

GOVERNMENT OF GOA
QUALITY CONTROL LABORATORY
WATER RESOURCES DEPARTMENT

Test Report No.: WRD / QC / F.6-2 / Cube -T : 2891, 2892,2895 to 2898, 2900 to 2904,2912 to 2914,2921,2922./ Lab /275/ 2021 - 22 Dated:- 02/ 02/2022. Laboratory : Bicholim - 2931,2932,2938 to 2940, 2947,2948,2950,2961,2962,2980,2996,2997,3009,3010,3036 & 3037 Sub Division V (QC)/WRD/Goa.

Name of work : 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 II
Construction of Bank protection wall for upstream of barrage at Ganjem.

Ref. to Requisition No.: MIN/WDVI/WRD/SDII/f.62/21-22/378 Dt.:-28/12/ 2021

Qty. Recived. : 33 Sets of cube Date of Receipt:- 30/12/ 2021. Tested on: -30/12/2021,01,03,04,05,06,08,10,12,13,15,17,19,20,21,& 24/01/2022 as per due dates. Ref to CPWD :2009,

Sample:CubeMixPCC1:1.5:3O.SNo.:7254,7255,7264,7265,7269,7270,7276,7284,7287,7288,7289,7303,7304,7305,7312,7313,7329,7330,7336,7337,7338,7349,7350,7351,7363,7364,7388,7407,7408,7420,7421,7454 & 7455/SS Lab. Sample No.: 2542 To 2574 Tested By: Mrs. S.B. Naik Shirodkar. J.E.

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SR.N O.	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Valu e permissable	% above or below	REMARK
1	Cement concrete cube of mix 1 : 1.5: 3 , cast on 2/12/2021. PCC for Wall - XIII bed U/s of OTB Ganjem Left Side near pump house Foundation. CH.0.00 TO 29.00 mt.	28 th day compressive strength	260.51	Kg/Cm ²	265.00 Kg/cm ²	2.58	Qty represents - 60.00 Cum for two sets of cubes.
			271.83	Kg/Cm ²			
			283.16	Kg/Cm ²			
			Average	271.83			
2	Cement concrete cube of mix 1 : 1.5: 3 , cast on 2/12/2021. PCC for Wall - XIII bed U/s of OTB Ganjem Left Side near pump house Foundation. CH.0.00 TO 29.00 mt.	28 th day compressive strength	280.89	Kg/Cm ²	265.00 Kg/cm ²	3.72	--do--
			265.04	Kg/Cm ²			
			278.63	Kg/Cm ²			
			Average	274.85			
3	Cement concrete cube of mix 1 : 1.5: 3 , cast on 4/12/2021. PCC for Wall - XIII bed U/s of OTB Ganjem Left Side near pump house Above Foundation 1st Lift. CH.0.00 TO 29.00 mt.	28 th day compressive strength	255.97	Kg/Cm ²	265.00 Kg/cm ²	2.01	Qty represents - 55.00 Cum for two sets of cubes.
			283.16	Kg/Cm ²			
			271.83	Kg/Cm ²			
			Average	270.32			
4	Cement concrete cube of mix 1 : 1.5: 3 , cast on 4/12/2021. PCC for Wall - XIII bed U/s of OTB Ganjem Left Side near pump house Above Foundation 1st Lift. CH.0.00 TO 29.00 mt.	28 th day compressive strength	283.16	Kg/Cm ²	265.00 Kg/cm ²	4.57	--do--
			271.83	Kg/Cm ²			
			276.36	Kg/Cm ²			
			Average	277.12			
5	Cement concrete cube of mix 1 : 1.5: 3 , cast on 6/12/2021. PCC for Wall - XIII bed U/s of OTB Ganjem Left Side near pump house Above Foundation 2nd Lift. CH.0.00 TO 29.00 mt.	28 th day compressive strength	271.83	Kg/Cm ²	265.00 Kg/cm ²	4.00	Qty represents - 40.00 Cum for two sets of cubes.
			265.04	Kg/Cm ²			
			289.95	Kg/Cm ²			
			Average	275.61			

Junior Engineer

Assistant Engineer

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SR.N O.	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min. Value permissible	% above or below	REMARK
6	Cement concrete cube of mix 1 : 1.5: 3 , cast on 6/12/2021. PCC for Wall - XIII bed U/s of OTB Ganjem Left Side near pump house Above Foundation 2nd Lift. CH.0.00 TO 29.00 mt.	28 th day compressive strength	280.89	Kg/Cm ²	265.00 Kg/cm ²	2.86	Qty represents - 40.00 Cum for two sets of cubes.
			267.30	Kg/Cm ²			
			269.57	Kg/Cm ²			
			Average	272.59			
7	Cement concrete cube of mix 1 : 1.5: 3 , cast on 7/12/2021. PCC for Wall - XIII bed U/s of OTB Ganjem Left Side near pump house Above Foundation 3rd Lift. CH.0.00 TO 29.00 mt.	28 th day compressive strength	294.48	Kg/Cm ²	265.00 Kg/cm ²	6.28	Qty represents - 11.00 Cum.
			278.63	Kg/Cm ²			
			271.83	Kg/Cm ²			
			Average	281.65			
8	Cement concrete cube of mix 1 : 1.5: 3 , cast on 8/12/2021. PCC for Wall - II LHS of Madeiwada foundation bottom. CH.153.50 to 194.00 mt.	28 th day compressive strength	283.16	Kg/Cm ²	265.00 Kg/cm ²	4.00	Qty represents - 18.00 Cum.
			258.24	Kg/Cm ²			
			285.42	Kg/Cm ²			
			Average	275.61			
9	Cement concrete cube of mix 1 : 1.5: 3 , cast on 9/12/2021. PCC for Wall - II LHS of Madeiwada foundation. CH.153.50 to 194.00 mt.	28 th day compressive strength	287.69	Kg/Cm ²	265.00 Kg/cm ²	6.85	Qty represents - 95.00 Cum for three sets of cubes.
			308.08	Kg/Cm ²			
			253.71	Kg/Cm ²			
			Average	283.16			
10	Cement concrete cube of mix 1 : 1.5: 3 , cast on 9/12/2021. PCC for Wall - II LHS of Madeiwada foundation. CH.153.50 to 194.00 mt.	28 th day compressive strength	258.24	Kg/Cm ²	265.00 Kg/cm ²	4.29	--do--
			278.63	Kg/Cm ²			
			292.22	Kg/Cm ²			
			Average	276.36			
11	Cement concrete cube of mix 1 : 1.5: 3 , cast on 9/12/2021. PCC for Wall - II LHS of Madeiwada foundation. CH.153.50 to 194.00 mt.	28 th day compressive strength	271.83	Kg/Cm ²	265.00 Kg/cm ²	5.14	--do--
			303.55	Kg/Cm ²			
			260.51	Kg/Cm ²			
			Average	278.63			
12	Cement concrete cube of mix 1 : 1.5: 3 , cast on 11/12/2021. PCC for Wall - II LHS of Madeiwada above foundation 1st Lift. CH.153.50 to 194.00 mt.	28 th day compressive strength	258.24	Kg/Cm ²	265.00 Kg/cm ²	5.14	Qty represents - 90.00 Cum for three sets of cubes.
			296.75	Kg/Cm ²			
			280.89	Kg/Cm ²			
			Average	278.63			

Junior Engineer

Assistant Engineer

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SR.N O.	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Valu e permissable	% above or below	REMARK
13	Cement concrete cube of mix 1 : 1.5: 3 , cast on 11/12/2021. PCC for Wall - II LHS of Madeiwada above foundation 1st Lift. CH.153.50 to 194.00 mt.	28 th day compressive strength	294.48	Kg/Cm ²	265.00 Kg/cm ²	6.00	Qty represents - 90.00 Cum for three sets of cubes.
			276.36	Kg/Cm ²			
			271.83	Kg/Cm ²			
			Average	280.89			
14	Cement concrete cube of mix 1 : 1.5: 3 , cast on 11/12/2021. PCC for Wall - II LHS of Madeiwada above foundation 1st Lift. CH.153.50 to 194.00 mt.	28 th day compressive strength	283.16	Kg/Cm ²	265.00 Kg/cm ²	2.86	--do--
			271.83	Kg/Cm ²			
			262.77	Kg/Cm ²			
			Average	272.59			
15	Cement concrete cube of mix 1 : 2: 4 , cast on 13/12/2021. PCC for Wall - II LHS of Madeiwada above foundation 2nd Lift. CH.153.50 to 194.00 mt.	28 th day compressive strength	260.51	Kg/Cm ²	265.00 Kg/cm ²	4.29	Qty represents - 65.00 Cum for two sets of cubes.
			283.16	Kg/Cm ²			
			285.42	Kg/Cm ²			
			Average	276.36			
16	Cement concrete cube of mix 1 : 1.5: 3 , cast on 13/12/2021. PCC for Wall - II LHS of Madeiwada above foundation 2nd Lift. CH.153.50 to 194.00 mt.	28 th day compressive strength	271.83	Kg/Cm ²	265.00 Kg/cm ²	7.99	--do--
			283.16	Kg/Cm ²			
			303.55	Kg/Cm ²			
			Average	286.18			
17	Cement concrete cube of mix 1 : 1.5: 3 , cast on 15/12/2021. PCC for Wall - II LHS of Madeiwada above foundation 3rd Lift. CH.153.50 to 194.00 mt.	28 th day compressive strength	276.36	Kg/Cm ²	265.00 Kg/cm ²	3.15	Qty represents - 23.00 Cum.
			262.77	Kg/Cm ²			
			280.89	Kg/Cm ²			
			Average	273.34			
18	Cement concrete cube of mix 1 : 1.5: 3 , cast on 15/12/2021. PCC for Wall - II RHS of Madeiwada foundation bottom. CH.104.00 to 144.00 mt.	28 th day compressive strength	285.42	Kg/Cm ²	265.00 Kg/cm ²	4.57	Qty represents - 15.00 Cum.
			258.24	Kg/Cm ²			
			287.69	Kg/Cm ²			
			Average	277.12			
19	Cement concrete cube of mix 1 : 1.5: 3 , cast on 16/12/2021. PCC for Wall - III RHS of Madeiwada foundation. CH.104.00 to 144.00 mt.	28 th day compressive strength	294.48	Kg/Cm ²	265.00 Kg/cm ²	5.43	Qty represents - 85.00 Cum for three sets of cubes.
			260.51	Kg/Cm ²			
			283.16	Kg/Cm ²			
			Average	279.38			
20	Cement concrete cube of mix 1 : 1.5: 3 , cast on 16/12/2021. PCC for Wall - III RHS of Madeiwada foundation. CH.104.00 to 144.00 mt.	28 th day compressive strength	276.36	Kg/Cm ²	265.00 Kg/cm ²	4.57	--do--
			285.42	Kg/Cm ²			
			269.57	Kg/Cm ²			
			Average	277.12			

Junior Engineer

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SR.N O.	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min. Value permissible	% above or below	REMARK
21	Cement concrete cube of mix 1 : 1.5: 3 , cast on 16/12/2021. PCC for Wall - III RHS of Madeiwada foundation. CH.104.00 to 144.00 mt.	28 th day compressive strength	271.83	Kg/Cm ²	265.00 Kg/cm ²	3.15	Qty represents - 85.00 Cum for three sets of cubes.
			285.42	Kg/Cm ²			
			262.77	Kg/Cm ²			
			Average	273.34			
22	Cement concrete cube of mix 1 : 1.5: 3 , cast on 18/12/2021. PCC for Wall - III RHS of Madeiwada above foundation 1st Lift. CH.104.00 to 144.00 mt.	28 th day compressive strength	289.95	Kg/Cm ²	265.00 Kg/cm ²	4.86	Qty represents - 80.00 Cum for three sets of cubes.
			278.63	Kg/Cm ²			
			265.04	Kg/Cm ²			
			Average	277.87			
23	Cement concrete cube of mix 1 : 1.5: 3 , cast on 18/12/2021. PCC for Wall - III RHS of Madeiwada above foundation 1st Lift. CH.104.00 to 144.00 mt.	28 th day compressive strength	260.51	Kg/Cm ²	265.00 Kg/cm ²	4.57	--do--
			278.63	Kg/Cm ²			
			292.22	Kg/Cm ²			
			Average	277.12			
24	Cement concrete cube of mix 1 : 1.5: 3 , cast on 18/12/2021. PCC for Wall - III RHS of Madeiwada above foundation 1st Lift. CH.104.00 to 144.00 mt.	28 th day compressive strength	271.83	Kg/Cm ²	265.00 Kg/cm ²	2.58	--do--
			283.16	Kg/Cm ²			
			260.51	Kg/Cm ²			
			Average	271.83			
25	Cement concrete cube of mix 1 : 1.5: 3 , cast on 20/12/2021. PCC for Wall - III RHS of Madeiwada above foundation 2nd Lift. CH.104.00 to 144.00 mt.	28 th day compressive strength	294.48	Kg/Cm ²	265.00 Kg/cm ²	5.71	Qty represents - 55.00 Cum for two sets of cubes.
			283.16	Kg/Cm ²			
			262.77	Kg/Cm ²			
			Average	280.14			
26	Cement concrete cube of mix 1 : 1.5: 3 , cast on 20/12/2021. PCC for Wall - III RHS of Madeiwada above foundation 2nd Lift. CH.104.00 to 144.00 mt.	28 th day compressive strength	271.83	Kg/Cm ²	265.00 Kg/cm ²	6.57	--do--
			294.48	Kg/Cm ²			
			280.89	Kg/Cm ²			
			Average	282.40			
27	Cement concrete cube of mix 1 : 1.5: 3 , cast on 22/12/2021. PCC for Wall - III RHS of Madeiwada above foundation 3rd Lift. CH.104.00 to 144.00 mt.	28 th day compressive strength	285.42	Kg/Cm ²	265.00 Kg/cm ²	7.42	Qty represents - 15.00 Cum.
			292.22	Kg/Cm ²			
			276.36	Kg/Cm ²			
			Average	284.67			
28	Cement concrete cube of mix 1 : 1.5: 3 , cast on 23/12/2021. PCC for Wall - XIV LHS D/s of barrage foundation. CH.00 to 24.00 mt.	28 th day compressive strength	283.16	Kg/Cm ²	265.00 Kg/cm ²	4.00	Qty represents - 45.00 Cum for two sets of cubes.
			271.83	Kg/Cm ²			
			271.83	Kg/Cm ²			
			Average	275.61			

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29	Cement concrete cube of mix 1 : 1.5: 3 , cast on 23/12/2021. PCC for Wall - XIV LHS D/s of barrage foundation. CH.00 to 24.00 mt.	28 th day compressive strength	258.24	Kg/Cm ²	265.00 Kg/cm ²	1.72	Qty represents - 45.00 Cum for two sets of cubes.
			271.83	Kg/Cm ²			
			278.63	Kg/Cm ²			
		Average	269.57	Kg/Cm²			
30	Cement concrete cube of mix 1 : 1.5: 3 , cast on 24/12/2021. PCC for Wall - XIV LHS D/s of barrage above foundation 1st Lift. CH.00 to 24.00 mt.	28 th day compressive strength	258.24	Kg/Cm ²	265.00 Kg/cm ²	2.29	Qty represents - 48.00 Cum for two sets of cubes.
			271.83	Kg/Cm ²			
			283.16	Kg/Cm ²			
		Average	271.08	Kg/Cm²			
31	Cement concrete cube of mix 1 : 1.5: 3 , cast on 24/12/2021. PCC for Wall - XIV LHS D/s of barrage above foundation 1st Lift. CH.00 to 24.00 mt.	28 th day compressive strength	294.48	Kg/Cm ²	265.00 Kg/cm ²	6.00	--do--
			271.83	Kg/Cm ²			
			276.36	Kg/Cm ²			
		Average	280.89	Kg/Cm²			
32	Cement concrete cube of mix 1 : 1.5: 3 , cast on 27/12/2021. PCC for Wall - XIV LHS D/s of barrage above foundation 2nd Lift. CH.00 to 24.00 mt.	28 th day compressive strength	269.57	Kg/Cm ²	265.00 Kg/cm ²	6.57	Qty represents - 34.00 Cum for two sets of cubes.
			305.81	Kg/Cm ²			
			271.83	Kg/Cm ²			
		Average	282.40	Kg/Cm²			
33	Cement concrete cube of mix 1 : 1.5: 3 , cast on 27/12/2021. PCC for Wall - XIV LHS D/s of barrage above foundation 2nd Lift. CH.00 to 24.00 mt.	28 th day compressive strength	262.77	Kg/Cm ²	265.00 Kg/cm ²	5.14	--do--
			289.95	Kg/Cm ²			
			283.16	Kg/Cm ²			
		Average	278.63	Kg/Cm²			

Copy to: 1. The Assistant Engineer , SD II , WDV I , WRD,Valpoi-Sattari - Goa.

2. Copy submitted to The Superintending Engineer ,CPO,WRD, Sinchai Bhavan, Porvorim Goa for kind Information.

3. Copy submitted to The Executive Engineer , WD VI ,WRD, Bicholim - Goa.

4. QC Lab File. 5. Bill File.

Junior Engineer

Assistant Engineer