

OIL FILTRATION SYSTEM



INDUSTRY

Application Study written by:
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CJC TM Application Study

Copper Stripping Machine - Hydraulic System

CUSTOMER

Mine: Minera El Tesoro -Sierra Gorda-Antofagasta (Chile)

THE SYSTEM

Copper Stripping Machine. Brand: Wenmec. Hydraulic System. Oil Volume; 3200 litres. Oil ISO VG 46.

THE PROBLEM

Wenmec is recommending the max. contamination level in the hydraulic system to be ISO 14/11. Higher contamination severely reduces lifetime of hydraulic components and oil and it is well known that 80% of all failures in hydraulic systems are due to contamination of the oil. The contamination seen in sample no. 1 will have a dramatic effect on the reliability of the hydraulic system. A stripping machine operates as most other oil systems in mines 24 hours a day and the stoppage time directly relates to lost production and hereby extremely high cost.

THE SOLUTION

CJC[™] Fine Filter HDU 27/54 P. The Dirt holding capacity is 8 litres. The filtration degree is 3 micron abs. The material of the filter element is cellulose. The pump capacity is 600 ltr./h.

THE RESULT

After only 2 months of operation the cleanliness level is well below what is recommended by the equipment manufacturer Wenmec. With the achieved level it is predicted to result in a 8-10 times extended lifetime of system components and oil.



Stripping machine. Wenmec. Minera El Tesoro (Chile)

THE ANALYSIS

| Dates | 26.02.02 | 1 pass. | after 24 h. | 17.04.02 |
|-----------------|-----------|-----------|-------------|----------|
| Particles >2µm | 2,647,300 | 2,689,200 | 132,900 | 4,500 |
| Particles >5µm | 82,800 | 49,500 | 2,300 | 1,810 |
| Particles >15μm | 6,500 | 22,000 | 800 | 280 |
| ISO 4406 Code | 22/17/13 | 22/15/12 | 18/12/10 | 13/11/8 |

COMMENTS

The Inspector Carlos Baez:

"Like we also experienced in our crusher lubrication system the results of the CJC Fine Filters are brilliant".



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