



TEST CERTIFICATE
FOR
PORTLAND POZZOLANA CEMENT (FLY ASH BASED)

| <u>PARTICULARS</u> | <u>TEST RESULTS</u> | <u>B I S SPECIFICATION</u> IS 1489(Part-1) :2015 | |
|-------------------------------|--|---|---|
| <u>PHYSICAL RESULT</u> | | | |
| 1 | Compressive Strength (MPa) : | | |
| | 72± 1 hr. (3 days) | 23.0 | 16 Min |
| | 168± 2 hrs. (7 days) | 32.6 | 22 Min |
| | 672 ± 4 hrs. (28 days) | RA | 33 Min |
| 2 | Normal Consistency (%) | 29.00 | |
| 3 | Setting Time (Minutes) : | | |
| | Initial | 150 | 30 Min |
| | Final | 220 | 600 Max |
| 4 | Fineness - Blaine (m ² /kg) | 350 | 300 Min |
| 5 | Soundness: | | |
| | Le-chatelier Expansion (in mm) | 0.50 | 10 Max |
| | Autoclave Expansion (%) | 0.03 | 0.80% Max |
| | Drying Shrinkage (%) | RA | 0.15% Max |
| <u>CHEMICAL RESULT</u> | | | |
| 1 | Total Loss on Ignition (%) | 2.82 | 5.0 Max |
| 2 | Insoluble Residue (% by mass) | 29.86 | Not more than =X+4.0(100-X)/100 Min 0.6 X (**) Where X is declared % of FlyAsh in Cement |
| 3 | Magnesia (% by mass) | 1.73 | 6.0 Max |
| 4 | Total Sulphur content as sulphuric anhydride (SO ₃), percent by mass | 2.22 | 3.5 Max |
| 5 | Chlorides (% by mass) | 0.014 | 0.1 Max |

The above test results complies with IS 1489 (Part- I) :2015 Portland Pozzolana Cement (Fly Ash Based)

(*) RA indicates "RESULTS AWAITED"

(**) Fly Ash addition 30.0 %

The amount of flyash in the furnished cement is not varying more than 3% from the declared value.