

One Large Scale Pump Repair for GLWA – It's All In the Details



Kennedy Industries disassembled, transported, repaired, and reinstalled a massive Byron Jackson pump for the GLWA Lake Huron Water Treatment Facility.

PROBLEM:

The Kennedy field service team was contacted by Great Lakes Water Authority (GLWA) to diagnose the overloading issue on a 2250 HP motor that runs their largest low lift pump, a Byron Jackson 84HXH. This enormous pump pulls raw water from Lake Huron at 139,000 GPM (gallons per minute) and feeds it into the water treatment plant to become drinking water for thousands of customers. Our team mobilized to troubleshoot the problem and soon discovered that one of the nine shaft couplings in the pump was broken, which created a severe mechanical rub at the impeller. Knowing that the pump had been in service since 1969, the client decided to send the entire pump to Kennedy for a complete evaluation and overhaul.



SOLUTION:

We first completely disassembled the pump and glass bead blasted all components. We then precision inspected, and performed non-destructive testing, shaft run-out checks, and concentricity checks on major components. We subsequently chrome plated, welded, metal-stitched (for a large crack found on the inlet bell), and performed numerous other machining processes, impeller balancing, critical component replacement, final cleaning, and an "as-built" inspection. After that we reassembled the pump in our 100,000 sq. ft. facility with all new hardware.

We returned the pump to the plant where we assisted with reinstallation and start up. This happy customer is now back on-line for another 50 years.

Pump Specs

- Flow rate: 200 million Gallons Per Day or 139,000 Gallons Per Minute
- Discharge size: 77"
- Weight: 175,000 lbs.
- Length: 110 ft.
- Horsepower: 2250
- RPM: 327