CLEAN OIL
BRIGHT IDEAS

CJC™ Application Study

Application Study written by:

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CUSTOMER

Lind Jensens Maskinfabrik (LJM), Lem, Denmark.

THE SYSTEM

LJM produces hydraulic cylinders for the wind turbine industry, where the customers have high demands for the cleanliness in the cylinders. ISO class 15/13/11 is a minimum requirement.

THE PROBLEM

During welding, machining and assembly of the hydraulic cylinders vast amounts of dirt and particles are introduced. In order to prevent these problems and meet the wind turbine manufacturers' requirements it is necessary to clean the cylinders before they are put into use.

THE SOLUTION

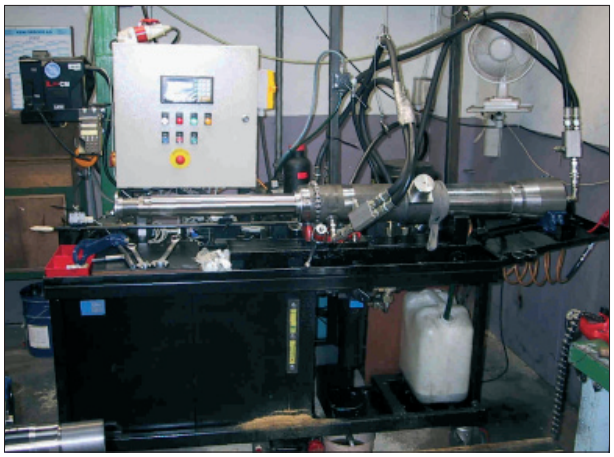
The oil in the test bench is filtered through a **CJC™ Fine Filter HDU 27/54** and analysed by a **UCC Particle Counter**, integrated in bench. The test bench is running automatically and when the outlet oil from the cylinder reaches the required cleanliness class the UCC counter signals to the test bench and the test stops. At the same time a print of the particle count is made as documentation that the cylinder has attained the required cleanliness code. This documentation is delivered with the cylinder to the customer as a guarantee that the cylinder has been tested and cleaned in accordance with his requirements.

THE RESULT

The utilization of a CJC™ Fine Filter on the test bench has resulted in the average ISO class of the cylinder outlet oil being reduced from 19/17/15 to now 14/12/10.

By the simultaneous flushing and counting of particles, LJM document that they meet the requirements of the wind turbine manufacturers.

Further, LJM has experienced a considerable decline in the number of warranty claims on the cylinders.



Lind Jensens Maskinfabrik has in cooperation with C.C. JENSEN developed a number of test benches for simultaneous cleaning and testing of hydraulic cylinders.

The test oil - and thus the cylinders - are cleaned through a CJC™ Fine Filter HDU 27/54 and controlled by a UCC automatic particle counter.

THE RESULT

	ISO 4406 code
Without use of CJC™ filter	19/17/15
With use of CJC™ filter	14/12/10

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