

**JSW Steel Limited  
TEST REPORT**

Portland Slag Cement as per IS 455:1989

REF.: JSW/QA/2014 38

DATE : 01-10-2014

WEEK NO. : 38

17-09-2014 to 23-09-2014

CHARACTERISTIC	RESULTS OBTAINED	REQUIREMENT OF IS455:1989
<b>(A) CHEMICAL COMPOSITION</b>		
(i) Magnesia (MgO), % by mass	4.09	10.0 Maximum
(ii) Insoluble Residue, % by mass	0.33	4.0 Maximum
(iii) Sulphuric Anhydride (SO <sub>3</sub> ) % by mass	2.63	3.0 Maximum
(iv) Sulphide Sulphur (S)	0.24	1.5 Maximum
(v) Loss on Ignition % by mass	2.01	5.0 Maximum
(vi) Total Chloride (Cl), % by mass	0.015	0.10 Maximum
<b>(B) PHYSICAL TESTING</b>		
<b>1. Fineness of Cement</b>		
Sp.Surface blaine (m <sup>2</sup> /kg)	355	225 m <sup>2</sup> /kg minimum
<b>2. Soundness</b>		
Le-Chatelier Expansion (mm)	0.61	10 mm Maximum
Autoclave Expansion (%)	0.04	0.8 % Maximum
<b>3. Setting Time</b>		
Initial (in Minutes)	161	Not less than 30 minutes
Final (in Minutes)	202	Not more than 600 minutes
<b>4. Compressive Strength (MPa)</b>		
(a) At 72 ± 1 Hrs.	23.41	16 MPa Minimum
(b) At 168 ± 2 Hrs.	35.45	22 MPa Minimum
(c) At 672 ± 4 Hrs.	Result Awaited	33 MPa Minimum

**Remarks :**

- Temperature during testing - 27 ± 2° c.
- Portland Slag Cement conforms to the requirement of IS 455-1989 in all respects.



Sr.General Manager