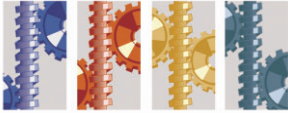




OIL FILTRATION SYSTEMS

CJC™ Application Study

Hydraulic Oil - Hydro Turbine



INDUSTRY

*Application Study
written by:
Hjalmar Sørgård
Øvre-Johnsen AS
Norway*

In cooperation with:

*Steffen Buhrkal
C.C.Jensen A/S
Denmark*

2001

CUSTOMER

Statkraft, Region Nord-Norge.
Contact person: Torstein Elvegård



THE SYSTEM

Governor oil system for Hydro Turbine. Oil volume: 5,200 L of hydraulic oil.



THE PROBLEM

The governor oil system was suffering from irregular and deviant operation caused by resin (oxidation) formation in the valves. The resin formation was identified as a sticky brown layer on all surfaces in the system. Due to resin formation valve malfunctions were becoming frequent, causing unplanned shut-downs.

The consequence of the contamination was that the valves had to be removed and cleaned up to 4 times a year at a cost of EUR 800 each time. The cost of a new valve is EUR 3,000.



CJC™ FineFilter HDU 27/54 MZ

THE SOLUTION

In order to arrest the problems and ensure continuous operation a **CJC™ FineFilter HDU 27/54 MZ** was installed. Two cellulose based **CJC™ FilterInserts B 27/27** (3µm absolute) were used.

CONCLUSION

After just one month of filtration the turbine operation has become stable and without interruptions.

THE RESULT

Date	Water content (ppm)	NAS
07.11.00	245	5
15.11.00	25	3
30.11.00	55	3
15.12.00	30	1

