

Mineral gear oil for thruster

AQUAMASTER US 1401 AZIMUTH starboard thruster

CUSTOMER SAVINGS & BENEFITS

Installing a CJC® Desorber/Filter Combi Unit D5, the following benefits were obtained:

- Costly emergency docking was avoided
- Lifetime of both components and oil was increased with a factor 5-6.
- Clean & dry mineral oil, free from water, particles and sodium/salt.
- No oil change needed resulting in less CO₂ emissions.

CUSTOMER

Vessel: VB PORNIC (harbor tug)
Vessel owner: BOLUDA, France, 44603 Saint-Nazaire

SYSTEM

System: AQUAMASTER US 1401 AZIMUTH starboard thruster
Oil type: EPONA Z 100 (Marine mineral gear oil)
Viscosity: 100,7 cSt @ 40°C
Oil volume: 850 liters

PROBLEMS

The customer had problems with seawater inlet on the starboard thruster of the tug. The mineral oil was contaminated from high level of seawater (0,39%), and sodium (NA) particles of 22 ppm. The next drydock was scheduled in six months so a solution was needed to continue vessel operation.

SOLUTION

A CJC® Desorber/Filter Combi Unit D5 was installed. Weekly oil samples were taken to follow the oil condition and trend. After one week of operation, the CJC® Desorber D5 had removed water from the oil so the ppm went from 3904 ppm to 136 ppm. According to Noria Corporation, this corresponds to a lifetime extension factor of 5-6 for the oil and equipment. The recommended water level in oil is <300 ppm. Moreover, wear debris particles, Fe & Cu was lowered from 29 & 4 ppm down to 17 & 1 ppm, whereas the contaminant Na was lowered from 22 ppm to 13 ppm. Max recommended for all <25 ppm.

ENVIRONMENTAL BENEFITS

Avoiding the oil change has also a significant impact on the environmental footprint of the vessel and contributes to BOLUDA's strategic objectives to be a CO₂ neutral company.



Chief Engineer and Hervé Solle, C.C.JENSEN, next to the CJC® Desorber / Filter Combi Unit D5 installed at "VB PORNIC".



OIL SAMPLING



Before filtration

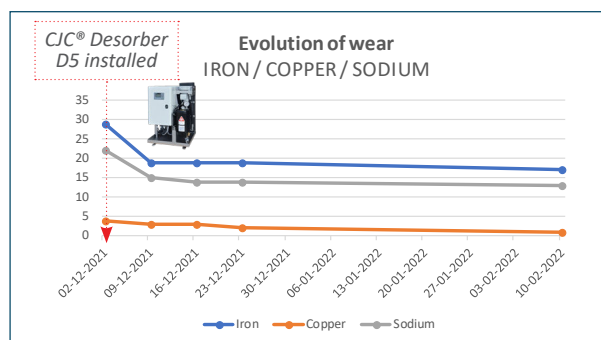
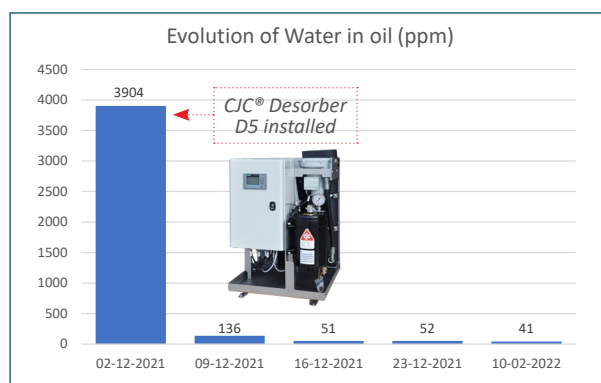
Water: 0,39%
Sodium: 22 ppm



After 3 weeks

Water: 0,05%
Sodium: 14 ppm

RESULTS



Mr. Olivier GLOAGUEN, Regional Technical Manager:
"The installation of the CJC® Desorber D5 allowed the vessel to remain operational for 6 months before its next technical shutdown. The results of the analyses are clear and clearly demonstrate the effectiveness of CJC® Desorber D5."



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Tugs
Thruster
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