

Oxifree Case Study Food Processing



Location: Vale do Ivai (Sugar and Alcohol Industry)

Date: 08/24/2009

Purpose:

To prove the efficiency of Oxifree within the Sugar and Alcohol producing industry.

Introduction:

We were asked by a client to apply Oxifree to their bearing housings to protect them against contamination so as to avoid premature wear / damage, extending the useful life of the bearings.

This contamination was due to particles penetrating deep inside the housings resulting in the bearing houses being replaced 2-3 times during the season of production, therefore generating substantial operational costs.

The pictures below show the regular operating conditions of the bearing house without the protection of Oxifree.

Dust particles are able to penetrate the unit damaging it and reducing its useful life.



The pictures below show the effects the regular operating conditions (without the protection of Oxifree) have on the bearing house with less than 6 months of use. Note how contaminated the grease becomes.



Solution:

Due to relenting dust ingress the client suffered, they decided to use Oxifree to avoid any continued contamination. The aim was to reduce bearing replacements resulting in reduced ongoing maintenance expenses.

Oxifree will protect the treated parts for several years.

The pictures below show the test bearing protected by Oxifree after one season of use. The bearing was replaced at the same time as the one shown above.

Clean grease (no contamination)



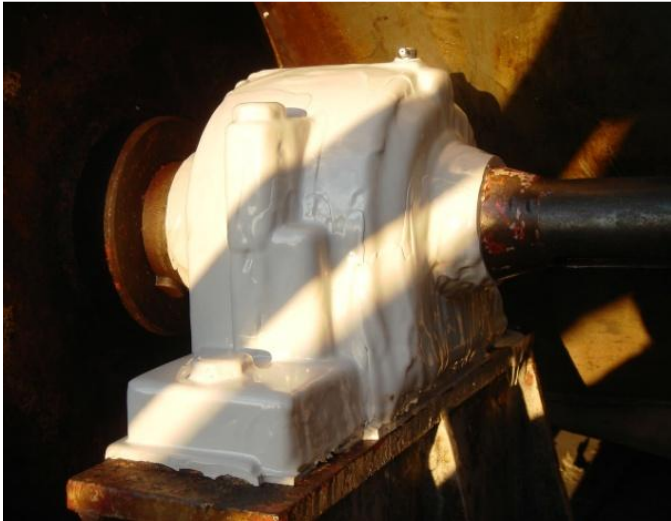
After one season of regular use no particles were found and there was no need for part replacement.



Process:

Two test units (bearing housings) were opened to be serviced and refurbished. One bearing was reassembled and left as normal, the other was reassembled and applied with Oxifree polymeric resin protective coating. This served as a test study for the efficiency of Oxifree as a shield to the ingress of foreign elements. Both units returned to work.

The unit after cleaning, parts replaced and Oxifree applied



The unit being opened at the end of the season of Oxifree protection



The unit after removing the Oxifree protective coating



The bearing shows no evidence of contamination



Conclusion:



Less than 6 months later the clients' maintenance team opened the test unit without Oxifree and found lots of particles and contaminants in it (see left image).

For the unit protected by Oxifree they waited a whole season (approx. 1 year) and opened the unit to find the internals clean and no dust ingress to be evident (see right image).

The grease inside the unit protected by Oxifree was clean and the bearing was in great operational condition.

The client was delighted with the outcome of trials which provided substantial costs savings to their annual operating budget. Oxifree material is now extensively applied throughout the facility.

For more information please contact



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