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**DIAMOND CEMENTS,(Prop. HEIDELBERGCEMENT INDIA LTD)  
MADORA,JHANSI UNIT**

**TEST REPORT FOR MYCEM**

Portland Pozzolana Cement as per IS1489 (Part I):1991

REF.: DC/JHN/QA/2015/41

DATE : 20.11.2015

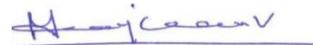
WEEK NO. : 41

(08.10.15 - 14.10.15)

CHARACTERISTIC	RESULTS OBTAINED	REQUIREMENT OF IS1489 (Part 1):1991
<b>(A) CHEMICAL COMPOSITION</b>		
(i) Loss on Ignition % by mass	2.15	5.0, Max.
(ii) Magnesia (MgO), % by mass	2.53	6.0, Max.
(iii) Sulphuric Anhydride (SO <sub>3</sub> ) % by mass	2.10	3.0, Max.
(iv) Total Chloride (Cl), % by mass	0.009	0.1, Max.
(v) Insoluble Material, % by mass	33.61	$X + 4.0 \times (100 - X) / 100$ Where X is the declared % of Fly Ash in the PPC sample
<b>(B) PHYSICAL TESTING</b>		
<b>1. Fineness of Cement</b>		
Sp.Surface blaine (m <sup>2</sup> /kg)	356	300 m <sup>2</sup> /kg minimum
<b>2. Soundness</b>		
Le-Chatelier Expansion (mm)	1.0	10 mm, Max.
Autoclave Expansion (%)	0.083	0.8 %, Max.
<b>3. Setting Time</b>		
Initial (in Minutes)	175	30 minutes, Min.
Final (in Minutes)	220	600 minutes, Max.
<b>4. Compressive Strength (MPa)</b>		
(a) At 72 ± 1 Hrs.	23	16 MPa, Min.
(b) At 168 ± 2 Hrs.	33	22 MPa, Min.
(c) At 672 ± 4 Hrs.	46	33 MPa, Min.
<b>5. Drying Shrinkage (%)</b>	0.034	0.15 %, Max.
<b>6. Declared % of Fly Ash in PPC</b>	34.87	15 - 35 %

**Remarks :**

- Temperature during testing -  $27 \pm 2^\circ \text{c}$ .
- The amount of Fly Ash in the finished cement is not varying more than  $\pm 3\%$  from the declared value.
- Portland Pozzolana Cement conforms to the requirement of IS 1489 (Part 1):1991 in all respects.



**Head of Quality Control - Jhansi**