



Diadem Ship Repair Pvt. Ltd.

Registered Address: Sharad Wadi Room No. 2, Near Basant Cinema, Dr. C.G. Road, Chembur, Mumbai. 400074
Office Address: 228, 2nd Floor, Daulat Udyog Bhavan, Wadhavali Village, Dr. C.G. Road, Chembur, Mumbai. 400074

WORK DONE REPORT

Alternator Rotor Shaft Repair & Reinstallation

Vessel: MT ELENA 1

Equipment: AVK Alternator Rotor Shaft (625 KVA)

Location: Mumbai Anchorage

Date: 20/06/2026

Background

During dismantling of the alternator for bearing replacement and inspection, severe damage and wear were observed on the rotor shaft bearing seating areas. The bearing journal surfaces were found damaged due to bearing failure and prolonged operation under adverse conditions, making direct installation of new bearings impossible.

Upon discussion and approval from the Vessel Superintendent and Chief Engineer, the rotor shaft was removed from the vessel and transported to our workshop for rectification.

Scope of Work Executed

1. Onboard Dismantling & Off-Landing

- Alternator rotor shaft dismantled from the alternator assembly.
- Rotor carefully shifted from Engine Room to vessel deck using suitable lifting arrangements.
- Rotor off-landed to service boat.
- Shifted from service boat to shore transport vehicle.
- Mumbai Port Customs A Section & B Section formalities completed.
- Customs boarding and clearance procedures completed.

Rotor Details

- Equipment: Alternator Rotor Shaft
- Quantity: 01 No.
- Approximate Length: 5 Feet
- Approximate Diameter: 400 mm
- Approximate Weight: 1,000 Kgs





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2. Workshop Inspection & Repair

After receipt at workshop, the rotor shaft was thoroughly inspected.

Findings

- Bearing seating area heavily worn and damaged.
- Surface pitting and scoring marks observed.
- Existing dimensions found outside acceptable bearing fit tolerances.

Repair Activities

- Rotor mounted on heavy-duty lathe machine.
- Damaged bearing seating areas machined and cleaned.
- Shaft journals prepared for weld build-up.
- TIG welding process carried out on damaged bearing seating surfaces.
- Approximately 3 mm additional material deposited for machining allowance.
- Controlled cooling and visual inspection carried out after welding.
- Rotor re-mounted on lathe machine.
- Bearing seating areas finish machined to specified dimensions and interference fit requirements.
- Dimensional inspection completed and confirmed within acceptable tolerances.

3. Dynamic Balancing

Following machining and dimensional verification:

- Rotor assembly subjected to dynamic balancing.
- Balancing corrections carried out as required.
- Final balancing completed successfully.
- Rotor confirmed suitable for operational service.

4. Return Logistics

- Repaired rotor packed and prepared for transportation.
- Loaded onto transport vehicle.
- Transported to Mumbai Port.
- Customs boarding and clearance formalities completed.
- Rotor delivered back to vessel through service boat arrangement.
- Rotor safely shifted onboard and positioned for reinstallation.

5. Reinstallation & Alignment

for
Q.C.P.





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- Rotor reinstalled into alternator assembly.
- New bearings fitted.
- Bearing housings assembled and secured.
- Alternator assembled completely.
- Laser alignment carried out between diesel engine and alternator.
- Alignment values adjusted within acceptable tolerances.
- Coupling bolts tightened and secured.
- Final checks completed.

6. Testing & Trial

The following checks were carried out:

- Rotor free rotation checked.
- Bearing temperatures monitored.
- Lubrication condition verified.
- Alternator insulation condition checked.
- Alignment re-verified after tightening.
- Alternator operated successfully.
- No abnormal vibration observed.
- No abnormal noise observed.
- Alternator performed satisfactorily during operational trial.

Conclusion

The alternator rotor shaft repair, machining, TIG weld build-up, finish machining, dynamic balancing, transportation, reinstallation, laser alignment, and operational testing have been completed successfully.

The alternator was restored to operational condition within a short turnaround period through emergency mobilization, workshop support, and coordinated onboard attendance.

The equipment has been handed over to vessel staff after satisfactory operational trial.

Status:

JOB COMPLETED SUCCESSFULLY

Recommendation:

Monitor bearing temperatures and vibration levels during the initial 72 operating hours and report any abnormalities immediately.

For
[Signature]





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Prepared By:

DIADEM SHIP REPAIR PVT. LTD.

Santosh Shinde
Director



Date: 23/06/2026

Vessel Representative Acknowledgement:

Name: CHAMARA PARADA

Rank: C/E

Signature: [Signature]



V/L REMARKS : JOB HAS COMPLETED WITH VESSEL STAFF AND
RUNNING AS TEST MODE, WITH UNDER OBSERVATION.
ALSO THEY NOT DONE LASOR ALIGNMENT DUE TO
LACK OF SPACE, ONLY VISUAL ALIGNMENT WITH
SHORE ALIGNMENT TECHNICIAN.