





WORK TEST CERTIFICATE

## **Portland Pozzolana Cement**

Despatched during Week No.		37	From	10-Sej	10-Sep-2019		16-Sep-2019	
Test Certificate No.		37	37 Reference		o No		MCM/IMC/OA/EM/00	
Dated		9/24/2019	Referenc	∌ NO.		WCW/IMS/QA/FM/09		
S.N.	Pa	rameters		Results Obtained	Redilirement as her is 14x4 (Part II) 1/11/15			
1	Chemical Composition							
	Loss on Ignition (% by mass)			1.90	Not More than 5.0 %			
	Magnesia (% by mass)			0.81	Not more than 6.0 %			
	Sulphuric Anhydride SO3 (% by mass)			2.47	Not More than 3.5 %			
	Chloride Content (% by mass)			0.01	Not more than 0.1 % for general purpose & not more than 0.05 % for pre-stressed structures			
	Insoluble Residue (% by mass)			28.30	Not More than [X + 4.0 (100-X) / 100] & Not less than (0.6 X), Where "X" is the declared Pozzolana content in cement			
Physical Analysis								
2	Fineness							
	Blaine's Specific Surface Area (m2 / kg)			338	Not Less than 300			
3	Compressive Strength (MPa)							
	72 ± 1h (3 Days)			29.3	Not less than 16.0			
	168 ± 2h (7 Days)			38.5	Not less than 22.0			
	672 ± 4h (28 Days) *			Awaited	Not less than 33.0			
4	Setting Time (Minutes)							
	Initial			140	Not less than 30			
	Final			240	Not more than 600			
5	Soundness							
	Le-Chatelier Expansion (mm)			0.50	Not more than 10.0			
	Auto-Clave Expansion (%)			0.040	Not more than 0.8			
6	Drying Shrinkage (%)*			Awaited	Not more than 0.15			
7	Normal Consistency (%)			30.00				
	Temp. During Testing (0C)			27.00	(27 ± 2)0C			

\* Fly Ash Content in Cement is (%) 34.00

The above cement complies with the requirements of IS 1489 (Part I): 2015 for Portland Pozzolana Cement.

Manager (QA)