Valve Refurbishment

for Obsolete Hammel Dahl Butterfly Valves



Nuclear Power Products and Services



PLANT TYPE Nuclear Power Plant

LOCATION Midwest United States

CHALLENGE Obsolete butterfly valves experiencing seat leakage

SOLUTION Valve refurbishment



Background

A nuclear power plant in the Midwest region of the United States was experiencing seat leakage in three Hammel Dahl butterfly valves installed in their split bypass flow application to the steam generator preheater.

Challenge

The original equipment manufacturer (OEM) was no longer in business, having sold that particular butterfly valve line over the years, and the parts needed to refurbish the leaking valves were obsolete.

Solution

Curtiss-Wright Nuclear proposed a valve refurbishment project using reverse engineered seats and components. Using the proposed solution, the nuclear power plant was able to avoid costly design modifications - which would involve alternate valve designs and re-analyzing all flows and failure modifications of the new valve replacement. The refurbishment project included qualification testing at Utah Water Research Laboratories and NWS Technologies to qualify operability and design of the reverse engineered parts.

The refurbished valves passed all qualification and operability testing, ensuring the valves meet original design specification requirements. By implementing Curtiss-Wright Nuclear's valve refurbishment solution, the plant saved over \$520k (compared to new valve replacement and qualification) and gained a new source of spare parts for their obsolete valves.

