



CLEAN OIL
BRIGHT IDEAS

CJC™ Application Study

Application Study
written by:

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CUSTOMER

Getrag Transmission Ganzhou Branch
Jiangxi Province, China
Contact: Mr. Huang Ning, Equipment Manager
Mr. Liao Fuping, Production Manager

THE SYSTEM

Systems: 8 chamber Ipsen furnace
2 continuous Aichelin furnaces
Oil Type: Houghton Quench
Oil Volume: Ipsen 6,000 L
Aichelin 14,000 L

THE PROBLEM

After 4 years of use, the oil contained huge amounts of contamination such as dust, metal particles and oxidation deposits, which result in lower oil cooling characteristic and reduced efficiency of the air coolers. Furthermore, "black spots" attached on the surface of the quenched parts made cleaning difficult.

THE SOLUTION

A CJC™ Fine Filter HDU 427/108 MZ E1L1PVY was installed for testing. The filter was equipped with CJC™ Filter Inserts 16 x F 27/27. Pump type MZ 9-4, 590 L/h.

COMPARISON TO CENTRIFUGE

At the same time, our competitor offered a MANN-HUMMEL FM600 centrifuge for a comparison test on the same kind of furnace and quench oil.

THE COMPARISON TEST

The comparison test lasted one month, after which the customer sent the oil to an independent laboratory for analysis:

- With the CJC™ Fine Filter the contamination level was **reduced with a factor of 15** from an insoluble contamination level of 0.177 to 0.008 (%m/m).
- With the FM centrifuge, the oil cleanliness was still at > 24/ > 24/ > 24 and the workers had to clean the centrifuge manually once every 3 days and fill the centrifuge with nitrogen.

THE RESULT

Installing the CJC™ Fine Filter resulted in improved cooling characteristic of the oil and less black spots on parts produced. After the test, we received an order from Getrag (Ganzhou) for in total 10 CJC™ Fine Filters HDU 427/108 MZ-E1L1PVY.



HDU 427/108 MZ installed at an Ipsen Furnace



The MANN-HUMMEL FM600 Centrifuge

THE RESULT

	Before	After 1 month
ISO Code 4406	> 24/ > 24/ > 24	21/19/15
Particles, > 2 µm *)	4,924,908	648,814
Particles, > 5 µm *)	18,749,200	169,366
Particles, > 15 µm *)	15,703,896	12,214
Insolubles (5 µm), %m/m	0.177	0.008

*) Number of particles per 100 ml
Oil samples taken by Shanghai Runcare Fluid Monitoring Co., Ltd.

COMMENTS

"The centrifuge represented a great hidden danger for our production", said Mr. Liao Fuping, Production Manager.