

3.2MW Generator Major Outage

Quartzelec removed, overhauled, and refitted a 3.2MW generator at Arla Foods, ensuring full operation within a 12-day critical outage.

ARLA FOODS INGREDIENTS | FOOD PROCESSING | CEREDIGION, WALES

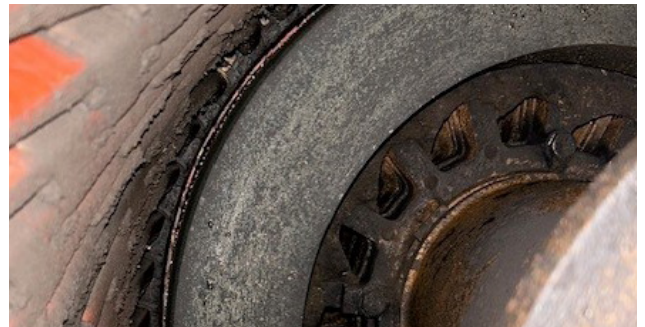
Our Customer's Challenge

Arla Foods Ingredients faced a critical operational challenge at their West Wales site in November. A 3.2MW generator, essential to their wood-burning power plant, required a full overhaul, and with no spare available, any delay would directly impact production. The generator was located in a confined area, making removal particularly difficult, and the customer required the entire process - including removal, refurbishment, and refit to be completed within just 12 days. Compounding the challenge, the generator was heavily contaminated with wood dust, demanding a thorough and precise overhaul. Arla Foods Ingredients turned to Quartzelec Swansea due to our proven expertise in complex generator overhauls, rapid turnaround solutions, and precision alignment capabilities, confident that our team could deliver the project safely, on time, and to the highest technical standards.

The Quartzelec Solution

Quartzelec removed the 3.2MW generator from its confined location on site and transported it to our workshop for a full overhaul. The unit was stripped down, thoroughly cleaned to remove heavy wood dust contamination, and the windings underwent full wash, stove, and Baker testing. Shaft concentricity was verified, the rotor was balanced to G2.5 specification, and the white metal bearings were restored within tolerance. Minor corrosion on the shaft was treated, and all components were coated with anti-track. The cooler was fully inspected to ensure optimal airflow, and full PD/TD testing confirmed the generator's integrity. Once rebuilt, the generator successfully completed its test run, was laser-aligned with the ORC turbine, and returned to site on schedule, fully operational and supporting production.

In addition, the team carried out on-site bearing changes for seven motors ranging from 11kW to 75kW and removed, overhauled, and refitted two 200kW AC fan motors, including supplying a new motor and providing a ready spare. Through meticulous planning, technical expertise, and efficient execution, the team ensured that all critical equipment was returned to service within the required timeframe, meeting the customer's stringent deadlines and operational needs.



Key Benefits

- Minimised Downtime – Critical 3.2MW generator returned to full operation within the 12-day outage, ensuring production continuity.
- Enhanced Reliability – Comprehensive generator overhaul, including rotor balancing, bearing refurbishment, and PD/TD testing, improved long-term equipment performance.
- Precision Alignment – Laser alignment with the ORC turbine ensured optimal efficiency and reduced mechanical stress.
- Additional Support – On-site motor bearing changes and fan motor overhauls provided spares and reduced future maintenance risks.



Thank you and your team for the exceptional support of our nearly completed shutdown, I feel that the works undertaken were excellent. Please pass on our thanks to your teams, very much appreciated.

- David Waite, Biomass Operations Manager

