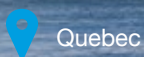




Major Problem on a Canadian Ship

Expertise in diesel generators
prevented a major breakdown



Quebec

The Challenge

A Canadian ship equipped with three 1,350 KVA (400V, 50Hz) diesel generators was experiencing intermittent problems with its generator #2. When it reached a load of 700kW, a current differential alarm was triggered, even though the output current appeared to be perfectly balanced. Despite thorough checks by the crew—replacing the relay, testing the cables, inspecting the main stator, among other things—the problem persisted, whether the generator was in stand-alone or synchronized mode.

Aware of the importance of resolving this malfunction before it caused a major breakdown, the customer called on LM's Energy Division, renowned for its expertise in diesel generators, synchronized systems, load sharing, and alternator winding.



The LM Solution



LM dispatched a senior technician from the Energy Division with over 20 years of experience and a DEC in electrical engineering, to work directly on the ship. Our technician performed a series of comprehensive checks, confirming that, despite normal external data (voltage, amperage, resistance), the differential relay was indeed detecting an anomaly.

The investigation focused on the generator windings. He isolated the phases and coils of the main stator. After several tests, a short circuit was identified on a coil in one phase of the stator. This anomaly caused an internal voltage imbalance detected by the differential relay, which is designed for other types of diagnostics. This precise analysis made it possible to determine the exact source of the problem.

Instead of bypassing the alarm, the customer chose to conduct a more in-depth analysis, thereby avoiding a major breakdown and prolonged interruptions to the ship's operations. Thanks to LM's intervention, the customer was able to order a new alternator and replace it before irreversible damage occurred. This preventive measure saved considerable costs and ensured the continuity of the ship's operations.

This project demonstrates LM's commitment to providing innovative and sustainable solutions.

Customer Benefits



Contact us today to discover how LM can transform your technical challenges into lasting success.



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