

ALTERNATOR REWIND



THE CLIENT

The client is a shipowner from Dubai, owning a vessel equipped with a 750 KVA alternator. This client operates in a highly demanding industry, relying on the operational efficiency and reliability of marine equipment.

THE SITUATION

During a routine inspection, the crew identified issues with the vessel's alternator. Electrical inspections and measurements on board revealed that the alternator's winding was compromised.

This failure could lead to the vessel's downtime and significant losses in terms of both time and costs. The shipowner sought a quick and reliable solution to rewind the stator of the alternator.



THE SERVICE

Metalock Brasil, was called upon to perform the service. The company followed these steps:

01 - Initial inspection and diagnosis:

- Conducted inspections and electrical measurements on board the vessel, using a Megohmmeter and Milliohmeter.
- Identified the need to rewind the main stator of the alternator.

02 - Dismantling and transportation:

- Dismantled the alternator assembly.
- Arranged for the removal of the alternator from the engine room to the deck of the vessel.
- Transported the alternator to Metalock Brasil's workshop in Santos, SP.

03 - Works at workshop:

- Performed dimensional inspection of the rotor and generator covers, confirming they were within the manufacturer's tolerances.
- Conducted dynamic balancing of the rotor to ensure balanced operation.
- Performed thermal treatment and electrical measurements of diodes, main rotor winding, exciter stator winding, and exciter rotor winding.
- Application of the manufacturer's instructions, regarding tolerances and electrical design.
- Rewound the stator according to the original equipment schematics.

04 - Reinstallation on board:

- After the vessel returned to the port of Santos, Metalock Brasil boarded again.
- Performed mechanical installation, with alternator mounted on the base, and alignment between the alternator and the engine.
- Executed the electrical connections.
- Conducted load tests on the alternator, following the manufacturer's protocol.



THE RESULTS

All tests conducted on the alternator were satisfactory and received approval from the classification society DNV.