

INDUSTRY

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CJCTM Application Study

Cement Mill - Gear Filtration

CUSTOMER

Aalborg Portland A/S, Denmark Contact person: Kaj Tranholm Olesen, 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. It was decided to improve oil cleanliness during the forthcoming overhaul of the transmission.

THE SOLUTION

A CJCTM Fine Filter type HDU 27/27 PM-DY with pump flow rate = 90 l/h and with CJCTM Filter Insert type B 27/27 (3 μ m 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

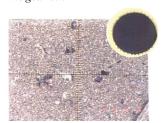
Oil sample no. 1 was taken out before the overhaul of the system. The sample no. 2 was taken at filter start up after overhaul and with new oil. Samples nos. 3, 4 and 5 were during the test.

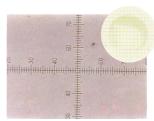
THE RESULT

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



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





Before

After

Datte	01-11	117-112	20-12	07-01	112-012	15-05
Particles >2 μm	>500,000	>8,000,000	215,884	19,240	15,489	7,242
Particles >5 μm	>500,000	3,257,230	65,185	10,004	6,969	5,219
Particles > 15 μ m	>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

The customer is very satisfied with the achieved ISO code of 13/12/8.

COMMENTS

Kaj Tranholm Olesen, Maintenance Manager at Aalborg Portland A/S, Cement Mill.

"I can only recommend the use of $CJC^{\mathbb{T}M}$ Oil Filters - as it helps us saving money on our maintenance budgets".



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