

OIL FILTRATION SYSTEMS



Application Study written by Willy Fossum, Øwre-Johnsen as, in coorporation with Steffen Buhrkal, C.C. Jensen A/S (DK)

# CJC<sup>TM</sup> Application Study

Fertilizer Manufacturing Plant Centrifuge Hydraulic System

CUSTOMER Norsk Hydro, Fullgjødsel 3, Porsgrunn, Norway.

### THE SYSTEM

Hydraulic system powering 2 centrifuge hydraulic motors and 2 mixer systems. The system consists of a tank of 600 litres and 4 hydraulic pumps.

#### THE PROBLEM

Severe operational problems had been detected and the service company Reidar Hansen was called in to solve the problem. Oil samples were taken, and the analysis report said NAS 12. The oil temperature was measured to 86°C.

#### THE SOLUTION

Existing pumps were replaced with new ones (Load Sensing System), and the tank breather was replaced with a  $3\mu$ m. An **HDU 15/25 PM** with a flow rate of 120 ltr./h and B 15/25 **filter insert** was installed and all pipes, valves and hoses were flushed before the hydraulic system was restarted, reducing the cleanlines code to NAS 8.

#### THE RESULTS

The cleanlines level has now stabilized at NAS 2 which is better than expected. The oil temperature has dropped to  $55^{\circ}$ C and interval of inline filter change has been extended from 6 months to 2 years.

In the 16 months of running since the conversion the off-line filter insert has been changed twice and most importantly there has been no unpredictable stoppages of the system.



Norsk Hydro Fertilizer Manufacturing Plant



CJC<sup>TM</sup> Fine Filter HDU 15/25 PM

## THE RESULTS

Weeks of operation	Cleanlines	Particles > 5 m
- 3	NAS 12	>1,000,000
0	NAS 8	> 64,000
6	NAS 7	>32,000
18	NAS 5	>8,000
25	NAS 3	>2,000
79	NAS 2	>1,000
146	NAS 2	>1,000

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Phone: +45 63 21 20 14 \* Fax: +45 62 22 46 15 E-mail: filter@cjc.dk \* Web: www.cjc.dk