

GOVERNMENT OF GOA
QUALITY CONTROL LABORATORY
WATER RESOURCES DEPARTMENT

Test Report No.: WRD / QC / F.6-2 / Cube -T : 1589 to 1591,1607 to 1609,1615 to 1618/ Lab /38/ 2021 - 22 Dated:-28/04/2021. Laboratory : Bicholim - Goa
,1630 to 1632, 1641 to 1643,1652 to 1654,1665 to 1667,1683 to 1686,1697,1698,1749 to 1752 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 I- Construction of Barrage providing and laying 1000mm dia D.Ipipe Rising main and Break Pressure Tank at Ganjem in Sattari Taluka.

Ref. to Requisition No.:WRD/ WDVI/SDI/F.W.215/2020-21/643 Dated :- 25/ 03 / 2021.

Qty. Recived. :33 Sets of cube Date of Receipt:- 27/ 03 / 2021. Tested on: -03,07,08,09,10,12,13,14,15,21/04/2021 as per due dates. Ref to CPWD :2009, Vol. I

Sample: Cube Mix 1:1.5:3 & M 35 O.S No.:5741 to 5743,5770,5771,5772,5778 to 5781,5795,5796,5797,5808,5809,5810,5820 to 5822,5834 to 5836,5852 to 5855,5867,5868 /SS & 42,43,44,45/RK Lab. Sample No.:1032 to 1064 Tested By:Mrs.R.R.Kadam.A.E & Mrs. Shirodkar. J.E.

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SR. NO	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissable	% above or below	REMARK
1	Cement concrete cube of mix 1 : 1.5: 3 , cast on 06/03/2021. RCC for Abutment on R.H.S from-6.00 to 7.20.	28 th day compressive strenath	303.55	Kg/Cm ²	265.00 Kg/cm ²	10.84	Qty represents - 30.00 Cum.
			294.48	Kg/Cm ²			
			283.16	Kg/Cm ²			
			Average	293.73			
2	Cement concrete cube of mix 1 : 1.5: 3 , cast on 06/03/2021. RCC for Pier P8-11.85m to 13.05m	28 th day compressive strenath	276.36	Kg/Cm ²	265.00 Kg/cm ²	4.29	Qty represents - 13.50 Cum.
			289.95	Kg/Cm ²			
			262.77	Kg/Cm ²			
			Average	276.36			
3	Cement concrete cube of mix 1 : 1.5: 3 , cast on 06/03/2021. RCC for Pier P8-11.85m to 13.05m	28 th day compressive strenath	253.71	Kg/Cm ²	265.00 Kg/cm ²	6.00	Qty represents - 13.50 Cum.
			299.01	Kg/Cm ²			
			289.95	Kg/Cm ²			
			Average	280.89			
4	Cement concrete cube of mix M 35 , cast on 10/03/2021. RCC for 7 th span of service bridge of barrage.	28 th day compressive strenath	407.75	Kg/Cm ²	400.00 Kg/cm ²	2.31	Qty represents - 9.00 Cum.
			412.28	Kg/Cm ²			
			407.75	Kg/Cm ²			
			Average	409.26			
5	Cement concrete cube of mix M 35 , cast on 10/03/2021. RCC for 7 th span of service bridge of barrage.	28 th day compressive strenath	405.48	Kg/Cm ²	400.00 Kg/cm ²	1.94	Qty represents - 9.00 Cum.
			407.75	Kg/Cm ²			
			410.01	Kg/Cm ²			
			Average	407.75			
6	Cement concrete cube of mix M 35 , cast on 10/03/2021. RCC for 7 th span of service bridge of barrage.	28 th day compressive strenath	394.16	Kg/Cm ²	400.00 Kg/cm ²	2.69	Qty represents - 9.00 Cum.
			430.40	Kg/Cm ²			
			407.75	Kg/Cm ²			
			Average	410.77			

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	Cement concrete cube of mix M 35 , cast on 10/03/2021. RCC for 7 th span of service bridge of barrage.	28 th day compressive strength	412.28	Kg/Cm ²	400.00 Kg/cm ²	3.45	Qty represents - 9.00 Cum.
			432.67	Kg/Cm ²			
			396.42	Kg/Cm ²			
		Average	413.79	Kg/Cm²			
8	Cement concrete cube of mix 1 : 1.5: 3 , cast on 11/03/2021. RCC for Abutment on R.H.S from- 7.20 to 8.40.	28 th day compressive strength	253.71	Kg/Cm ²	265.00 Kg/cm ²	2.29	Qty represents - 15.00 Cum.
			276.36	Kg/Cm ²			
			283.16	Kg/Cm ²			
		Average	271.08	Kg/Cm²			
9	Cement concrete cube of mix 1 : 1.5: 3 , cast on 11/03/2021. RCC for Abutment on R.H.S from- 7.20 to 8.40.	28 th day compressive strength	262.77	Kg/Cm ²	265.00 Kg/cm ²	5.14	Qty represents - 15.00 Cum.
			283.16	Kg/Cm ²			
			289.95	Kg/Cm ²			
		Average	278.63	Kg/Cm²			
10	Cement concrete cube of mix 1 : 1.5: 3 , cast on 11/03/2021. RCC for Secondary concrete 7 th & 8 th opening of Gate Grooves.	28 th day compressive strength	310.34	Kg/Cm ²	265.00 Kg/cm ²	11.70	Qty represents - 10.00 Cum.
			305.81	Kg/Cm ²			
			271.83	Kg/Cm ²			
		Average	295.99	Kg/Cm²			
11	Cement concrete cube of mix 1 : 1.5: 3 , cast on 11/03/2021. RCC for Secondary concrete 9 th & 10 th opening of Gate Grooves.	28 th day compressive strength	269.57	Kg/Cm ²	265.00 Kg/cm ²	4.57	Qty represents - 10.00 Cum.
			283.16	Kg/Cm ²			
			278.63	Kg/Cm ²			
		Average	277.12	Kg/Cm²			
12	Cement concrete cube of mix 1 : 1.5: 3 , cast on 12/03/2021. Secondary concrete 1 st & 2 nd opening gate 5m to 10m.	28 th day compressive strength	317.14	Kg/Cm ²	265.00 Kg/cm ²	15.40	Qty represents - 16.00 Cum.
			296.75	Kg/Cm ²			
			303.55	Kg/Cm ²			
		Average	305.81	Kg/Cm²			
13	Cement concrete cube of mix 1 : 1.5: 3 , cast on 12/03/2021. RCC for Abutment on R.H.S from - 8.40 to 9.60.	28 th day compressive strength	303.55	Kg/Cm ²	265.00 Kg/cm ²	12.84	Qty represents - 15.00 Cum.
			299.01	Kg/Cm ²			
			294.48	Kg/Cm ²			
		Average	299.01	Kg/Cm²			

Junior Engineer

Assistant Engineer

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SR. NO	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissible	% above or below	REMARK
14	Cement concrete cube of mix 1 : 1.5: 3 , cast on 12/03/2021. R.H.S U/S wall R.C.C.	28 th day compressive strength	249.18	Kg/Cm ²	265.00 Kg/cm ²	6.00	Qty represents - 13.00 Cum.
			285.42	Kg/Cm ²			
			308.08	Kg/Cm ²			
		Average	280.89	Kg/Cm²			
15	Cement concrete cube of mix 1 : 1.5: 3 , cast on 13/03/2021.Secondary concrete 3 rd & 4 th opening gate 5m to 10m.	28 th day compressive strength	308.08	Kg/Cm ²	265.00 Kg/cm ²	12.55	Qty represents - 16.00 Cum.
			305.81	Kg/Cm ²			
			280.89	Kg/Cm ²			
		Average	298.26	Kg/Cm²			
16	Cement concrete cube of mix 1 : 1.5: 3 , cast on 13/03/2021. RCC for Pier P9-11.85m to 13.05m	28 th day compressive strength	308.08	Kg/Cm ²	265.00 Kg/cm ²	15.97	Qty represents - 13.50 Cum.
			310.34	Kg/Cm ²			
			303.55	Kg/Cm ²			
		Average	307.32	Kg/Cm²			
17	Cement concrete cube of mix 1 : 1.5: 3 , cast on 13/03/2021. RCC for Pier P9-11.85m to 13.05m	28 th day compressive strength	271.83	Kg/Cm ²	265.00 Kg/cm ²	4.00	Qty represents - 13.50 Cum.
			283.16	Kg/Cm ²			
			271.83	Kg/Cm ²			
		Average	275.61	Kg/Cm²			
18	Cement concrete cube of mix 1 : 1.5: 3 , cast on 15/03/2021.Secondary concrete 5 th & 6 th opening gate 5m to 10m.	28 th day compressive strength	249.18	Kg/Cm ²	265.00 Kg/cm ²	2.86	Qty represents - 16.00 Cum.
			265.04	Kg/Cm ²			
			303.55	Kg/Cm ²			
		Average	272.59	Kg/Cm²			
19	Cement concrete cube of mix 1 : 1.5: 3 , cast on 15/03/2021. RCC for Abutment -9.60 to 10.80m	28 th day compressive strength	260.51	Kg/Cm ²	265.00 Kg/cm ²	6.57	Qty represents - 15.00 Cum.
			289.95	Kg/Cm ²			
			296.75	Kg/Cm ²			
		Average	282.40	Kg/Cm²			
20	Cement concrete cube of mix 1 : 1.5: 3 , cast on 15/03/2021. RCC for Abutment -9.60 to 10.80m	28 th day compressive strength	308.08	Kg/Cm ²	265.00 Kg/cm ²	14.26	Qty represents - 15.00 Cum.
			294.48	Kg/Cm ²			
			305.81	Kg/Cm ²			
		Average	302.79	Kg/Cm²			

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SR. NO	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissable	% above or below	REMARK
21	Cement concrete cube of mix 1 : 1.5: 3 , cast on 16/03/2021. Secondary concrete 9 th & 10 th opening.	28 th day compressive strength	283.16	Kg/Cm ²	265.00 Kg/cm ²	2.86	Qty represents - 16.00 Cum.
			262.77	Kg/Cm ²			
			271.83	Kg/Cm ²			
		Average	272.59	Kg/Cm²			
22	Cement concrete cube of mix 1 : 1.5: 3 , cast on 16/03/2021. RCC for Abutment-10.80 to 12.00m	28 th day compressive strength	289.95	Kg/Cm ²	265.00 Kg/cm ²	6.85	Qty represents - 15.00 Cum.
			262.77	Kg/Cm ²			
			296.75	Kg/Cm ²			
		Average	283.16	Kg/Cm²			
23	Cement concrete cube of mix 1 : 1.5: 3 , cast on 16/03/2021. Wall between service bridge P1 P2 P3.	28 th day compressive strength	271.83	Kg/Cm ²	265.00 Kg/cm ²	2.01	Qty represents - 18.50 Cum.
			258.24	Kg/Cm ²			
			280.89	Kg/Cm ²			
		Average	270.32	Kg/Cm²			
24	Cement concrete cube of mix M 35 , cast on 17/03/2021. RCC for 8th span service bridge of barrage.	28 th day compressive strength	373.77	Kg/Cm ²	400.00 Kg/cm ²	0.62	Qty represents - 9.00 Cum.
			448.52	Kg/Cm ²			
			385.09	Kg/Cm ²			
		Average	402.46	Kg/Cm²			
25	Cement concrete cube of mix M 35 , cast on 17/03/2021. RCC for 8th span service bridge of barrage.	28 th day compressive strength	396.42	Kg/Cm ²	400.00 Kg/cm ²	3.82	Qty represents - 9.00 Cum.
			419.07	Kg/Cm ²			
			430.40	Kg/Cm ²			
		Average	415.30	Kg/Cm²			
26	Cement concrete cube of mix M 35 , cast on 17/03/2021. RCC for 8th span service bridge of barrage.	28 th day compressive strength	416.81	Kg/Cm ²	400.00 Kg/cm ²	2.88	Qty represents - 9.00 Cum.
			387.36	Kg/Cm ²			
			430.40	Kg/Cm ²			
		Average	411.52	Kg/Cm²			
27	Cement concrete cube of mix M 35 , cast on 17/03/2021. RCC for 8th span service bridge of barrage.	28 th day compressive strength	410.01	Kg/Cm ²	400.00 Kg/cm ²	4.77	Qty represents - 9.00 Cum.
			432.67	Kg/Cm ²			
			414.54	Kg/Cm ²			
		Average	419.07	Kg/Cm²			

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SR. NO	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissable	% above or below	REMARK
28	Cement concrete cube of mix 1 : 1.5: 3 , cast on 18/03/2021. Wall between service bridge P4 P5 P6.	28 th day compressive strength	289.95	Kg/Cm ²	265.00 Kg/cm ²	6.28	Qty represents - 18.50 Cum.
			271.83	Kg/Cm ²			
			283.16	Kg/Cm ²			
		Average	281.65	Kg/Cm²			
29	Cement concrete cube of mix 1 : 1.5: 3 , cast on 18/03/2021. RCC for Abutment-12.00 to 13.05m	28 th day compressive strength	276.36	Kg/Cm ²	265.00 Kg/cm ²	4.00	Qty represents - 15.00 Cum.
			287.69	Kg/Cm ²			
			262.77	Kg/Cm ²			
		Average	275.61	Kg/Cm²			
30	Cement concrete cube of mix M 35 , cast on 24/03/2021. RCC for 9th span service bridge of barrage.	28 th day compressive strength	405.48	Kg/Cm ²	400.00 Kg/cm ²	2.50	Qty represents - 9.00 Cum.
			416.81	Kg/Cm ²			
			407.75	Kg/Cm ²			
		Average	410.01	Kg/Cm²			
31	Cement concrete cube of mix M 35 , cast on 24/03/2021. RCC for 9th span service bridge of barrage.	28 th day compressive strength	391.89	Kg/Cm ²	400.00 Kg/cm ²	2.69	Qty represents - 9.00 Cum.
			410.01	Kg/Cm ²			
			430.40	Kg/Cm ²			
		Average	410.77	Kg/Cm²			
32	Cement concrete cube of mix M 35 , cast on 24/03/2021. RCC for 9th span service bridge of barrage.	28 th day compressive strength	400.95	Kg/Cm ²	400.00 Kg/cm ²	3.45	Qty represents - 9.00 Cum.
			419.07	Kg/Cm ²			
			421.34	Kg/Cm ²			
		Average	413.79	Kg/Cm²			
33	Cement concrete cube of mix M 35 , cast on 24/03/2021. RCC for 9th span service bridge of barrage.	28 th day compressive strength	389.63	Kg/Cm ²	400.00 Kg/cm ²	4.20	Qty represents - 9.00 Cum.
			425.87	Kg/Cm ²			
			434.93	Kg/Cm ²			
		Average	416.81	Kg/Cm²			

Copy to: 1. The Assistant Engineer , SD I , WD VI ,WRD,Bicholim - 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.

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