



CLEAN OIL
BRIGHT IDEAS

Application Study
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2009

Hydraulic Oil Paper Machine, Super Calender, Top Roll

CJC™ Application Study

CUSTOMER

SCA Graphic Sundsvall AB, Ortvikens Paper Factory.

THE SYSTEM

Hydraulic system. Top roll for super calender.

Oil Volume: 3000 L

Oil Type: Synthetic oil Shell Delima SW 320

THE PROBLEM

The oil was heavily oxidized due to hot oil in the system, normal temperature in the range 80-90°C. The valves controlling the bowls were sticking, causing down time, and had to be renovated at regular intervals. The acidity level of the oil (TAN) was 0.62, alarmingly high. In comparison, new oil has a TAN of 0.3.

THE SOLUTION

CJC™ Fine Filter HDU 27/54 P. Pump flow 600 L/h. **CJC™ Filter Inserts 2 x BLA 27/27.**

THE TEST

A test was performed over a 12 months period to determine whether it was possible to affect the varnish problem in the valves and the acidity level of the oil in a positive direction. During the test period no inserts were changed.

THE RESULT

The inserts retained very large quantities of oil degradation products from the oil (see photos of the inserts to the right) and the acidity level (TAN) was reduced to 0.51 and stabilized at an acceptable level.

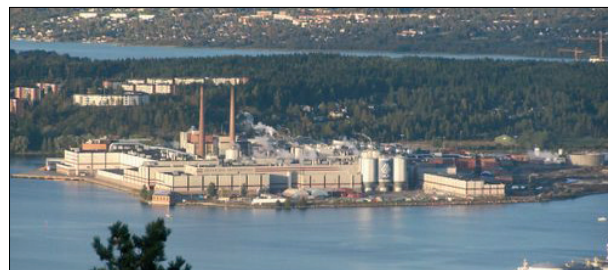
COMMENTS

Mr. Morgan Markkula, Head of the Hydraulic Group found that the oil life time could be prolonged.

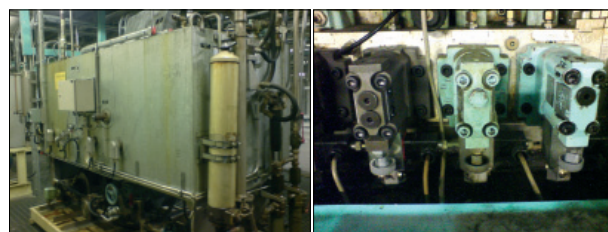
Mr. David Solander, Hydraulics Technician, was of the opinion that the valve problems disappeared when the amount of sludge and varnish was reduced.

Mr. Stefan Bergsten, Head of Analysis, compared the valves before and after the filtration, and the positive result is very clear.

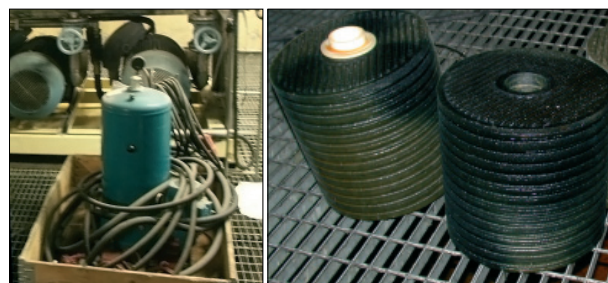
See photos to the right



Ortvikens Paper Factory in Sundsvall

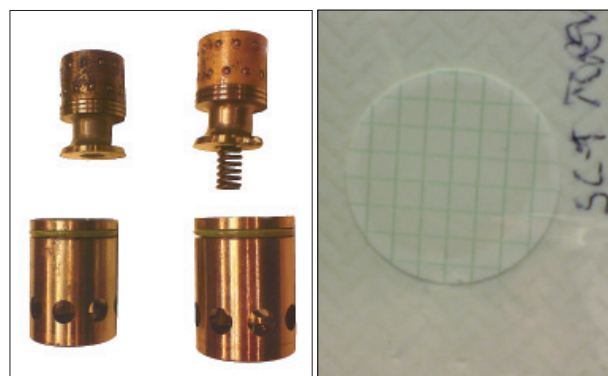


The oil system and the valve block where the problems occurred



CJC™ HDU 27/54 P

The inserts after one year of operation



Valves before and after

Analysis after 12 months