CLEAN OIL
BRIGHT IDEAS

Quench Oil
Quench Bath, Continuous Quenching Line for Screws

CJC™ Application Study

Application Study written by:

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CUSTOMER
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THE SYSTEM
Quench bath, volume of 5,000 litres.
Continuous quenching line.

THE PROBLEM
Oil degradation products like resins / oxidation, sludge and carbon deposits are the most critical problem in quench works. During the quenching process, the oil is degraded due to the contact with hot components being quenched. This results in varnish deposits that stick to the inner surface of the quench bath and make the heat exchange less effective.

Neither replacing the oil that is consumed in the quenching process nor removing varnish deposits manually from the quench bath could eliminate the continuous problem of varnish deposits. The consequence was frequent occurrence of blocked orifices and de-creasing efficiency of the heat exchangers, resulting in unplanned stops and costly loss of production.

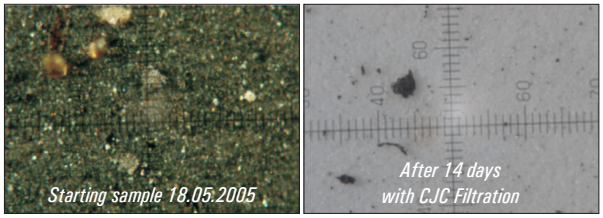
THE SOLUTION
CJC™ Fine Filter HDU 427/81 MZ (590 L/h), with **12 CJC™ Filter Inserts F 27/27,** was installed and has since kept the oil in the quench bath clean and in constant good operating condition.

THE RESULT
Oil parameters and heat exchange capacity were clearly improved. "Śrubex" was very surprised with the life time of CJC™ Filter Inserts which was much longer than expected - more than 6 months. Over 70 kgs of dirt was removed in the period.

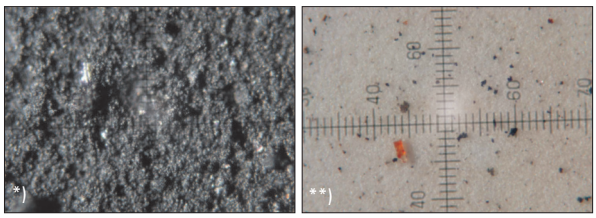
Cleaning of the heat exchanger was no longer needed. On the quench bath with the CJC™ Filter installed, unplanned stops and loss of production were reduced.

Replacement of the first CJC™ Filter Inserts

RESULT OF CJC™ FILTRATION



MEMBRANES SHOWING RESULTS OF ANALYSIS



**) Oil sample from SAFED line (traditional filtration, similar working parameters), which has been mechanically cleaned 3 weeks earlier.*
***) Oil sample taken 6 months after the CJC™ Filter was installed.*

COMMENTS

Mr. Krzysztof Kuźniar, Maintenance Manager:
"I was most impressed by comparison of the two analysis mentioned above. Those have proved the efficiency of the CJC Filtration compared to the mechanical filtration."

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