



OIL FILTRATION SYSTEMS

CJC™ Application Study

Gear Oil - Steel Mill Screw Down Gear System



INDUSTRY

*Application Study
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2001



CUSTOMER

CORUS, Dalzell Works PLC,
Motherwell, United Kingdom.
(Formerly known as British Steel PLC.)

THE SYSTEM

System A is a Mill Screw Down Gear Lube System (oil = ISO VG 150). System B is Main table gearboxes and Roller tables (oil = ISO VG 320). The steel passes through the tension rollers backwards and forwards, continuously until the plate is formed. While passing through the rollers, the steel is quenched with water.

THE PROBLEM

The system suffered from large water and particulate ingress, causing a large number of gearbox failures. Water level 35.5 % and an uncountable ISO code. Over the years the amount of contamination cannot be quantified, but it is known to have a damaging effect upon components and the life time of the oil.

THE SOLUTION

A **CJC™ Desorber Unit D38** was installed to operate between 2 systems (A and B). In addition a **CJC™ FineFilter** was installed upon each system.

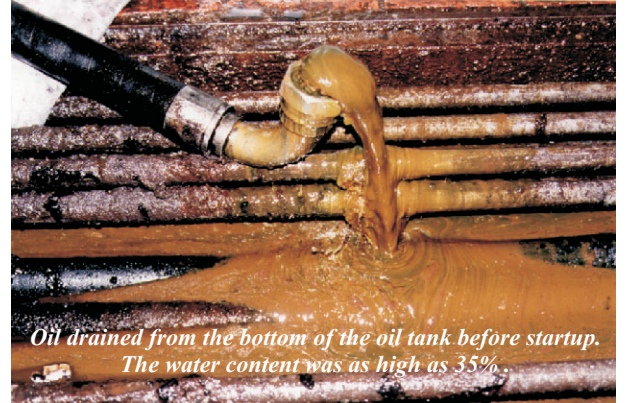
System A with **HDU 3x27/108 GP**, with pump flow rate = 2400 ltr./hour.

System B with **HDU 427/108 GP**, with pump flow rate = 3100 ltr. Hour.

Both Fine Filters were installed with **CJC Fine Insert type BLA 27/27** (3 µm absolute).

THE RESULT

Since the installation of the CJC equipment, the gearbox failures have ceased saving component cost and plant downtime. 35,5% of water, was reduced to 112,7 ppm, and from uncountable ISO code, down to 18/15.

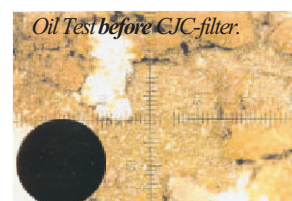
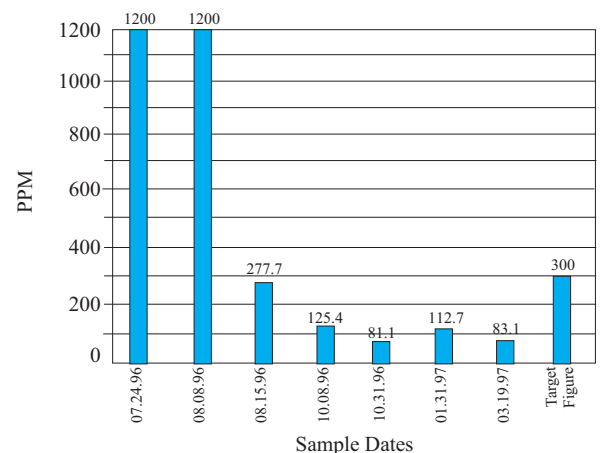


*Oil drained from the bottom of the oil tank before startup.
The water content was as high as 35%.*

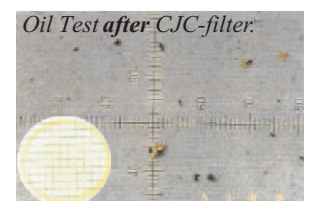


The CJC™ Fine Filters.

Water Removal using CJC™ Desorber



Oil Test before CJC-filter.



Oil Test after CJC-filter.

