

Priority One Repairs from ERIKS That Kept Water Flowing

Industry Sector:
Water & Wastewater



Application:
High-Lift Pumps



Problem

When ERIKS first surveyed the high-lift pumps at Water Supply Works in the South of England in 2022, the findings were clear: ageing slip ring motors, minimal planned maintenance, and a risk of failure that could cripple the water supply to Southampton and a major refinery downstream.

Despite clear prioritisation in the ERIKS report, the site initially focused on lower-risk pumps. It didn't take long for reality to catch up: a pump flagged as critical failed, proving the value of the original assessment.

With five pumps supplying drinking water to the local area and five serving the large local refinery's industrial demands, which can fluctuate daily, any performance drop puts huge pressure on operations. If multiple pumps fail simultaneously, the consequences could include disruptions to household water supply and potentially refinery production halts, and severe reputational damage.

Challenge

The water company had been operating with stretched maintenance resources and a largely reactive strategy. Many pumps had seen continuous service for decades without the regular PPM checks required to keep them in reliable working order. The environment didn't help — although housed, the pump gallery was open to the elements, leaving motors vulnerable to moisture ingress.

The site's isolation valves hadn't been operated in years. Several were seized completely and required a specialist contractor to release them before any pump work could begin. One unit had been out of action for over two decades after a misjudged impeller trim left it badly under-spec.

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As a result of these compounding issues, most of the repair work progressed on a P1 [Priority One] basis, meaning the asset had to be removed, repaired, and returned without delay, bypassing the standard quotation process entirely. That's where ERIKS stepped in as their tried and trusted repair partner.

Solution

Since the initial survey, ERIKS has completed a full overhaul programme for all five drinking water supply pumps and two of the industrial supply units, with further work planned. Each project followed a rigorous, technically detailed process designed to return each motor and pump as close as possible to its original spec.

On arrival at the ERIKS Southampton Workshop, each motor was fully dismantled and assessed. The slip rings, typical of these older motor designs, were skimmed to restore clean contact surfaces, and new brush gear was installed. Insulation resistance tests were conducted in-situ before removal and again under workshop conditions to ensure safe and reliable operation. Several motors showed low IR readings due to moisture exposure, which was addressed during overhaul.

The pump units underwent full mechanical refurbishment. This included complete strip-down, internal shotblasting, and application of Belzona coatings to restore the pump casing and prevent future erosion. Impellers were assessed for wear, with modifications carried out where necessary. Each impeller was then balanced to strict tolerances to reduce vibration and extend bearing life.

New mechanical seals and sleeves were supplied and fitted, and new wear rings were installed to improve overall efficiency and flow performance. Once reassembled, each unit underwent a full test on the ERIKS rig to confirm operation under load before return to site.

In every case, ERIKS met tight turnaround deadlines, despite complex repairs, avoiding unplanned outages and ensuring site operations could continue as normal.