

**GOVERNMENT OF GOA  
QUALITY CONTROL LABORATORY  
WATER RESOURCES DEPARTMENT**

**Test Report No.:** WRD/Q.C./F.6-4/ Aggr-T- 9538, 9539, Sand-T-4973, 4974, Cement-T-1136 /Lab/ **399** / 2019-20 **Dated:-** 22 / 01 / 2020.

**Laboratory:** Bicholim –Goa.

**Sub DivV/ (QC)/WRD/Bicholim – Goa.**

**Sub:-**Construction of tail minor DO's, W.C. and F.C.'s of B-4 distributory and D.W.C. 191 off taking at ch 18.005 kms of RBMC of TIP at village Dhargal in Pernem Taluka.

**Ref to requisition No.:** .F.131/WRD/WDVII/SDIV/19-20/221 dt.09/01/2020.

**Qty. Received:** 1 bags each **Date of Receipt:** 13/ 01 / 2020 **Tested on:** 13 & 14/01/2020 **Ref to Specification:** CPWD 2009, Vol. I & IS: 4031, 1968

**Sample:** 20mm, 12mm size aggrt. Sand( 2Nos), J. K. cement 43 grade **O.S. No. :** 1570/AF to 1574/AF **Lab. Sample No.:** 7627 TO 7631. **Tested by:** Mr. A R. Fadte, J.E.

Sr. No.	Description of sample	Tested for	Results	Max. /Min. value permissible	Remarks
1.	<b>20 mm Size Aggregate:</b> ( L.S.No 7627 )	Particle size distribution:	It is single sized aggregate of 20 mm nominal size		(Qty. rep: 45.00cu.m.)
2.	<b>12 mm Size Aggregate:</b> ( L.S.No 7628 )	Particle size distribution:	It is not single sized aggregate of 12.5 mm nominal size.		(Qty.rep:45.00cu.m.)
<b>REMARK: After blending 20 mm aggregate with 12 mm aggregates at the ratio of 1:2 by weight; it is satisfying the required criteria for graded aggregate of 20 mm nominal size.</b>					
3.	<b>Coarse Sand:</b> - (L. S. No. 7629)	i) Silt & Clay by S.A. method ii) Silt by sedimentation iii) Fineness Modulus iv) Grading Zone	: - 3.60 % : - 4.76 % : - 2.47 : - II		(Qty. rep: 45.00cu.m.)
<b>REMARK: The observed results are within the permissible limits of the Coarse Sand.</b>					
4.	<b>Fine Sand:</b> - (L.S.No.7630)	i) Silt & Clay by S.A. method ii) Silt by sedimentation iii) Fineness Modulus iv) Grading Zone	: - 4.40 % : - 5.00 % : - 1.91 : - IV.		(Qty. rep: 3000sq.m.)
<b>REMARK: The observed results are within the permissible limits of the fine Sand.</b>					
5.	<b>Cement:L. S. No.7631</b> JK cement. OPC,43 Grade Ordinary Portland cement, Manuf. date: Week 52, Month 12, Year'2019. CM/L = 0003401033 Qty. rep. To be used for – For PCC 1:2:4,RCC1:1.5:3.	i) Fineness of Cement ii) Consistency of cement iii) Initial Setting Time iv) Final Setting Time	: 1.39 % : 31.00 % : 140 Minutes : 380 Minutes	----- (It should not be more than 10%) (It should be in the neighborhood of 35%) ---- (It should not be less than 30 minutes) -- (It should not be more than 600 minutes)	
<b>REMARK:- The observed results are within the permissible limit for tested Ordinary Portland cement.</b>					

Copy to: 1. The Assistant Engineer, S. D. IV, WD VII, WRD , Dhargal – Pernem – Goa.

2. Submitted to The Superintending Engineer, CPO, WRD, Porvorim – Goa for kind information.

3. Submitted to The Executive Engineer, W.D. VII, WRD, Dhargal – Pernem – Goa

4. Q.C. Lab file

5. Bill File

Junior Engineer

Assistant Engineer