



Doc.no.: WD/LAB/FM/09

**Wadi Cement Work**

**Portland Pozzolana Cement (Fly ash based)**

Week No. 03 (15.01.2017 to 21.01.2017)

Sl.no.	Characteristics	Unit	Actual	IS 1489 (Part 1) : 1991 specified requirement
1	<b>Chemical characteristics</b>			
	Magnesia (MgO)	%	1.2	Max. 6.0
	Sulphuric anhydride (SO <sub>3</sub> )	%	2.8	Max. 3.5
	Chloride (Cl <sup>-</sup> )	%	0.022	1. Max. 0.1 for structures other than prestressed concrete 2. Max. 0.05 for Prestressed concrete structures
	Insoluble Residue (IR)	%	26.8	$x + (4*(100-x))/100$
	Loss on Ignition	%	1.8	Max. 5.0

**2 Physical characteristics**

	Fineness (by Blaine method)	m <sup>2</sup> /kg	352	Min. 300
	<b>Soundness</b>			
	(a) Le chatelier method	mm	0.5	Max. 10
	(b) Autoclave test method	%	0.006	Max. 0.8
	<b>Setting time</b>			
	(a) Initial Setting Time (IST)	Minutes	150	Min. 30
	(b) Final Setting Time (FST)	Minutes	220	Max. 600
	<b>Compressive Strength</b>			
	(a) 3-days	MPa	28.7	16
	(b) 7-days	MPa	36.8	22
	(c) 28-days	MPa	Awaited	33
	Normal consistency	%	30.5	-
	Temperature during Testing	°C	27+/-2	27+/-2
	Fly ash content	%	30.5	15 to 35

Note: X- is the declared percentage of fly ash in the Portland Pozzolana Cement

**Head Quality Assurance**