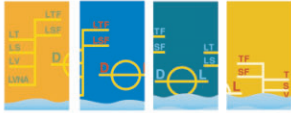




OIL FILTRATION SYSTEMS

# CJC™ Application Study

## Lube Oil - Training Vessel, Diesel Engine



### MARINE

*Application Study  
written by:  
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C.C.Jensen Chile, S.L.*

2003

### CUSTOMER

Chilean Navy-Training Ship:  
"Esmeralda", Valparaiso, Chile.

### THE SYSTEM

**Engine:** MAN B&W Alpha Diesel.  
**Type:** 12V23.  
**Power:** 1920 kW. RPM: 900.  
**Oil volume in sump:** 800 ltrs.  
**Oil type:** TEXACO 16x30.

### THE PROBLEM

Low load on the engine around 40 to 50% generates high soot contamination. This causes wear on the components. A spectral analysis of the oil showed 15 ppm of iron and 7 ppm of sodium.

### THE SOLUTION

**CJC™ FineFilter HDU 427/108**,  
720 ltr/hr.  
**Dirt holding capacity:** 64 kilos.  
**Filter:** 3 µm absolute. 0.8 µm nominal.

### THE RESULT

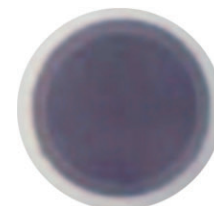
During a test period of 6 months the iron content in the oil reduced to 8 ppm and the sodium to 3 ppm.

The ISO cleanliness code remained at 19/14 and the insolubles were retained at a level of 0.396 gr/ltr.

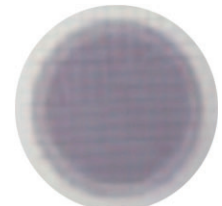
With these results it is expected that the engine components life time will at least increase with a factor 2.

### COMMENTS

**Superintendent Engineer  
Mr. Niemann from Armada de Chile:**  
*In conjunction with the results obtained it shows that the use of the CJC™ Fine Engine Oil Filter increases the lifetime of the oil. Further analysis conducted by Texaco showed a reduction of iron content from 16 ppm to 5 ppm. The lifetime of the Filter Insert proved shorter than expected but this attributed to the low load on the engine generating high levels of soot contamination.*



Before CJC™ Filter.



After CJC™ Filter.

Date:	5 µm	15 µm	ISO	Weight gr / ltr.	Fe / Na
27.03.02:	303,990	15,380	19/13	0.514	13.71/7.03
14.06.02:	1,482,930	230,880	21/18	0.682	7.75/3.6
17.08.02:	463,920	12,160	19/14	0.318	7.2/3.5
19.09.02:	781,160	30,780	20/15	0.369	8.06/3.22

