



**CLEAN OIL
BRIGHT IDEAS**

CJC™ Application Study

**Application Study
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CUSTOMER

AVR Rotterdam, recycling center.

THE APPLICATION

Incinerating home and industrial waste products to produce steam as propulsion of steam turbines to generate electricity.

THE SYSTEM

STORK 8,6 MW steam turbine. Each turbine contains 1,200 liter turbine oil TEXACO Regal Premium EP 46.

THE PROBLEM

Leakage in the labyrinth seals and condensation in the sump tank causes high water content in the oil causing serious problems to the systems. Catalytic reaction of high water content which in turn accelerate deterioration and cause particle contamination.

THE SOLUTION

CJC™ Filter Separator PTU3 27/54 P-EPW with pump flow of 400 liters/hour with 2 x **CJC™ Filter Insert BLAT 27/27** (3 micron absolute) and water separation with coalescing element.

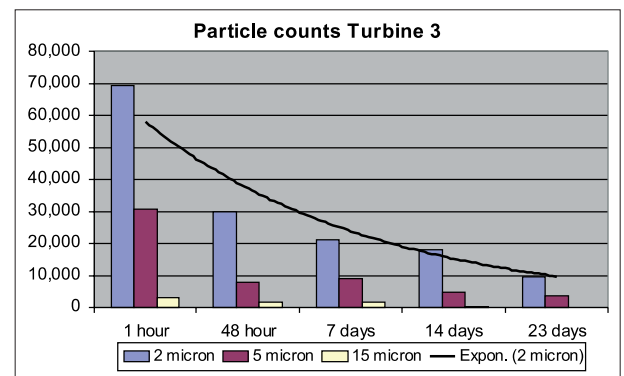
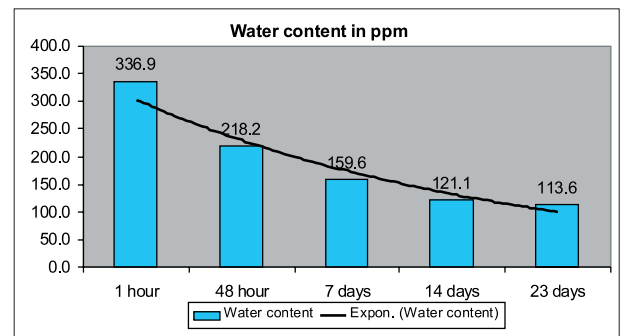
THE RESULT

Prior to the installation of the filter separator, turbine 3 was revised. The labyrinth seal was replaced, the sump tank cleaned and new oil installed. After 23 days the water content level in the oil is reduced to 113.6 ppm. Earlier oil samples reported water content up to 1,500 ppm.

In 23 days a total of 22 litres of water have been separated from the oil which is measured by a measuring jug collecting water from the automatic water discharger.



Steam Turbines at AVR Rotterdam



Particle contamination is reduced by factor 7 in 23 days of filtration. Started with ISO code 17/15/12 and resulted to ISO code 14/13/8.