

# Application Profile





## **Custom Heavy-Duty Gearing**

### **Nuclear Power Plant Pump Drive**

#### **Application**

#### Highlights

- Precision-ground, AGMA Q12 gear set
- 10CFR50 Appendix B Quality Program with compliance to NQA-1
- Reduced vibration and stress on other pump components

A nuclear power plant located in New York needed replacement gearing for the main feedwater pump speed increaser. Put into service in 1970, the plant houses a single Westinghouse 2-loop pressurized water reactor that generates 4,930 GWh of power annually. The large pump increases the pressure of the water supplied to the steam generator.

The original gearing, supplied by Nuttall in 1967, had become obsolete and was nearing the end of its service life. Rated at 5500 HP, the Nuttall Model SU21 drive transmits torque and increases the speed between the drive motor, operating at 1,770 RPM and the feedwater pump running at 6,811 RPM.

Because Nuttall was the original supplier of the speed increasers in Westinghouse pressurized water reactors, costly and time-consuming reverse engineering was not necessary. Nuttall maintains all original design drawings and specifications for their speed increaser units.

Since 1960, Nuttall has provided superior quality speed increasers for various pumps in nuclear power applications. Nuttall continues to supply parts, service and 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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