



LUBRICATION ENGINEERS HELLAS S.A.

LEADERS IN LUBRICANTS

Mr. Krasimir Petrov
Maintenance Manager
TITAN ZLATNA PANEGA CEMENT
2 Shipka
5760 Zlatna Panega village, Lovech
Bulgaria

Athens, 7 December 2007

Dear Krasimir,

Thank you very much for working with us last week, during the kiln conversion to **Pyroshield® 9011 XH**.

I understand that particularly on Tuesday, you had serious difficulties in the plant, however after this day – which after all is behind us - we were able to enjoy a very positive co-operation between us all.

Attached you will find as promised, all the temperature readings, as well as all the photos taken from the gears prior and during the conversion.

Overall the initial results of the conversion are very positive:

- ***The lubricant consumption has been reduced, so far, by 65,33%.***
- ***The pinion temperatures show an average reduction in excess of 15%.***

As we have explained, based on numerous conversions done worldwide, these are very normal & expected results for **Pyroshield® 9011 XH**.

They prove the enormous load carrying ability of the product, as well its ability to reduce friction.

By reducing friction, temperature is also reduced, as well as wear is minimized.

On the other hand, the ability of the lubricant to carry **enormous** loads and its tackiness (which helps it to stay in place), allow the consumption to be seriously reduced.

As we have explained, in our next visit, we will reduce the consumption even more.

Following the above and on the understanding that the daily lubricant consumption has been reduced from 3,0 kgs per day, to 1 kgr per day, the cost difference of the product has already been justified, as:

- a) One kgr of the kluber product costs €6,30, therefore the daily cost was €6,30X3 = €18,90.**
- b) The cost of Pyroshield is €19,63 and the consumption as it is today is 1 kgr.**

Considering the lower consumption, which is “saving” 2 kgs / day, (i.e. 730,00 kgs per year less disposal), as well as the better lubricity and lower gear temperatures, any difference – which in this case and temporarily is € 0,73 / day – is well justified.



On top of the above, based on our calculations, the daily consumption, after the first month, may be reduced to **0,675 kgr / day**, which will represent a total reduction of **77,50%** and it will also make the product cheaper in use by 30%.

These savings are stated without considering the life of the gears, the lower temperature, the life of the pump as well as the savings of disposing 70% less product annually.

Although it is too early, I must also state here, that the cost of **Pyroshield 9011 XH**, may be reduced further more, if you decide to use the product to all your mills and kilns.

We have already offered this option to the Patras plant and we thought that you should be aware of this, even if it is too early to discuss about it.

I think Krasimir that I have covered all the details of our discussion during last week.

Again, thank you very much for the confidence shown to Lubrication Engineers, its products as well as its services.

Please do not hesitate to contact us for any subject related to the above mentioned.

Here is wishing you the very best for the Christmas season, as well as the New Year!!!

Very sincerely yours,

Alexander C. Doucakis
Managing Director
Lubrication Engineers Hellas A.E.
Leaders in lubricants

www.le-greece.gr
www.le-international.com
www.le-inc.com

- Enclosures

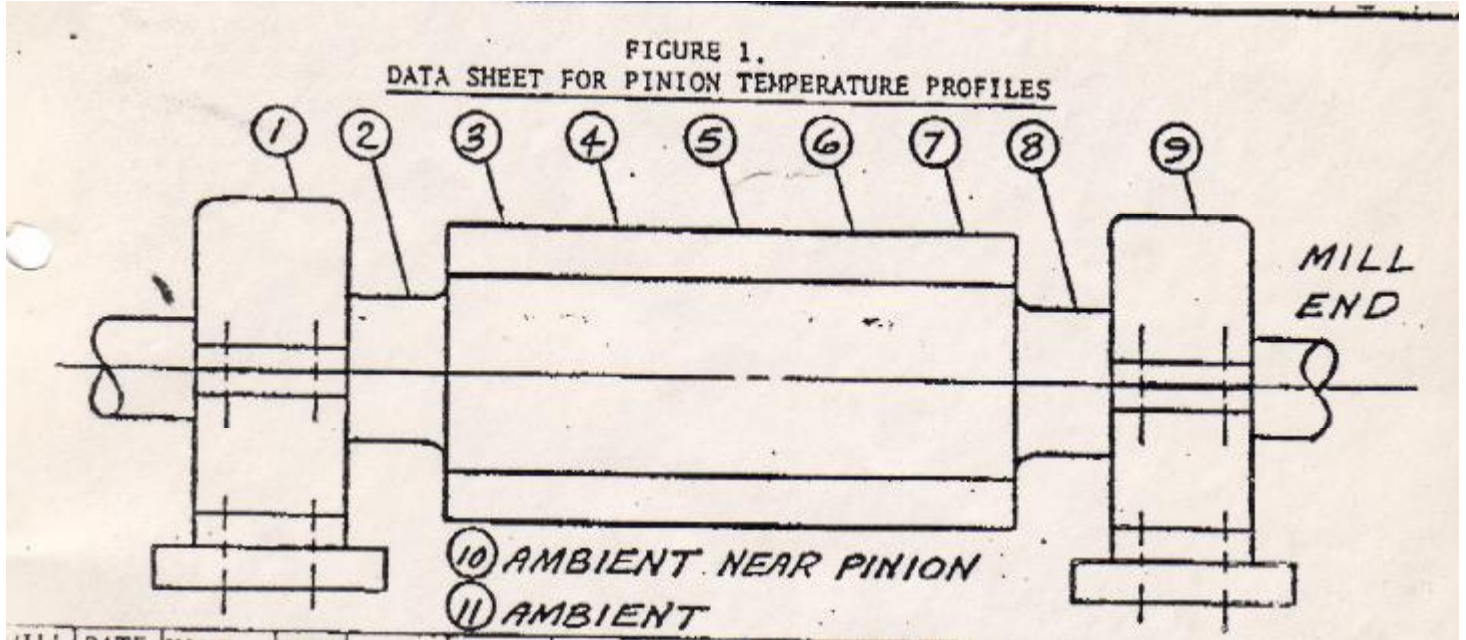
C.c.:

- Ø Mr. A. Frantzis / TITAN ZLATNA PANEGA CEMENT
- Ø Mr. K. Videv / TITAN ZLATNA PANEGA CEMENT
- Ø Mr. N. Kominos / LE HELLAS S.A.



DATA SHEET FOR PINION TEMPERATURE PROFILES

Product:



Mill or Kiln No	Date	Time	Air press	Spray interval	Temperatures °C											
					1	2	3	4	5	6	7	8	9	10	11	
5	27/11	10.25		300" – 500"	59	37.0	26.0	27.0	27.8	28.6	29.0	33.5	56.0	32.0	11.5	
		12.00					30.0	30.0	31.0	31.50	32.0			38.0		
		13.40				61.3	40.6	33.0	33.7	33.2	34.0	34.0	39.0	57.6	37.3	17.2
		15.50						27.8	28.9	29.0	28.5	29.0			33.0	14.5
		18.30		continuous	At this time Pyroshield was put in the pump tank and was sprayed continuously through the night											
	28/11	09.46		300" – 900"	39.5	30.4	19.3	19.9	20.0	20.0	20.0	28.0	39.0	29.5	13	
		13.55		300" – 1200"	33.7	22.9	17.4	17.5	17.8	17.5	17.2	16.4	27.5	24.9	12.5	
	29/11	09.45			36.6	24.8	12.5	12.6	13.5	13.9	14.8	26.8	32.4	25.5	9.9	
		13.15			39.0	29.5	20.0	19.6	20.3	20.5	20.6	34.8	39.7	32.1	16.2	

Kiln (oven) outside temperatures: On 27/11 at 10.25 it was 221°C. On 28/11 at 09.45 it was 191°C. On 29/11 at 09.45 it was 190°C. On 29/11 at 13.15 it was 204°C.

LUBRICATION ENGINEERS HELLAS A.E. ***LEADERS IN LUBRICANTS***

85, Serron street – 10441 Athens, Greece
Tel: +30 210 5152040 & 210 5152 522 FAX: 210 5152044
<http://www.le-greece.gr>

LUBRICATION ENGINEERS INC., TEXAS PRODUCTS ARE MANUFACTURED UNDER AN ISO 9000:2000 CERTIFIED QUALITY SYSTEM FROM BUREAU VERITAS QUALITY INTERNATIONAL, NORTH AMERICA (Certificate No: 18024).

CUTTING MAINTENANCE COSTS THROUGH PERFORMANCE & SERVICES ...

PINION TEMPERATURE PROFILES KILN No 5 27-11-2007



MILL or KILN DATA SHEET

DATE: November 27th, 2007

CUSTOMER

COMPANY: Zlatna Panega Titan Cement - Bulgaria

ADDRESS: Zlatna Panega Village, Lovech area Bulgaria

PERSON RESPONSIBLE: Mr. Krasimir Petrov **PHONE:**

MILL or KILN

- O.E.M: KHD, Kiln No 5
- Dimensions: DiameterFt. WidthFt Type / Model:.....
 Mill type: **Kiln** Ball mill Other (pls explain).....
- Number of mills (total) : 8 mills (6 cement + 2 raw) and 2 kilns – total 10.
- Girth gear: Diameter 6.000 mm - Speed 2.2 RPM
 Gears width:
- Pinion: Diameter 1.250 mm - - Speed 10.5 RPM

Spray system

How is the lubricant applied; Spray Brush Other (oil bath etc.)

If spray what type? Farval Other (specify): Lincoln

LUBRICATION ENGINEERS HELLAS A.E.
LEADERS IN LUBRICANTS



Injectors position: Facing the pinion

Spray valve type: - Air ratio:Yes No

Air pressure at pump: p.s.i. - Air at injectorsYes.....

Lubricant used

Present lubricant consumption: 3 kgs per day Price (€): 6.30 - Waste disposal cost:
.....

Is spray system working properly? Yes No

If no please specify;

OTHER

- Are the following parts – equipment available?

Strobe-light Yes No

Infrared thermometer Yes No

Anything else that you think we should be aware of?

.....

LUBRICATION ENGINEERS HELLAS A.E.
LEADERS IN LUBRICANTS

85, Serron str. 104 41 Athens, Greece
Tel:+30 210 5152040 & 210 5152522. Fax: +30 210 5152044
<http://www.le-greece.gr> , www.le-international.com

LUBRICATION ENGINEERS INC., TEXAS IS CERTIFIED WITH AN ISO
9001:2000, QUALITY SYSTEM FROM BUREAU VERITAS QUALITY
INTERNATIONAL, NORTH AMERICA (Certificate No: 18024).

REDUCING MAINTENANCE COSTS THROUGH PERFORMANCE & SERVICES