CLEAN OIL
BRIGHT IDEAS

Hydraulic Oil
Hydro Turbine Control System

CJC™ Application Study

Application Study written by:

Bryan Holden
C.C.JENSEN Ltd.
United Kingdom

2000

CUSTOMER

A Boving Control System on Hydro Turbine with 3,000 litres of oil ESSO FM 68.

THE PROBLEM

An environmentally friendly vegetable oil has a faster oxidation process than a standard mineral oil; thus, making clean and dry oil even more important than normal.

The particle content in the oil was very high causing problems with mechanical parts and reducing oil lifetime.

THE SOLUTION

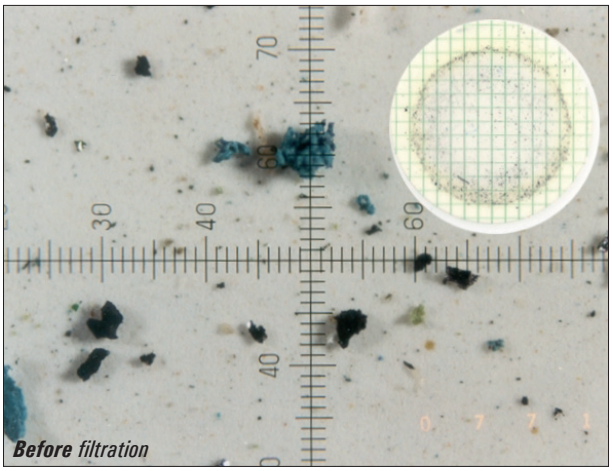
A **CJC™ Filter Separator PTU3 27/108 MZ-EPW**. The unit is equipped with 4 **CJC™ Filter Inserts BLAT 27/27** with a filtration ratio of 3 μm absolute. The dirt holding capacity is 4 ltr. per insert. Furthermore the CJC™ Filter Separator is capable of separating free water from the oil.

THE RESULT

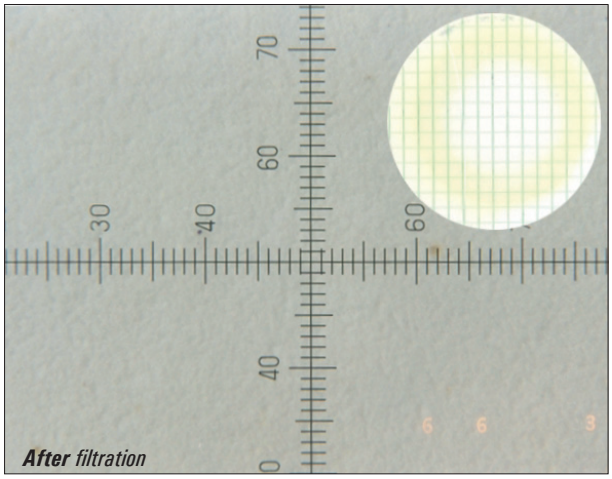
The achieved reduction from an ISO code 20/19/17 to 12/11/8 will give the machines component a theoretical life time increase of 8 times!

REFERENCES

More than 300 CJC™ Filters are operating on Hydro Turbines, installed in Sweden, Scotland, Norway, Germany, Switzerland and Spain.



***Before** filtration*



***After** filtration*

THE RESULT

Date	June 30	July 14	July 21	July 30
Particles > 2μm	627,284	5,027	4,970	2,565
Particles > 5μm	377,104	3,224	2,906	1,374
Particles >15μm	111,596	813	701	183
ISO Code	20/19/17	13/12/10	13/12/10	12/11/8
Water, ppm	325	498	318	332

COMMENTS

Jim Currie, Norson Services:
"The CJC™ Fine Filter is very easy to use. I have been very satisfied with the results obtained".

C.C.JENSEN A/S
Løvholmen 13 • DK-5700 Svendborg • Denmark
Phone: +45 6321 2014 • Fax: +45 6222 4615
filter@cjc.dk • www.cjc.dk