

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

Test Report No.: WRD/QC/F.6-2/Cube -T- 7607 To 7610,7620 To 7623, 7649 To 7652, 7676 To 7679, 7681 To 7683, 7687 To 7690 & 7704 To 7707 /Lab / **237** / 2019 - 20
Dated:- 10/ 07 / 2019

Laboratory : Bicholim -Goa / Sub Division V (QC)/WRD/ Bicholim -Goa.

Name of Work: - Construction of Barrage and up gradation of Raw water pumping station at Ganjem on Mhadei River for Augmentation of Raw water for OPA Water Works. Part III : Construction of Bank Protection wall for upstream of Barrage at Ganjem in Sattari taluka.

Ref. to Requisition No.: MI/WRD / WD VI/SD II /F.62 /2019-20/ 133 Dated: - 18-06-2019

Qty. Recived. : 27 Sets of cube Date of Receipt: - 21/06/2019. Tested on: -03/07/2019 To 09/07/2019 Ref to CPWD :2002, Vol. I

Sample: RCC 1 : 1.5 : 3 Mix O.S No. : 987/AF To 990/AF, 1000/AF To 1003/AF, 1029/AF To 1036/AF, 612/SP To 614/SP & 1038/AF To 1045/AF

Lab. Sample No.: 6294 To 6320. Tested By: - Mr. Anil R. Fadte,J.E. & Mr. S.M.Patri, AE

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SR.NO.	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissible	% above or below	REMARK
1	Plain Cement concrete cube of mix 1:1.5:3 , cast on 05/06/2019, PCC for wall-III,Wall-step-I from Ch. 30-93 m.	28th day compressive strength	296.75	Kg/Cm ²	265.00 Kg/Cm ²	6.57	Represents Qty. 24.00 Cum.
			267.30	Kg/Cm ²			
			283.16	Kg/Cm ²			
		Average	282.40	Kg/Cm²			
2	Plain Cement concrete cube of mix 1:1.5:3 , cast on 05/06/2019, PCC for wall-III,Wall-step-I from Ch. 30-93 m.	28th day compressive strength	276.36	Kg/Cm ²	265.00 Kg/Cm ²	13.41	Represents Qty. 27.50 Cum.
			330.73	Kg/Cm ²			
			294.48	Kg/Cm ²			
		Average	300.52	Kg/Cm²			
3	Plain Cement concrete cube of mix 1:1.5:3 , cast on 05/06/2019, PCC for wall-III,Wall-step-I from Ch. 30-93 m.	28th day compressive strength	265.04	Kg/Cm ²	265.00 Kg/Cm ²	14.83	Represents Qty. 25.50 Cum.
			351.12	Kg/Cm ²			
			296.75	Kg/Cm ²			
		Average	304.30	Kg/Cm²			
4	Plain Cement concrete cube of mix 1:1.5:3 , cast on 05/06/2019, PCC for wall-III,Wall-step-I from Ch. 30-93 m.	28th day compressive strength	274.10	Kg/Cm ²	265.00 Kg/Cm ²	9.70	Represents Qty. 28.00 Cum.
			330.73	Kg/Cm ²			
			267.30	Kg/Cm ²			
		Average	290.71	Kg/Cm²			
5	Plain Cement concrete cube of mix 1:1.5:3 , cast on 06/06/2019, PCC for wall-III,Wall-step-II from Ch. 0-93 m.	28th day compressive strength	351.12	Kg/Cm ²	265.00 Kg/Cm ²	25.94	Represents Qty. 28.00 Cum.
			346.59	Kg/Cm ²			
			303.55	Kg/Cm ²			
		Average	333.75	Kg/Cm²			
6	Plain Cement concrete cube of mix 1:1.5:3 , cast on 06/06/2019, PCC for wall-III,Wall-step-II from Ch. 0-93 m.	28th day compressive strength	344.32	Kg/Cm ²	265.00 Kg/Cm ²	28.79	Represents Qty. 27.00 Cum.
			351.12	Kg/Cm ²			
			328.46	Kg/Cm ²			
		Average	341.30	Kg/Cm²			

Junior Engineer

Assistant Engineer

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SR.NO.	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissable	% above or below	REMARK
7	Plain Cement concrete cube of mix 1:1.5:3 , cast on 06/06/2019, PCC for wall-III,Wall-step-II from Ch. 0-93 m.	28th day compressive strength	348.85	Kg/Cm ²	265.00 Kg/Cm ²	21.67	Represents Qty. 18.50 Cum.
			283.16	Kg/Cm ²			
			335.26	Kg/Cm ²			
		Average	322.42	Kg/Cm²			
8	Plain Cement concrete cube of mix 1:1.5:3 , cast on 06/06/2019, PCC for wall-III,Wall-step-II from Ch. 0-93 m.	28th day compressive strength	262.77	Kg/Cm ²	265.00 Kg/Cm ²	19.67	Represents Qty. 22.00 Cum.
			351.12	Kg/Cm ²			
			337.52	Kg/Cm ²			
		Average	317.14	Kg/Cm²			
9	Plain Cement concrete cube of mix 1:1.5:3 , cast on 07/06/2019, PCC for wall-II,Wall-step-I from Ch. 75-154 m.	28th day compressive strength	342.05	Kg/Cm ²	265.00 Kg/Cm ²	16.82	Represents Qty. 27.50 Cum.
			308.08	Kg/Cm ²			
			278.63	Kg/Cm ²			
		Average	309.59	Kg/Cm²			
10	Plain Cement concrete cube of mix 1:1.5:3 , cast on 07/06/2019, PCC for wall-II,Wall-step-I from Ch. 75-154 m.	28th day compressive strength	280.89	Kg/Cm ²	265.00 Kg/Cm ²	8.56	Represents Qty. 27.00 Cum.
			294.48	Kg/Cm ²			
			287.69	Kg/Cm ²			
		Average	287.69	Kg/Cm²			
11	Plain Cement concrete cube of mix 1:1.5:3 , cast on 07/06/2019, PCC for wall-II,Wall-step-I from Ch. 75-154 m.	28th day compressive strength	289.95	Kg/Cm ²	265.00 Kg/Cm ²	6.85	Represents Qty. 24.00 Cum.
			267.30	Kg/Cm ²			
			292.22	Kg/Cm ²			
		Average	283.16	Kg/Cm²			
12	Plain Cement concrete cube of mix 1:1.5:3 , cast on 07/06/2019, PCC for wall-II,Wall-step-I from Ch. 75-154 m.	28th day compressive strength	274.10	Kg/Cm ²	265.00 Kg/Cm ²	11.41	Represents Qty. 28.00 Cum.
			312.61	Kg/Cm ²			
			299.01	Kg/Cm ²			
		Average	295.24	Kg/Cm²			
13	Plain Cement concrete cube of mix 1:1.5:3 , cast on 08/06/2019, PCC for wall-II,Wall-step-II from Ch. 0-154 m.	28th day compressive strength	260.51	Kg/Cm ²	265.00 Kg/Cm ²	2.29	Represents Qty. 29.50 Cum.
			269.57	Kg/Cm ²			
			283.16	Kg/Cm ²			
		Average	271.08	Kg/Cm²			
14	Plain Cement concrete cube of mix 1:1.5:3 , cast on 08/06/2019, PCC for wall-II,Wall-step-II from Ch. 0-154 m.	28th day compressive strength	287.69	Kg/Cm ²	265.00 Kg/Cm ²	3.72	Represents Qty. 28.50 Cum.
			276.36	Kg/Cm ²			
			260.51	Kg/Cm ²			
		Average	274.85	Kg/Cm²			
15	Plain Cement concrete cube of mix 1:1.5:3 , cast on 08/06/2019, PCC for wall-II,Wall-step-II from Ch. 0-154 m.	28th day compressive strength	271.83	Kg/Cm ²	265.00 Kg/Cm ²	4.00	Represents Qty. 29.00 Cum.
			265.04	Kg/Cm ²			
			289.95	Kg/Cm ²			
		Average	275.61	Kg/Cm²			

Junior Engineer

Assistant Engineer

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SR.NO.	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value	% above or	REMARK
16	Plain Cement concrete cube of mix 1:1.5:3 , cast on 08/06/2019, PCC for wall-II,Wall-step-II from Ch. 0-154 m.	28th day	262.77	Kg/Cm ²	265.00 Kg/Cm ²	3.15	Represents Qty. 28.00 Cum.
		compressive	274.10	Kg/Cm ²			
		strength	283.16	Kg/Cm ²			
		Average	273.34	Kg/Cm²			
17	Plain Cement concrete cube of mix 1:1.5:3 , cast on 09/06/2019, PCC for wall-II,Wall-step-II from Ch. 0-154 m.	28th day	271.83	Kg/Cm ²	265.00 Kg/Cm ²	5.14	Represents Qty. 26.50 Cum.
		compressive	283.16	Kg/Cm ²			
		strength	280.89	Kg/Cm ²			
		Average	278.63	Kg/Cm²			
18	Plain Cement concrete cube of mix 1:1.5:3 , cast on 09/06/2019, PCC for wall-II,Wall-step-II from Ch. 0-154 m.	28th day	276.36	Kg/Cm ²	265.00 Kg/Cm ²	4.00	Represents Qty. 29.00 Cum.
		compressive	255.97	Kg/Cm ²			
		strength	294.48	Kg/Cm ²			
		Average	275.61	Kg/Cm²			
19	Plain Cement concrete cube of mix 1:1.5:3 , cast on 09/06/2019, PCC for wall-II,Wall-step-II from Ch. 0-154 m.	28th day	265.04	Kg/Cm ²	265.00 Kg/Cm ²	2.58	Represents Qty. 27.00 Cum.
		compressive	253.71	Kg/Cm ²			
		strength	296.75	Kg/Cm ²			
		Average	271.83	Kg/Cm²			
20	Plain Cement concrete cube of mix 1:1.5:3 , cast on 10/06/2019, PCC for wall-II,Wall-step-III from Ch. 0-154 m.	28th day	278.63	Kg/Cm ²	265.00 Kg/Cm ²	11.70	Represents Qty. 15.00 Cum.
		compressive	296.75	Kg/Cm ²			
		strength	312.61	Kg/Cm ²			
		Average	295.99	Kg/Cm²			
21	Plain Cement concrete cube of mix 1:1.5:3 , cast on 10/06/2019, PCC for wall-II,Wall-step-III from Ch. 0-154 m.	28th day	265.04	Kg/Cm ²	265.00 Kg/Cm ²	13.69	Represents Qty. 18.00 Cum.
		compressive	348.85	Kg/Cm ²			
		strength	289.95	Kg/Cm ²			
		Average	301.28	Kg/Cm²			
22	Plain Cement concrete cube of mix 1:1.5:3 , cast on 10/06/2019, PCC for wall-II,Wall-step-III from Ch. 0-154 m.	28th day	274.10	Kg/Cm ²	265.00 Kg/Cm ²	3.15	Represents Qty. 21.00 Cum.
		compressive	267.30	Kg/Cm ²			
		strength	278.63	Kg/Cm ²			
		Average	273.34	Kg/Cm²			
23	Plain Cement concrete cube of mix 1:1.5:3 , cast on 10/06/2019, PCC for wall-II,Wall-step-III from Ch. 0-154 m.	28th day	283.16	Kg/Cm ²	265.00 Kg/Cm ²	6.00	Represents Qty. 22.00 Cum.
		compressive	267.30	Kg/Cm ²			
		strength	292.22	Kg/Cm ²			
		Average	280.89	Kg/Cm²			
24	Plain Cement concrete cube of mix 1:1.5:3 , cast on 11/06/2019, PCC for wall-III,Wall-step-III from Ch. 0-93 m.	28th day	289.95	Kg/Cm ²	265.00 Kg/Cm ²	4.57	Represents Qty. 14.50 Cum.
		compressive	269.57	Kg/Cm ²			
		strength	271.83	Kg/Cm ²			
		Average	277.12	Kg/Cm²			

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Assistant Engineer

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SR.NO.	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissible	% above or below	REMARK
25	Plain Cement concrete cube of mix 1:1.5:3 , cast on 11/06/2019, PCC for wall-III,Wall-step-III from Ch. 0-93 m.	28th day compressive strength	274.10	Kg/Cm ²	265.00 Kg/Cm ²	3.72	Represents Qty. 12.00 Cum.
			283.16	Kg/Cm ²			
			267.30	Kg/Cm ²			
		Average	274.85	Kg/Cm²			
26	Plain Cement concrete cube of mix 1:1.5:3 , cast on 11/06/2019, PCC for wall-III,Wall-step-III from Ch. 0-93 m.	28th day compressive strength	269.57	Kg/Cm ²	265.00 Kg/Cm ²	6.57	Represents Qty. 11.00 Cum.
			294.48	Kg/Cm ²			
			283.16	Kg/Cm ²			
		Average	282.40	Kg/Cm²			
27	Plain Cement concrete cube of mix 1:1.5:3 , cast on 11/06/2019, PCC for wall-III,Wall-step-III from Ch. 0-93 m.	28th day compressive strength	332.99	Kg/Cm ²	265.00 Kg/Cm ²	22.52	Represents Qty. 11.50 Cum.
			348.85	Kg/Cm ²			
			292.22	Kg/Cm ²			
		Average	324.69	Kg/Cm²			

1. Copy to: The Assistant Engineer SD II , WD VI , 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 ,WDVI,WRD, Bicholim-Goa.
4. QC Lab File. 5. Bill File.

Junior Engineer

Assistant Engineer