

Assignment

Kraatz was awarded a contract for the fabrication of 2 Kort nozzles for an Anchor Handling vessel, the Donnelly Tide. The vessel is owned and managed by Tide Water Marine, one of the largest offshore supply vessel owners and managers in the world. A Kort nozzle is a shrouded, propeller assembly for marine propulsion. The hydrodynamic design of the shroud, which is shaped like a foil, is an important component in the overall efficiency of a vessel’s propulsion system.



Figure 1 - Double curvature of leading edge

Never before was a Kort nozzle of this complexity fabricated in Namibia. Historically, these types of Kort nozzles are fabricated abroad and shipped to Namibia. The most complex section of the Kort nozzle is the double curved leading edge that requires specialized rolling or spinning machinery. Due to tight time schedules, quality requirements and an alternative forming method proposed, the project was awarded to Kraatz.

Getting the job done

The steel specification for the fabrication of the Kort Nozzles is significantly higher than the standard normal fabrication assignments and not readily available. In order for Kraatz to supply the correct grade of steel, steel was sourced from South Africa and upgraded in compliance with the required international specifications.

The workshop section, under the Industrial division successfully sourced the steel and fabricated the 2 Kort Nozzles in a record time of 26 days, despite the traditional December holiday period.



Figure 2 - After Non Destructive Testing (NDT)



Figure 3 - Ready for transportation

After fabrication, the Kort nozzles were transported and successfully installed on the vessel by the Marine and Offshore division.



Figure 4 - Kort Nozzles Installed

The vessel successfully passed sea trials and was put back into operation.