaft bearings on the triple screw dredger, Fraser Titan

In April 2011, the *Fraser Titan*, a triple screw 2300m³ (8,124 ft.³) dredger, was converted to Thordon RiverTough water lubricated propeller shaft bearings from an oil lubricated system. The previous oil lubricated system had many issues - frequent maintenance of aft seals, water ingress contaminating the lubricating oil, and unplanned drydockings. The vessel had its first drydocking with water lubricated shaftlines in March 2012 at Esquimalt Drydock (Canada), reporting no sealing issues (as there is no aft seal) and very little wear. At current bearing wear rates after 6,100 hours of operation, RiverTough bearings are expected to last over 10 years (+60,000 hours).

"We chose Thordon RiverTough for this vessel because these bearings are known for long wear life in abrasive waters, they eliminated the aft sealing issues we had and come with no risk of pollution," says Dmitry Kravtsov, Technical Superintendent for FRPD (Fraser River Pile and Dredge GP Inc. of Vancouver, Canada). "The Thordon solution onboard the vessel has reduced our downtime and maintenance costs."

The *Fraser Titan* has three shaftlines with diameters of 165 mm (6.6"). The Thordon RiverTough propeller shaft bearings operate in combination with hard coated Nickel-Chrome-Boron shaft sleeves which provide superior wear life in highly abrasive wear conditions experienced on the Fraser River in British Columbia. Water is used as a lubricant (instead of oil) and is taken



Triple screw dredger, Fraser Titan converted from oil to water lubricated propeller shaft bearings in 2011

from the river, pumped through the bearings using a Thordon Water Quality Package and returned back to the river. Since no aft seal is required, there is no risk of damage by abrasives or rope. This results in lower in-service maintenance costs and the elimination of storage, sampling and disposal of oil from the stern tube. Mill Log Marine, Thordon's authorized distributor in British Columbia, Canada, has worked with FRPD on this project and continues to advise on problem areas where Thordon solutions may further help them reduce operating costs. **NW**



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