



CLEAN OIL  
BRIGHT IDEAS

# Hydraulic Oil Cement Mill, Vertical Raw Mill, Hydraulic System

## CJC™ Application Study

Application Study  
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In cooperation with

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Bulacan Plant



2012

### CUSTOMER

Holcim Philippines Incorporated, Bulacan Plant,  
Bulacan Phils.

### THE SYSTEM

Cement Mill, Vertical Raw Mill # 4, Hydraulic System  
1 & 2.

**Oil Type:** ISO VG 68, Tellus-68  
**Capacity:** 2 x 1,680 Liters

### THE PROBLEM

Holcim Philippines - Bulacan Plant is doing a quarterly machine condition monitoring through oil analysis. On May 15, 2012, they found out that the oil in the Hydraulic System 1 & 2 on Raw Mill #4 was heavily contaminated with silicon and wear particles. Due to high operation cost, maintenance downtime and concern on oil consumption cost, they wanted to install a reliable solution to solve their contamination problems.

### THE SOLUTION

A CJC™ Filter Separator PTU2 27/27 PV 4-14-9 with a CJC™ Filter Insert BLAT 27/27 was installed to reduce the contamination and wear particles present in the oil. One month of continuous filtration resulted in a dramatic decreased in oil contaminations that lead to a high savings on oil change alone.

### FINANCIAL BENEFITS

The customer saved 2 x 1,680 Liters of oil to approximately PHP 287,360.- (EUR 5,455.-). Furthermore, Holcim has additional savings on labour cost, spare parts and unwanted downtime.

### ENVIRONMENTAL BENEFITS

Due to longer oil change intervals, cost savings on disposal were obtained.

### THE TEST

On May 15, 2012, the ISO Code cleanliness level was 19/17/14. On June 12, after only one month of filtration, the ISO Code level was reduced to 16/14/11.

### THE RESULT

The installation helped to attain plant Oil-Consumption- Ratio (OCR) Target in one month. Furthermore, the Mean-Time-Between-Failures (MTBF) was increased.

### CUSTOMER COMMENTS

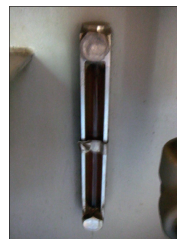
**Mr. Joel Aycardo, Lubrication Supervisor:**  
"Perfect solutions to help our Oil Consumption Ratio concerns, now we can save on oil change and can increase our machine reliability."



Holcim Philippines Incorporated, Bulacan Plant, Bulacan Phils.



CJC™ PTU2 27/27 PV  
installed at the  
hydraulic system of the  
vertical raw mill, #4

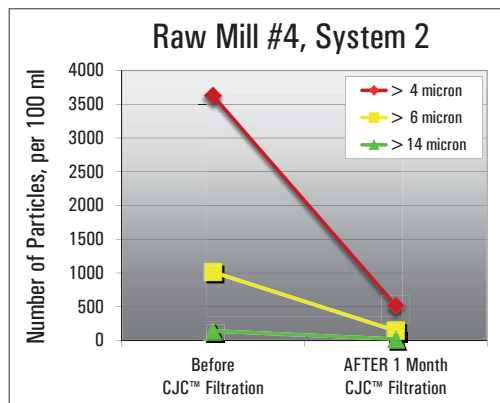


Sight glass,  
**BEFORE**  
CJC™ Oil Filtration



Sight glass,  
**AFTER**  
CJC™ Oil Filtration

### PARTICLE DEVELOPMENT



### RESULT

	Raw Mill #4, System 2		Raw Mill #4, System 1	
	Before May 2012	AFTER 1 month June 2012	Before June 2012	AFTER 1 month July 2012
Particles > 4 µm	3,626	519	2,635	596
Particles > 6 µm	1,015	145	737	167
Particles > 14 µm	142	20	103	23
ISO Code	19/17/14	16/14/11	19/17/14	16/15/12

Particles per 100 ml.