

Industry: Marine - Workboat

End User: Illinois Marine Towing Inc. U.S.A.

Application: Rudder Housing & Strut Bearings

Thordon Grade: SXL Rudder Bearings, RiverTough Tailshaft Bearings

Date of Original Installation: March 2022

About:

Illinois Marine Towing (IMT), a wholly owned subsidiary of Canal Barge Company, own tugs, barges, and equipment for transporting material on the various inland waterways throughout the US. They have a repair facility in Lemont, Illinois, and work on their own equipment as well as others that need repairs.

Challenge:

On the tugboat, *Aggie C*, IMT had used rudder and tailshaft bearings from several manufacturers but unfortunately had never had much success. They had always glued their bearings into the housings no matter how badly the housings were out of round.

IMT was familiar with Thordon having used Thordon products on other vessels in their fleet. When IMT contacted Thordon, we connected them with our authorized distributor in the region, Mactech, to assist with the issues that the *Aggie C* was facing. Tim McCarthy and Monty Glisson from Mactech connected with IMT and a week later McCarthy was on site measuring all rudder bores (twelve total - six upper and six lower), two tailshaft strut housings, and the rudder steering system. Six of the bores (three upper and three lower) were out of round by 2.54 mm (0.1in) and the deviation in bore diameter was the cause of all of their past bearing failures.



Rudder housings bored and SXL bearings installed.

Solution:

When McCarthy brought the issues to the attention of the Operations Manager and the Chief Engineer at IMT, he was able to convince them to repair the bores. Mactech are experts in this kind of work and not only would they repair the bores, but would also ensure that the bearings were machined to the proper dimensions and freeze fit into the housings.

Result:

McCarthy and two other Mactech team members travelled to the jobsite in March 2022. Together with two repairmen from the shipyard, they discussed the plan to get the bores back in the round and prepare the housings for the installation of new Thordon bearings. The work was done much quicker than the customer anticipated because all twelve rudder houses were completed in half the time frame thanks to the efficient work of the Mactech team.

When the boring repair was complete, measurements were taken and provided to a local machine shop in order to machine the bearings to the required dimensions. Thordon's SXL bearings were machined to be installed in the rudder housings and RiverTough bearings were machined to be installed in the tailshaft struts. One week later, the bearings were installed and the Chief Engineer and Operations Manager were amazed at the ease of installation.

When the tug left drydock, the captain of the vessel had nothing but positive things to say about the performance of the vessel.



Strut tube before machining and after with RiverTough bearing installed.

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