CONSERVATION OF RESOURCES

Crane Carrier Company Custom TNK18 Tank Field Performance Report

Technical Application Bulletin

PROJECT BACKGROUND

DISCOVER

- Tank Interior Delamination
- Causing blockage in the suction strainer and components downstream
- Some tanks began experiencing delamination within 8 hours, other over an extended period of use

DIAGNOSE

- Noticeable change on the carboxylic acid pecks from 2800-3000
- Calcium and Magnesium are also severly depleted, indication of a chemical reaction
- The presence of heat and water in conjunction with the cement cause a chemical reaction to occur with the oil

INDUSTRIES

DESIGN

What We Did: Schroder attempted to recreate the issue at our FCC (Fluid Care Center).

- Schroeder cut pieces off from the blank tanks for testing material. Over the course of a week, we soaked the tank material in out standard hydraulic oil, ramping up the temperature 10 degrees every 12 hours until we reached an oil temperature of 250 degrees.
- At the end of the testing period, we did not see any of the delamination. There were minor deformations but there we no signs that they would have developed the degree of delamination that we have seen in the field.
- We installed a temperature probe on tank mounted on the cement truck. The temperature reading never exceeded a maximum on 135 degrees. At the end of the test, there were no signs of delmaination to the tank.
- We collected residue oil from the tanks sent back throuh RGA, and subjected them to an extensive test. These oil samples came from 4 tanks with varying degree of delamination. The results showed a change in the FTIR scans from the virgin oil to the oil samples from the 4 tanks.

DELIVER

ROI

Overall Cost-Savings After 1 Year

$65.1K

Return On Investment After 1 Year

▲200%

Fluid Saved Per Year

9.3K gal.

Underlying values:

Overall fluid replacement cost w/o AMFS per year = $490 per truck (100 total x 2 times a year) $490 x 100 x 2 = $98,000.00

Overall fluid replacement cost w/ AMFS per year = $490 per truck (100 total x 0.67 times a year) $490 x 100 x 0.67 = $32,830.00

CUSTOMER BENEFITS

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FURTHER APPLICATION AREAS

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PRODUCT SPECS

TNK18 | Tank

Flow: 5 gpm (19 L/min)
Temp. Range: -20°F to 150°F
Viscosity: up to 1000 SUS (216 cSt)
Bypass Cracking: 30 psi (2 bar) x 2
Compatibility: All petroleum-based hydraulic fluid compatible with Viton®

Schroeder INDUSTRIES