



CLEAN OIL
BRIGHT IDEAS

Quenching Oil

IPSEN Chamber Furnace

CJC™ Application Study

Application Study
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CUSTOMER

DURA Automotive Systems Rotenburg GmbH, Germany, one of the biggest suppliers for the international car and caravan industry, manufactures metal, cold-formed and fine-blanked parts as well as valve spring plates.

THE SYSTEM

Discontinuous IPSEN chamber furnace
Oil volume: 2,400 Litres
Oil type: Mineral oil based quenching oil

THE PROBLEM

After the quenching process black deposits covered the small-sized quenched parts (valve covers). These deposits from the contaminated quench bath could not be removed despite extensive after-treatment. Because of these optical flaws the valve covers were sorted out as defective goods in the quality control.

THE SOLUTION

For the test a **CJC™ Fine Filter HDU 38/100** with **CJC™ Fine Filter Insert 4 x F 38/20** (3 µm absolute) and a pump flow of 270 L/h was installed to remove contaminations from the quenching oil and by these means improve the surface quality of the hardened parts.

Dirt holding capacity: approx. 15 Kg
Water absorption capacity: approx. 8.5 L

THE RESULT

Only 1 ½ weeks after installation of the CJC™ Fine Filter the surfaces of the quenched parts were significantly cleaner. The black deposits had vanished, sandblasting in the after-treatment could be omitted. The amount of defective goods was reduced.

Because of these convincing results the company decided to buy the CJC™ Fine Filter after the test period.

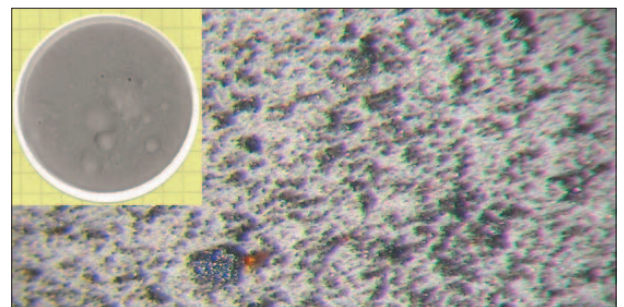
COMMENT

Mr. Riebesell, Maintenance Manager:
"We have clearly seen the efficiency of the CJC™ Fine Filter on the quenched parts. This result has convinced us."

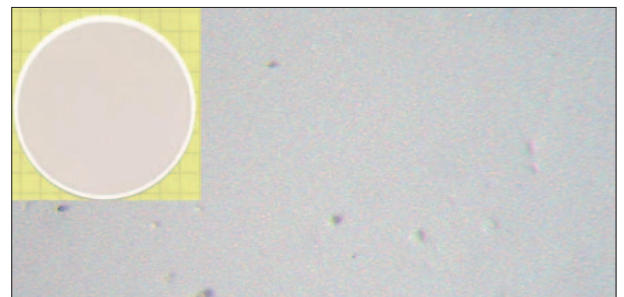


Hardened parts:
on the left with **unfiltered**, on the right with **filtered quenching bath**

OIL SAMPLES



Oil sample **BEFORE** filtration with CJC™
(0.45 µm membrane filter, 2 g liquid throughput, 80-fold enlargement)



Oil sample **AFTER** filtration with CJC™
(0.45 µm membrane filter, 2 g liquid throughput, 80-fold enlargement)