



TECHNICAL BROCHURE

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MAINTENANCE WORK

Propulsion Systems



MAINTENANCE WORK

Rotating Machines



MAINTENANCE WORK

Switchboards



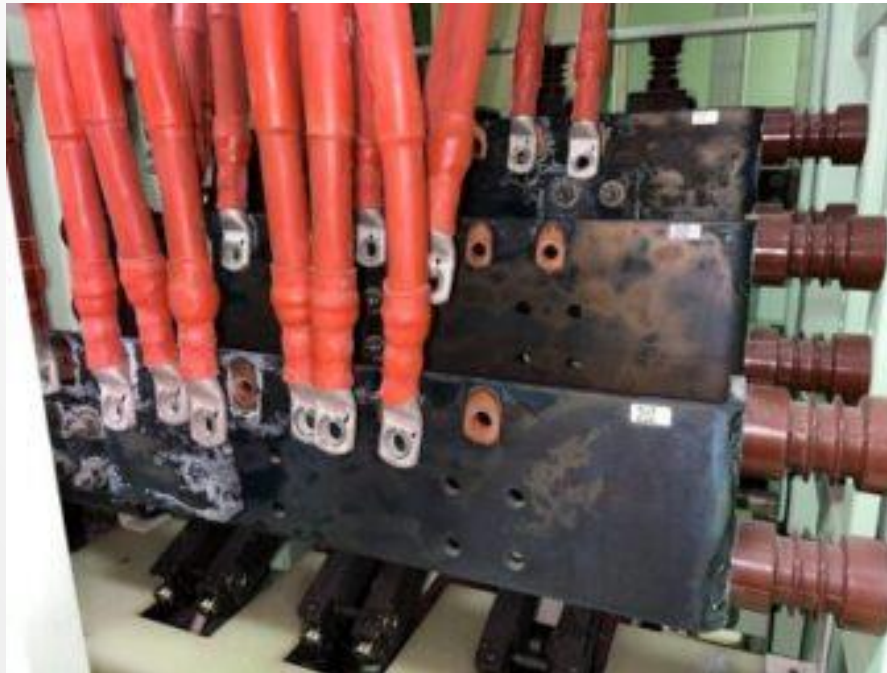
MAINTENANCE WORK

Dry Ice Cleaning

Removes oils, grease, inks, films, mold & more. Ideal on Electrical and power generation equipment as it does not use any chemical, water or particles that could damage electrical components.



BEFORE

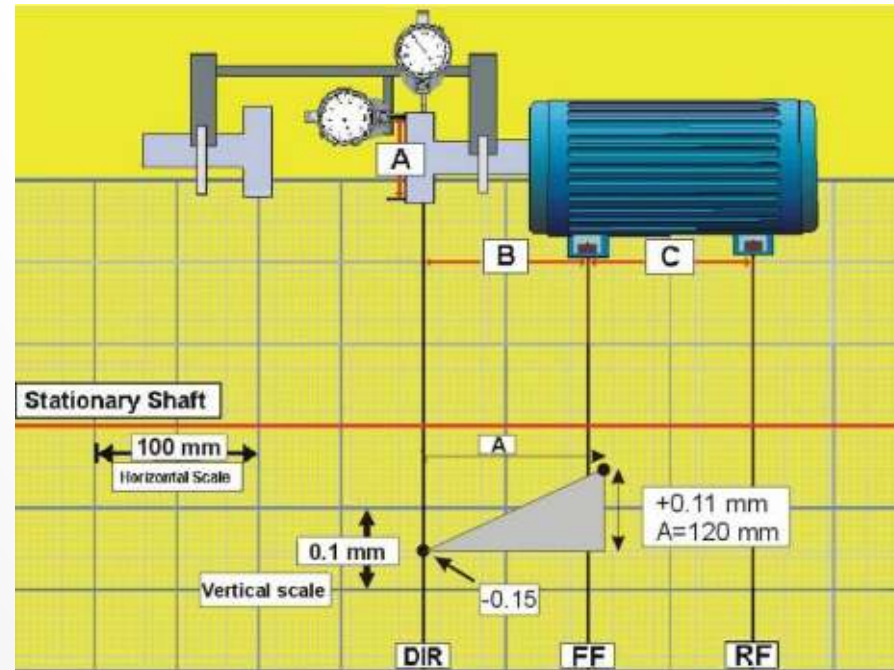


AFTER



MAINTENANCE WORK

Alignment, coupling dismantling/assembly



MAINTENANCE WORK

Chocking of Equipment

Our technicians are Chockfast® Certified. Our Chock calculations follow the general guidelines for marine chock designers (TB 692G). The chock calculations are used to make sure that an engine is precisely aligned.

NOTE: For details, download our “Chocking of Equipment” brochure on our website.

MAINTENANCE WORK

Motor Rewind

BEFORE



AFTER



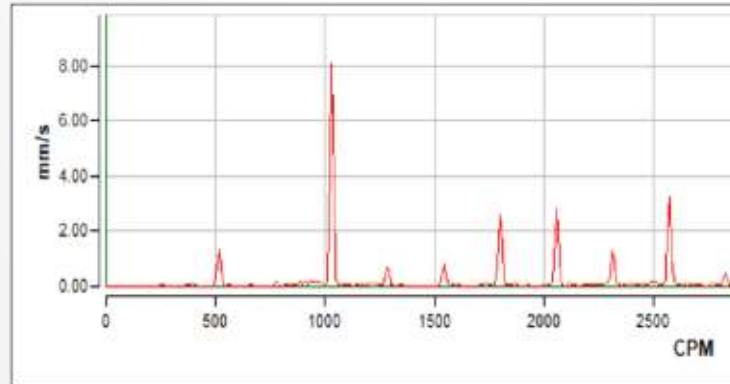
NOTE: For details, download our “Motor Rewind” brochure on our website.

SPECIAL TESTS

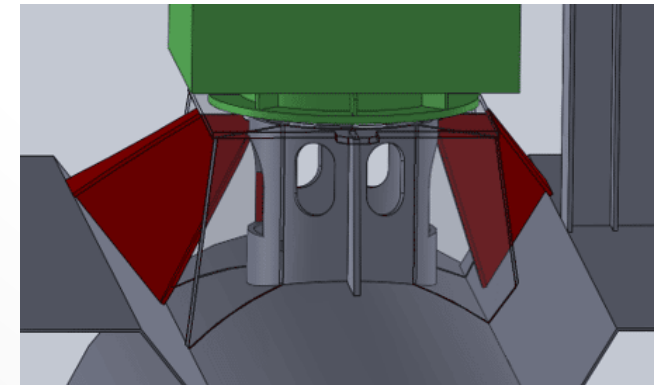
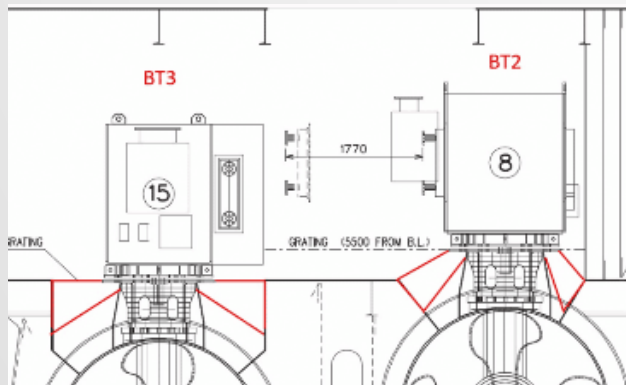
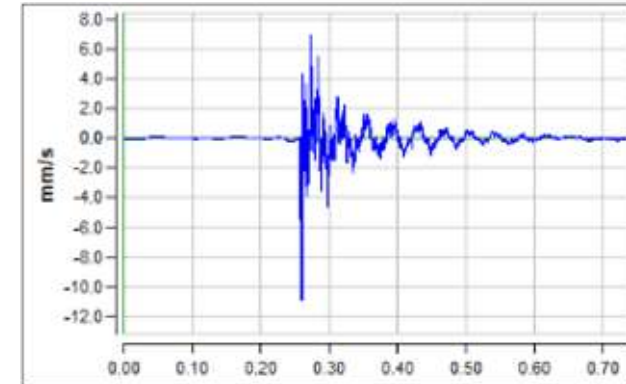
Vibration Analysis

VIBRATION SEVERITY PER ISO 10816						
Vibration Velocity Vrms	Machine		Class I small machines	Class II medium machines	Class III large rigid foundation	Class IV large soft foundation
	in/s	mm/s				
0.01	0.28					
0.02	0.45					
0.03	0.71					good
0.04	1.12					
0.07	1.80					satisfactory
0.11	2.80					
0.18	4.50					unsatisfactory
0.28	7.10					
0.44	11.2					
0.70	18.0					unacceptable
0.71	28.0					
1.10	45.0					

LEVELS OF VIBRATIONS RMS



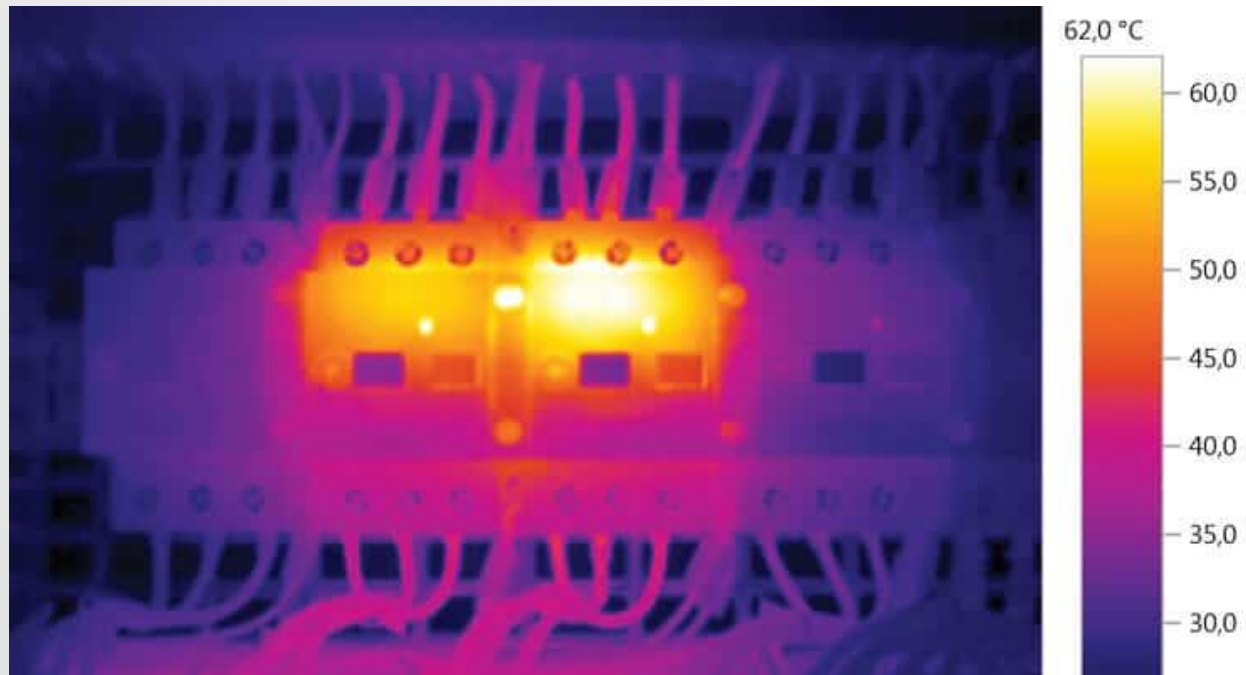
FFT ANALYSIS, IMPACT TESTING: DETECTION OF MAIN ISSUE: ALIGNMENT, BALANCING, LOOSENESS, BEARING DAMAGES, RESONANCE



RESONANCE SOLVING: VIBRATIONS LEVELS REDUCED FROM 18MM/S TO 4/MMS COMPARING BEFORE AND AFTER REINFORCEMENT

SPECIAL TESTS

Thermography Survey



SPECIAL TESTS

Rotating Machines Electrical Tests



CABLING WORK

AVR cabling and system upgrade



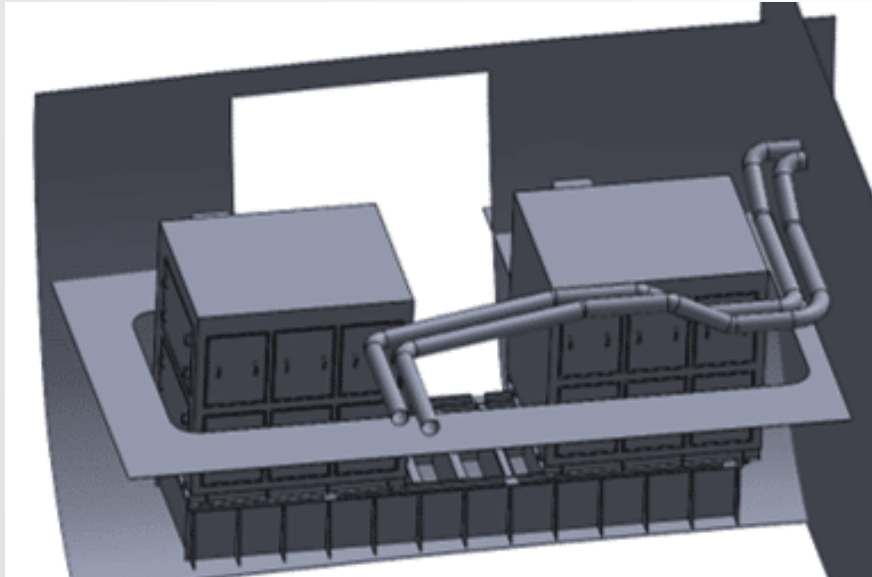
CABLING WORK

Cabling of new ballast system water treatment

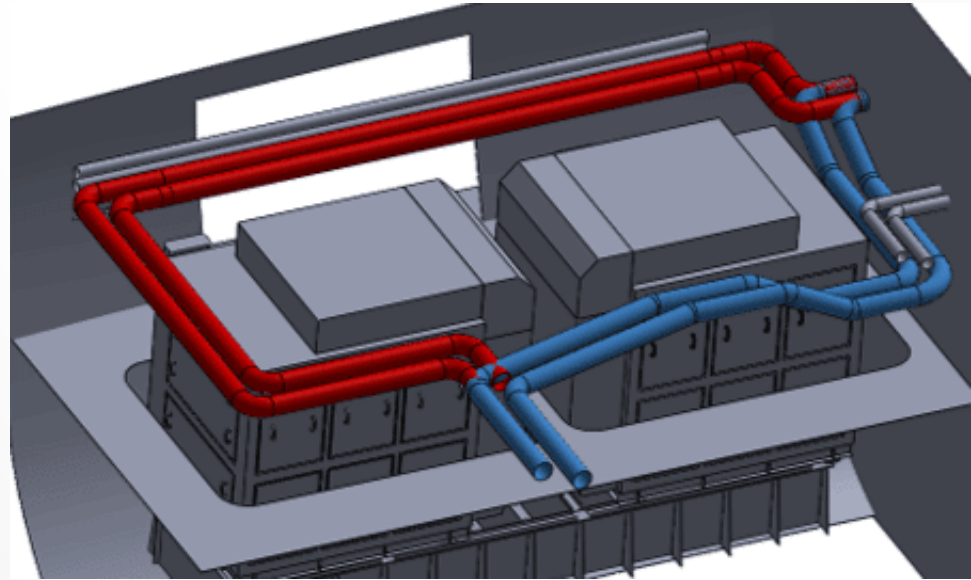


PIPING WORK

BEFORE



AFTER



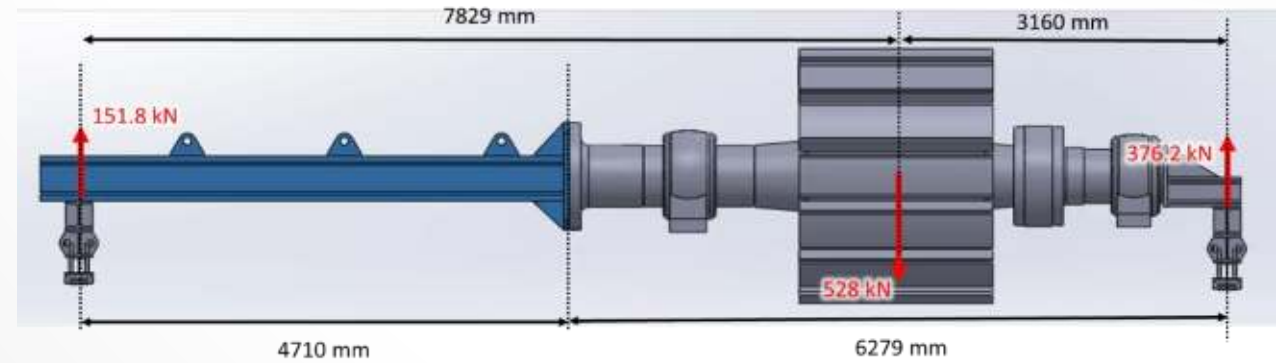
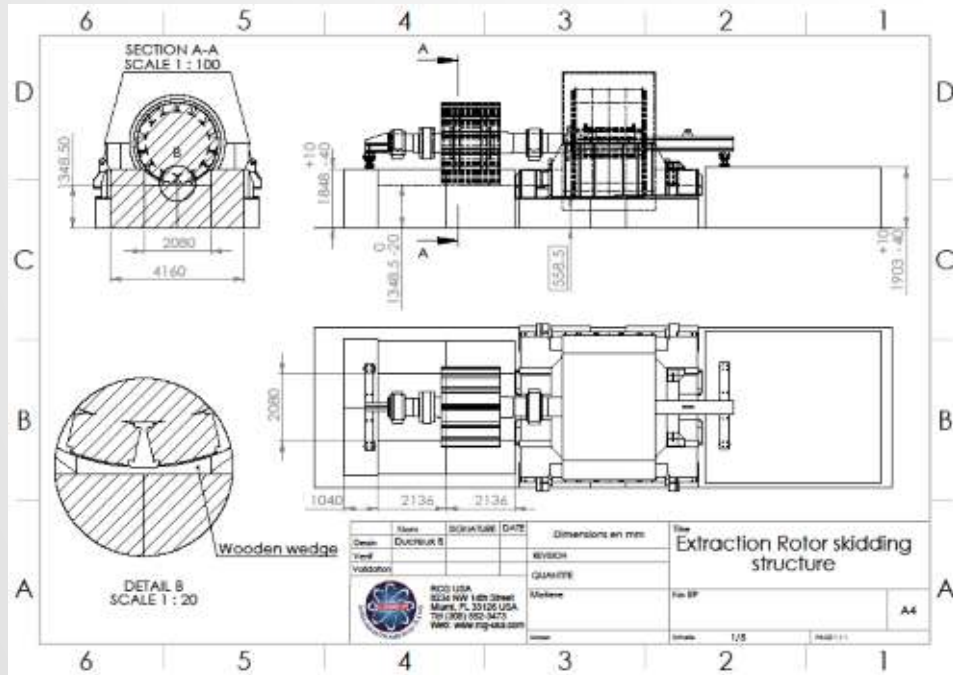
LOAD SHARING / SHORE POWER



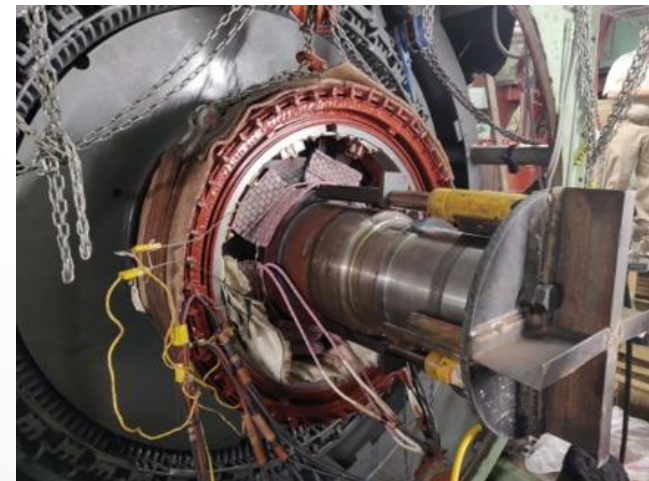
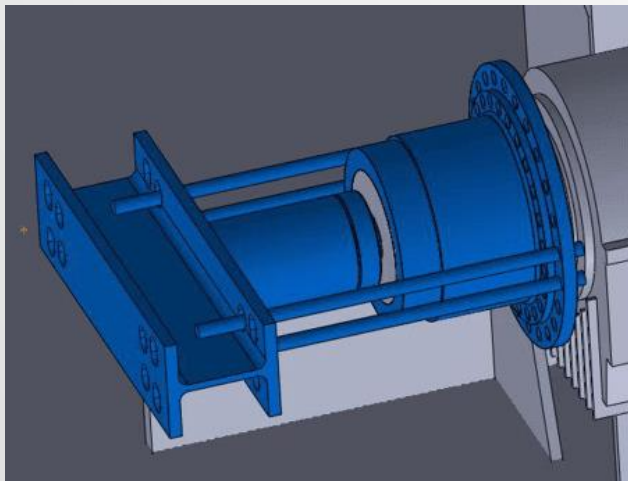
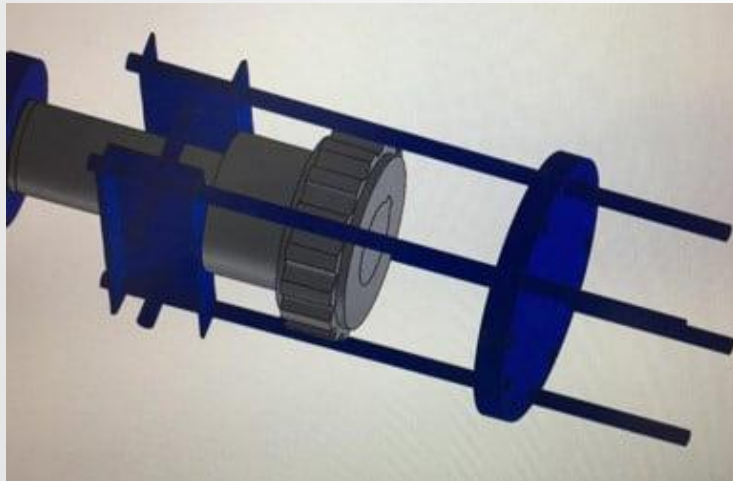
STRUCTURE MODIFICATION, CALCULATION, WELDING, TESTING



IN-HOUSE MODELING AND STRUCTURE DESIGN USING 3D SOFTWARE



SHRINK FIT / EXTRACTION FOR COUPLING, EXCITER, FAN



HEAVY LIFTING / SPECIAL PROJECTS

REPLACEMENT OF PROPULSION MOTOR STATOR



NOTE: For details, download our “Propulsion Motor Dismantling” brochure on our website.

COMMON ISSUES REQUIRING INTERVENTION

- Thruster Issues and Repairs
- Generators
- PEM
- Transformers



NOTE: For details, download our “Common Issues Requiring Intervention” brochure on our website.