

**JSW Steel Limited
TEST REPORT**

Portland Slag Cement as per IS 455:1989

REF.: JSW/QA/2014 37

DATE : 24-09-2014

WEEK NO. : 37

10-09-2014 to 16-09-2014

CHARACTERISTIC	RESULTS OBTAINED	REQUIREMENT OF IS455:1989
(A) CHEMICAL COMPOSITION		
(i) Magnesia (MgO), % by mass	4.10	10.0 Maximum
(ii) Insoluble Residue, % by mass	0.33	4.0 Maximum
(iii) Sulphuric Anhydride (SO ₃) % by mass	2.60	3.0 Maximum
(iv) Sulphide Sulphur (S)	0.23	1.5 Maximum
(v) Loss on Ignition % by mass	2.40	5.0 Maximum
(vi) Total Chloride (Cl), % by mass	0.015	0.10 Maximum
(B) PHYSICAL TESTING		
1. Fineness of Cement		
Sp.Surface blaine (m ² /kg)	356	225 m ² /kg minimum
2. Soundness		
Le-Chatelier Expansion (mm)	0.55	10 mm Maximum
Autoclave Expansion (%)	0.04	0.8 % Maximum
3. Setting Time		
Initial (in Minutes)	159	Not less than 30 minutes
Final (in Minutes)	202	Not more than 600 minutes
4. Compressive Strength (MPa)		
(a) At 72 ± 1 Hrs.	23.45	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