



**CLEAN OIL**  
**BRIGHT IDEAS**

# Hydraulic Oil Container Straddle

## CJC™ Application Study

Application Study  
written by:

Lars Bo Andersen  
C.C.JENSEN A/S  
Denmark

2002

### CUSTOMER

Piraeus Port Authorities, Greece, operate more than 200 Container Straddles.

### THE SYSTEM

Hydraulic system on a Preussag Container Straddle. The system volume is approximately 250 litres.

### THE PROBLEM

The oil on the hydraulic system, which controls the movement of the container straddle and the lifting of the container itself, was heavily contaminated with particles and water. The water comes from condensation and is causing oxidation of the oil. Due to this, the life time of the oil and components is seriously reduced.

### THE SOLUTION

The filter was installed on the top of the container straddle. The filter was a **CJC™ Fine Filter HDU 15/25 PM** with a 24V motor. The CJC™ Fine Filter was equipped with a **BG 15/25 Filter Insert**. This will remove approximately 2 kilos of dirt and 2 litres of water from the oil.

### THE TEST

The filter runs while the container straddle is in operation. It was agreed to take oil samples with following intervals 24, 48, 72 and 150 hours.

### THE RESULT

The achieved reduction in ISO 4406 codes after only 150 hours of operation will result in a considerable increase in lifetime of oil and components of approximately 4 times.



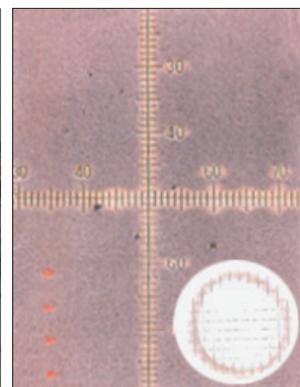
Container Straddle



CJC™ Fine Filter 15/25 PM



Before filtration



After filtration

### THE RESULT

Particle size	0 Hour	24 Hour	48 Hour	72 Hour	150 Hour
Particles 2 µm	2,160,698	70,365	68,139	65,412	40,375
Particles 5 µm	354,056	33,190	40,447	21,648	28,141
Particles 15 µm	125,322	3,249	3,884	2,699	2,448
ISO 4406 Code	22/19/17	17/16/12	17/16/12	17/15/12	16/15/12
Water Content, ppm	910	80	74	72	90