



CLEAN OIL  
BRIGHT IDEAS

**Application Study  
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## CJC™ Application Study

### CUSTOMER

Aalborg Portland A/S, Denmark.  
Contact person: Per Munk Bertelsen, Maintenance Manager.

### THE SYSTEM

FLS Gear-TD1500, gear with torsion shaft for rotating cement oven. Oil 370 litres of MOBIL GEAR SHC 632.

### THE PROBLEM

Oil samples had shown an extremely high particle content, leading to increased wear and tear on the gear teeth.

### THE SOLUTION

A CJC™ Fine Filter HDU 27/27 PM-DY with pump flow rate of 90 ltr/h and with a CJC™ Filter Insert B 27/27 (3 µm abs) with a dirt holding capacity of 4 litres.

The CJC™ filter unit is installed on the gear system platform next to the gear housing drawing the oil from the bottom (sump) of the gear box and returning it to the top of the gear wheels.

### THE TEST

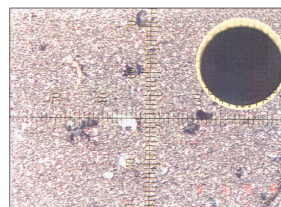
Oil sample No. 1 was taken before the overhaul of the system. Sample No. 2 was taken after overhaul, with new oil and just before filter start up. Samples Nos. 3-6 were during the test, with the filter running.

### THE RESULT

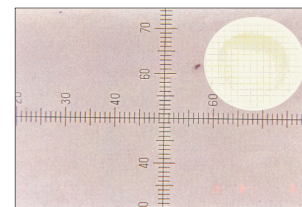
The achieved reduction from 3,257,000 particles > 5 µm to 6,969 will increase the gear bearings life by a factor of five.



*The Portland Rotating Oven is driven by FLS Gear equipped with a CJC™ Filter for retaining particle, oxidation and water from the gear oil.*



*Before CJC™ Filter.*



*After CJC™ Filter.*

### THE RESULT

Sample No.	1	2	3	4	5	6
Date	1/11	17/12	20/12	07/01	12/02	15/05
Particles > 2µm	> 500,000	> 8,000,000	215,884	19,240	15,489	7,242
Particles > 5µm	> 500,000	3,257,230	65,185	10,004	6,969	5,219
Particles > 15µm	> 130,000	80,250	7,080	762	549	227
ISO CLASS	20/20/18	24/22/17	18/17/13	15/14/10	14/13/9	13/12/8

### COMMENTS

**Per Munk Bertelsen, Maintenance Manager at Aalborg Portland A/S, Cement Mill:**

*"I can only recommend the use of CJC™ Oil Filters - as it helps us saving money on our maintenance budgets".*