

ICE CUTTER STERN TUBE OIL DEHYDRATION

THE CUSTOMER

United States Coast Guard.

THE PROBLEM

Captain of USCGC Waesche, a 420 ft ice cutter, had recently changed to environmentally acceptable lubricant for the propeller gear box. Water ingress up to 5 wt.% in the lube reservoir created harmful degradation products.

THE CMS SOLUTION

Coast Guard rented a large dehydration system in an effort to avoid premature lubricant changeover. Unit was attached directly to the 1300 gallon lubrication oil reservoir in a kidney loop operation.

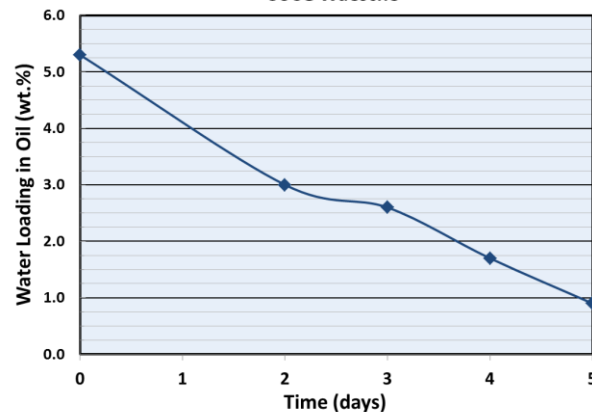
THE OUTCOME

By 5 days the water loading was reduced to below 1 wt% as measured by Karl Fischer titration. Oil changeover was still necessary due to presence of degradation products. Coast Guard chose to employ dehydration systems in other vessels using same hydraulic oil.



Dehydration system in hull of USGC Waesche

Dehydration Profile of 1300 gallon lubricant reservoir in USCGC Waesche



Dehydration system size compared to other hull equipment