



Hydraulic Oil Hydraulic Control, Engine MAN 12K98 ME-C6

CJC® Application Study



THE CUSTOMER

Hapag-Lloyd AG, Hamburg, Germany.
Container vessel: MS "Colombo Express",
8,600 TEU

THE SYSTEM

Hydraulic control of the fuel injection pump and exhaust valves on the main engine.

Engine: MAN 12K98 ME-C6
Oil type: Lube oil, Mobilgard 300
Viscosity: 111 cSt at 40°C
Oil volume: 16,000 litres

THE PROBLEM

Because of problems in the hydraulic control system the customer has taken an oil sample. The oil analysis has shown high contamination with water and particles.

THE SOLUTION

Installation of a CJC® Oil-Care System 427/81 with CJC® Fine Filter Insert B 427/81 (3 µm absolute) for continuous fine filtration and dewatering of the lube oil (24/7/365) in May 2008.

Pump capacity: 1,510 L/h at 60 Hz
Dirt holding capacity: approx. 24 kg
Water holding capacity: approx. 14.4 L
Filter material: 100% renewable raw material

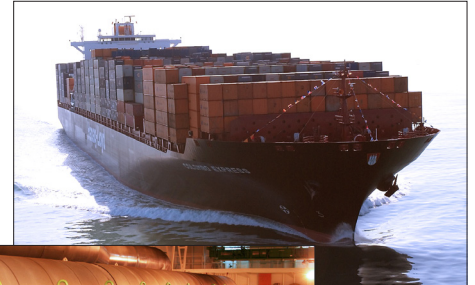
The CJC® Oil-Care System removes particles, water, oil degradation products and acid compounds with extremely high efficiency from the oil.

THE RESULT

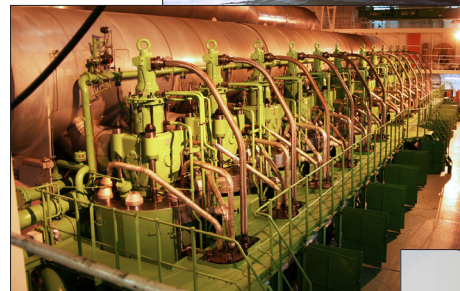
Since the installation, there have been no failures. The convincing results (see table) prompted Hapag-Lloyd to install identical filters on in total 24 vessels of different classes up to 13,000 TEU.

The 24 container vessels:

- Colombo Express
 - Kyoto Express
 - Bremen Express
 - Chicago Express
 - Hannover Express
 - Osaka Express
 - Tsingtao Express
 - Kuala Lumpur Express
 - Vienna Express
 - Basle Express
 - Budapest Express
 - Frankfurt Express
- Prague Express
 - Sofia Express
 - Hamburg Express
 - Hong Kong Express
 - New York Express
 - Nagoya Express
 - Shanghai Express
 - Essen Express
 - Antwerpen Express
 - Leverkusen Express
 - Ludwigshafen Express
 - Ulsan Express



MS "Colombo Express"



MAN engine 12K98 ME-C6



CJC® Oil-Care System 427/81 installed in the engine room

THE RESULT

Date	May	1th Aug	15th Sep	9th Oct
Particle > 2 µm	3,031,840	25,398	43,610	8,465
Particle > 5 µm	384,800	11,544	16,936	1,539
Particle > 15 µm	35,650	633	725	66
ISO Code	22/19/16	15/14/10	16/15/10	14/11/7
Water, ppm	1,300	1,100	1,065	851

COMMENT

*Mr. Lars Voß, Technical Inspector, Hapag-Lloyd GmbH:
"Nothing but the installation of the CJC Fine Filters enabled us to meet the requirements of the ME-hydraulic system."*