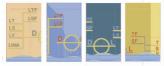


OIL FILTRATION SYSTEMS



MARINE Application Study written by Kim Kjær C.C. Jensen (DK)

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

# Lube Oil on Diesel Engine - Coaster

CUSTOMER Shipowner: Rederiet Monsunen Vessel: M/S Monsunen Type: Coaster

Contact person: Carl E.L. Andersen

THE SYSTEM Engine: Volvo Penta TAMD 162. Oil system: 65 litres oil sump. Consumption 2 ltr./day. Oil . Elf Trophy Performance.

#### THE PROBLEM

The oil was highly contaminated with blow by debris, combustion particles, soot and wear metals.

Leading to changes of oil and spin-on filters every 500 hours.

Due to the high running cost and abnormal wear on bearing's etc. caused by the heavy contamination of the oil, the owner decided to install a fine filter on the lube oil engine sump.

# THE SOLUTION

A **CJC<sup>TM</sup> Fine filter** type HDU 27/54 PV with pump flow rate = 45 ltr./hour and with **CJC<sup>TM</sup> Filter Insert** type A 2x27/27 ( $3\mu$ m absolute). Dirt holding capacity: 8 litres of dirt and 4 litres of water.

## THE TEST

The filter was installed in an off-line circuit, and samples were taken periodically approximately every 500 hours.

## THE RESULT

Contamination was reduced immediately and TBN number was kept stabile during the test period of 3,125 hours in which no oil nor oil filters were changed.

This engine has had a history of abnormal wear but after 500 hours with the  $CJC^{TM}$  Fine Filter it was characterized as good.



The  $CJC^{TM}$  Fine Filter installed in the engine room



M/S MONSUNEN

| Hours run      | 0       | 800     | 1525   | 2000   | 3125   |
|----------------|---------|---------|--------|--------|--------|
| Particles >5 m | 269,360 | 128,370 | 96,630 | 59,630 | 68,260 |
| ISO CODE 440   | 6 19/17 | 17/14   | 17/14  | 16/13  | 17/13  |
| Insolubles     | 0.421   | 0.437   | 0.221  | 0.306  | 0.194  |
| Water content  | 0.1195  | 0.0916  | 0.0892 | 0.1676 | 0.0516 |
| TBN            | 11.92   | 11.15   | 9.68   | 9.53   | 11.17  |

