



# Lubrication Oil

## Bulk Carrier - Diesel Main Engine

### CJC™ Application Study

#### CUSTOMER

**Vessel:** M/S Bolivar

**Shipowner:** Richard de Wilde

#### THE SYSTEM

**Bulk carrier with engine type:**

SKL 29/24, 6 cyl. AL2, 1320 kW at 1000 rpm

**Lube oil:** FINA Caprano S412

**Fuel:** Gas oil

#### THE PROBLEM

On his previous engines Mr. De Wilde experienced short lube oil change intervals and liner laque-ring.

#### THE SOLUTION

**CJC™ Fine Filter 27/108**, flow rate of 200 L/h and with **CJC™ Filter Insert HDU 27/108** (3 µm absolute).

Dirt holding capacity: approx. 8 kg

Water holding capacity: approx. 4.8 L

#### THE TEST

The CJC™ filter unit was installed on the SKL engine and oil samples were taken from the sump at start up and regularly between 150 and 2,500 hours.

Filter inserts were replaced twice during the observation period: after 1,000 hours of operation and after 4,100 hours.

No oil changes were carried out during the test period. However, oil was added to compensate for the engine consumption (~ 0.7 g/kWh).

The M/S Bolivar is equipped with CJC™ filters for particle and water removal from both main engine lube oil and gas oil system.

#### COMMENTS

*Richard de Wilde, owner of M/S Bolivar said:*  
"I can only recommend the use of CJC™ filters - you will not believe how much dirt one insert holds".



The M/S Bolivar



The engine room of M/S Bolivar

#### THE RESULT

Hours run	0	150	525	791	1,050	2,489
Particles > 5 µm	514,349	94,130	79,160	62,190	39,160	58,140
Particles > 15 µm	57,742	28,100	14,380	9,820	6,150	6,920
ISO code 4406	20/16	17/15	16/14	16/13	16/13	16/13
TBN	11.94	11.82	11.92	11.54	11.35	10.93
Insolubles, g/ltr.	0.39	0.26	0.39	0.592	0.872	0.652