

CASE STUDY

ICGS SAGAR

THE CHALLENGE

In 2017, the Indian Coast Guard ship Sagar (ICGS Sagar) was brought in to port for routine maintenance and repairs when engineers discovered severe defects in the ship's port shaftline. Specifically, composite bearings had signs of extreme premature wear, and had been failing repeatedly since the ship's commissioning in 1999. The top and bottom of the bearing showed severe degradation, which caused damage to Aft A brackets, the propeller shaft, retaining rings and intermediate bracket bushes. Additional damage included the presence of deep grooves on the shaft that obstructed the intermediate bracket on the forward and aft sides, and forced the propeller shaft out of alignment to rest on the Aft A bracket.

Lignum Vitae North America (Lignum Vitae N.A.) was engaged to assess the issues and engineer a solution that could guarantee mission readiness in extreme operating conditions for this offshore patrol vessel, which provides critical maritime safety support to Indian assets.

THE PROJECT

- Identify solution with proven, time-tested results to replace unreliable composite material
- Eliminate key performance issues including composite material degradation and shaft scoring
- Address excessive wear down of intermediate bracket bush with 21mm clearance against 6.00mm renewal clearance
- Conduct tests to compare zero clearance lignum vitae shaftline bearing performance with composite material's 80 mm clearance against 6.00 mm renewal clearance

THE RESULTS

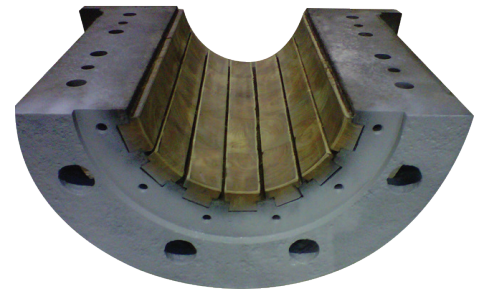
- Lignum vitae bearing half shells made from staves permanently replaced existing, poorly performing composite bearings on the port shaftline of the ICGS Sagar
- Lignum vitae bearings have sustained satisfactory, uninterrupted performance since installation

TYPE

Lignum vitae stave bearings

EQUIPMENT

ICGS Samar-class cutter



Lignum Vitae

Water Lubricated Bearings