

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

Test Report No.: WRD/Q.C./F.6-4/Aggr-T- 9805, 9806 /Lab/312/2020-21 **Dated:** 24/ 03/2021. **Laboratory:** Bicholim –Goa.

Sand –T: 5129,5130 , Cement: 1239.

Sub Div: V (QC)/WRD/Bicholim Goa.

Sub: Construction of barrage and up gradation of Raw water pumping station at Ganjem on Madei river for augmentation of Raw for OPA Water works. Part III
Construction of Bank protection wall for upstream of barrage at Ganjem.

Ref to requisition No: MIN/WDVI/WRD/SDII/F.62/20-21/540 **Dated:** 03/03/2021.

Qty. Received: 1 bags each **Date of Receipt:** 16/03/2021 **Tested on:** 17&18/03/2021 **Ref to Specification:** CPWD 2009, Vol. I&IS:4031-4-1968

Sample: Sand, 20mm, **O.S. No.** 5460, 5461, 5488, 5487 & 5441/SS **Lab. Sample No.:** 888 To 892 **Tested by:** Mrs. S. B. Naik Shirodkar.JE.
12.5mm size aggrt, cement.

R E P O R T 01 OF 02

Sr. No.	Description of sample	Tested for	Results	Max. /Min. value permissible	Remarks
1.	20 mm Size Aggregate:	Particle size distribution:	It is single sized aggregate of 20 mm nominal size.	(Qty. rep. – --- m ³)	
2.	12.5 mm Size Aggregate:	Particle size distribution:	It is not single sized aggregate of 12.5 mm nominal size.	(Qty. rep. – --- m ³)	
REMARK: After blending 20 mm aggregate with 12.5 mm aggregates at the ratio of 1:1 by weight; it is satisfying therequired criteria for graded aggregate of 20 mm nominal size.					
3.	M. Sand: (L.S.No.890)	i) Silt & Clay by S.A. method ii) Silt by sedimentation iii) Fineness Modulus iv) Grading Zone	: - 12.20% : - 14.28% : - 2.99 : - I	(Limit of Deleterious material is 15.00% for crushed sand)	
REMARK: The observed results are within the permissible limits for crushed sand (Fine Aggregate) vide table 2 of IS 383: 2016(Clause 5.2.1).					
4.	Coarse Sand: (L.S.No.891)	i) Silt & Clay by S.A. method ii) Silt by sedimentation iii) Fineness Modulus iv) Grading Zone	: - 5.60% : - 5.95% : - 2.42 : - II		
REMARK: The observed results are within the permissible limits of the coarse sand.					

Junior Engineer Assistant Engineer

R E P O R T 02 OF 02

Sr. No.	Description of sample	Tested for	Results	Max. /Min. value permissible	Remarks
5.	<u>Cement:</u> Dalmia Super cement, bearing IS:269 Ordinary PortlandCement, Manuf. date: Week,- Month - Year'2021. CM/L = <u>6200022577</u> Qty. rep. -.	i)Fineness of Cement ii) Consistency of cement iii) Initial Setting Time iv) Final Setting Time	: 1.11% : 32.50% : 150minutes : 310 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)	
To be used for – For Mix 1:1.5:3. <u>REMARK: The observed results are within the permissible limit for Ordinary Portland cement.</u>					

Copy to: 1. The Assistant Engineer, SDII, WDVI,WRD, Valpoi- Sattari – Goa.

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

3. Copy Submitted to The Executive Engineer, W.D. VI, WRD, Bicholim – Goa.

4. Q.C. Lab file

5. Bill File.

Junior Engineer

Assistant Engineer