

PRECISION IN-SITU MACHINING

REPAIRS TO BOW THRUSTER DRIVE SHAFT BEARING HOUSING - BORING TO ACCEPT SHRUNKEN SLEEVE AND SUBSEQUENT SLEEVE BORING

The Stena Europe was found to have excessive wear in the lower housing bore for the bow thruster drive shaft during a dry dock inspection. The best solution would be to bore out the existing housing to accept a sleeve which, in turn, would have to be machined out to return the housing to its original dimensions - exactly.



The ships engineers also wished to check the angularity between the Drive Shaft and Bow Thruster Shaft, where the pinion gears mesh.

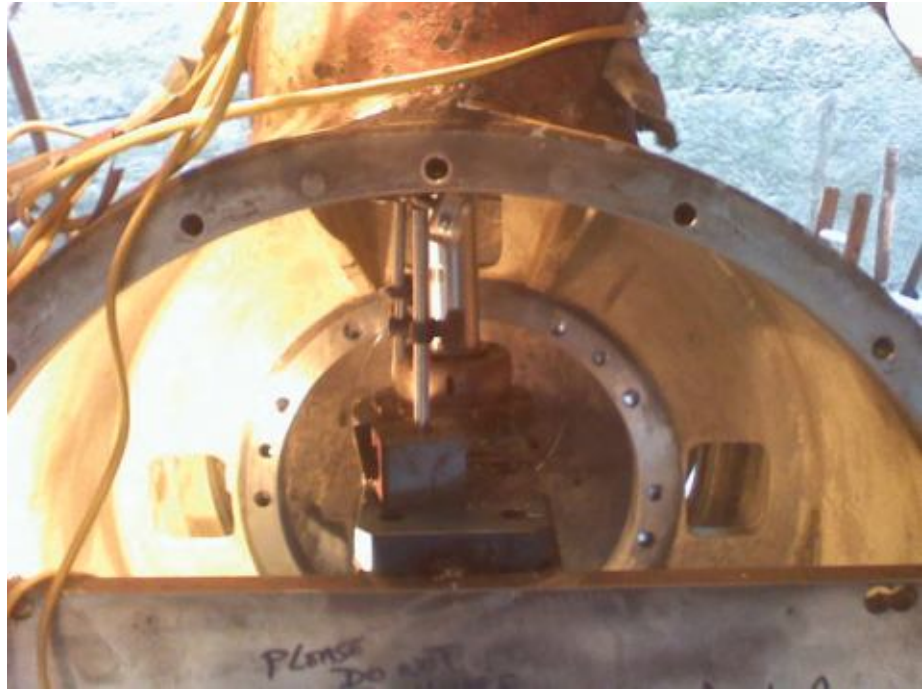


M & A utilised one of its range of heavy duty line boring bars to replicate the position of the Bow Thruster Shaft. When the vertical bar had been set in the drive shaft housing bores, a sweep reading was taken across the horizontal bar. No error was found.

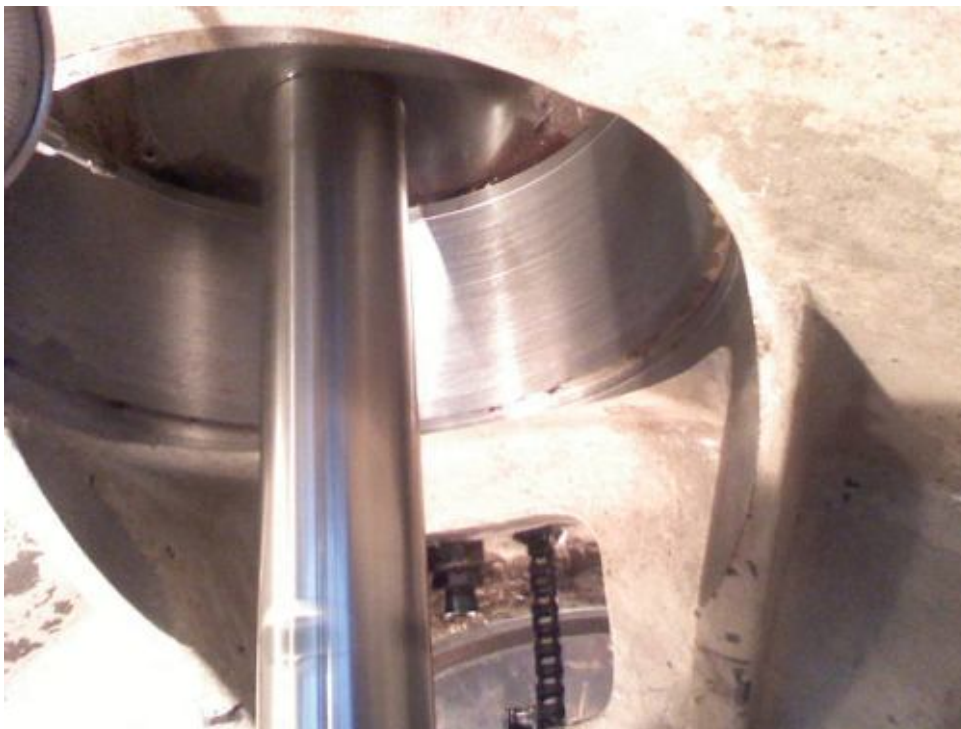


"The boring operation was accomplished without fuss and the whole project effected with accuracy"

To allow the sleeve to be fitted, the adjacent webs also had to be machined away. This required additional bracket supports mounted in the Bow Thruster housing to locate and centralise the lower machine bearing.



**Lower Bearing
And Support**



**Machining The
Sleeve To The
Final Size**



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