



Oil Filtration Systems
INDUSTRY

Turbine Lube Oil and Hydraulic Oil Waste Incineration Plant - Steam Turbine

CJC™ Application Study

Application Study
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THE CUSTOMER

SIRUSA is a plant that converts urban waste into power thanks to the GEC ALSTOM type TM 20.30 steam turbine of 7.4 MW.

THE SYSTEM

The steam turbine has a lubrication system on the bearings. The lubrication system and the hydraulic control system are centralized on a 2,500 litres tank. Oil: SHELL Turbo 46.

THE PROBLEM

SIRUSA often experienced problems with water emulsion in the lubricant because steam entered via bearing seals. Even though the oil was changed frequently, impurities accumulated in the bearings causing breakdown.

SIRUSA wanted to reduce breakdowns. Therefore the possibility of fitting equipment to ensure clean and dry oil to reduce repair costs and reduce breakdowns were studied.

THE SOLUTION

A filter separator **CJC™ PTU2 27/27 P-EW** with a **CJC™ FilterInsert BLA 27/27** was fitted onto the steam turbine oil tank to clean and dry oil continuously with a flow of 200 litres/hour, removing particles of 3 µm absolute, resins (micro-sludge) and separating water from oil by means of a manual water drain.

THE RESULT

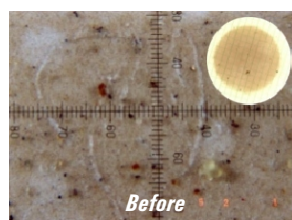
Only one month after fitting the CJC™ unit it was possible to reduce contamination from wear and tear particles by 70 times.

Water is from now on maintained below a level of 100 ppm and the probability of breakdown is reduced by a factor of 7.

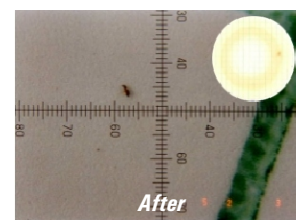
The results were succeeded with only one filter insert change per year.



Installation of the CJC™ FineFilter PTU2 27/27



Before



After

THE RESULT

	Before	After 1 month
ISO classification:	20/18/15	14/12/7
Class NASS (American standard):	11	4
No of 2 µm particles:	591,245	8,516
Water:	360 ppm	8 ppm
Tank cleaning:	every year	never
Resins level (oxidation):	brown	white

COMMENTS

Mr. Salvador Suárez:

The CJC unit has produced astonishing results. It is an ancillary installation with a rapid pay back because there is less mechanical breakdown and less oil and filter changes.

We have now installed another 2 CJC™ FineFilters for the 400 litres hydraulic stations for both pushers and skimmers in order to save work, time and money. I can highly recommend CJC™ FilterSeparators.