



Product

Drop-In Replacement Speed Increaser

Application

Nuclear Plant Charging Pump Drive

Highlights

- Completely new gearbox manufactured to original specifications
- 10CFR50 Appendix B Quality Program with compliance to NQA-1
- All manufacturing and testing performed in-house

A nuclear power plant in Spain suffered a catastrophic failure of its charging pump speed increaser. The cause of the failure was a loss of lubrication due to a rupture in one of the lubrication lines which had been modified by the utility without regard to the OEM design. The unit was rated for 1035 HP with an input speed of 1482 RPM and an output speed of 4854 RPM.

Nuttall Gear was the original supplier of the speed increaser and maintained all of the original drawings and specifications for the unit, which was manufactured in 1978. This allowed Nuttall Gear to supply a newly manufactured drop-in replacement unit without the need for costly and time-consuming reverse engineering. The speed increaser contained over 220 individual parts, with each part verified to meet or exceed the original specification. The unit was fully assembled at Nuttall Gear and tested in-house on a dedicated high-speed test stand. Vibration and temperature levels were continuously monitored during the test.

Nuttall Gear has supplied high quality speed increasers for nuclear power pump applications since 1960. Nuttall Gear continues to supply service and parts, including upgraded gear sets, for these units under its 10CFR50 Appendix B program. By partnering with Nuttall Gear, customers are assured that replacement components are genuine and manufactured to meet or exceed original design specifications.

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