

GOVERNMENT OF GOA
QUALITY CONTROL LABORATORY
WATER RESOURCES DEPARTMENT

Test Report No.: WRD / QC / F.6-2 / Cube -T :2142 to 2144,2155 to 2159,2172 to 2174/ Lab /128 / 2021 - 22 Dated:-26 / 06/ 2021. Laboratory : Bicholim - Goa.
,2184 to 2187,2198 to 2201,2209 to 2212,2218 to 2221,2234 to 2237,2250 to 2252,2270,2271,2301 Sub Division V (QC)/WRD/ Bicholim- 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.62/21-22/98 Dated :- 02/ 06/ 2021.

Qty. Recived. :37 Sets of cube Date of Receipt:- 04/ 06 / 2021. Tested on: -04,05,06,08,09,10,11,12,14,15 & 17/06/2021 as per due dates. Ref to CPWD : 2009, Vol. I

Sample: Cube Mix 1:1.5:3 O.S No. : 6372 to 6374,6386 to 6390,6403 to 6405,6415 to 6418,6429 to 6432,6440 to 6443,6449 to 6452,6465 to 6468,6481 to 6483,6501,6502,6534/SS Lab. Sample No.: 1690 To 1726 Tested By: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 07/05/2021. For Wall X bed D/s of O.T.B at Ganjem Right side Foundation Ch .54.30to 72.53mt	28 th day compressive strength	267.30	Kg/Cm ²	265.00 Kg/cm ²	4.00	Qty represents -43.00 Cum for two sets of cubes.
			287.69	Kg/Cm ²			
			271.83	Kg/Cm ²			
			Average	275.61			
2	Cement concrete cube of mix 1:1.5:3 , cast on 07/05/2021. For Wall X bed D/s of O.T.B at Ganjem Right side Foundation Ch .54.30to 72.53mt	28 th day compressive strength	271.83	Kg/Cm ²	265.00 Kg/cm ²	4.57	----- do -----
			283.16	Kg/Cm ²			
			276.36	Kg/Cm ²			
			Average	277.12			
3	Cement concrete cube of mix 1:1.5:3 , cast on 07/05/2021. For Wall X Key bed D/s of O.T.B at Ganjem Right side Foundation Ch 00.00 to 12.20mt	28 th day compressive strength	260.51	Kg/Cm ²	265.00 Kg/cm ²	2.29	Qty represents - 20.00 Cum.
			262.77	Kg/Cm ²			
			289.95	Kg/Cm ²			
			Average	271.08			
4	Cement concrete cube of mix 1:1.5:3 , cast on 07/05/2021. For Wall X above foundation 6th lift of O.T.B at Ganjem Right side Ch 00.00 to 22.00mt	28 th day compressive strength	283.16	Kg/Cm ²	265.00 Kg/cm ²	6.00	Qty represents - 23.00 Cum.
			287.69	Kg/Cm ²			
			271.83	Kg/Cm ²			
			Average	280.89			
5	Cement concrete cube of mix 1:1.5:3 , cast on 08/05/2021. For Wall X above foundation 3 rd lift of O.T.B at Ganjem Right side Ch 22.00 to 39.70mt	28 th day compressive strength	296.75	Kg/Cm ²	265.00 Kg/cm ²	6.85	Qty represents - 22.00 Cum.
			280.89	Kg/Cm ²			
			271.83	Kg/Cm ²			
			Average	283.16			
6	Cement concrete cube of mix 1:1.5:3 , cast on 08/05/2021. For Wall X above foundation 1 st lift of O.T.B at Ganjem Right side Ch 39.70 to 54.30mt	28 th day compressive strength	278.63	Kg/Cm ²	265.00 Kg/cm ²	2.29	Qty represents - 25.30Cum.
			262.77	Kg/Cm ²			
			271.83	Kg/Cm ²			
			Average	271.08			

Junior Engineer

Assistant Engineer

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SR. NO	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissible	% above or below	REMARK
7	Cement concrete cube of mix 1 :1.5 : 3 , cast on 08/05/2021. For Wall X above foundation 1 st lift of O.T.B at Ganjem Right side Ch 54.30 to 72.53mt	28 th day compressive strength	283.16	Kg/Cm ²	265.00 Kg/cm ²	5.71	Qty represents - 37.00 Cum for two sets of cubes.
			271.83	Kg/Cm ²			
			285.42	Kg/Cm ²			
		Average	280.14	Kg/Cm²			
8	Cement concrete cube of mix 1 :1.5 : 3 , cast on 08/05/2021. For Wall X above foundation 1 st lift of O.T.B at Ganjem Right side Ch 54.30 to 72.53mt	28 th day compressive strength	294.48	Kg/Cm ²	265.00 Kg/cm ²	8.85	----- do -----
			292.22	Kg/Cm ²			
			278.63	Kg/Cm ²			
		Average	288.44	Kg/Cm²			
9	Cement concrete cube of mix 1 :1.5 : 3 , cast on 09/05/2021. For Wall X above foundation 2 nd lift of O.T.B at Ganjem Right side Ch39.70 to 54.30mt	28 th day compressive strength	274.10	Kg/Cm ²	265.00 Kg/cm ²	2.58	Qty represents - 21.00 Cum.
			260.51	Kg/Cm ²			
			280.89	Kg/Cm ²			
		Average	271.83	Kg/Cm²			
10	Cement concrete cube of mix 1 :1.5 : 3 , cast on 09/05/2021. For Wall X above foundation 2 nd lift of O.T.B at Ganjem Right side Ch54.30to 72.53mt	28 th day compressive strength	265.04	Kg/Cm ²	265.00 Kg/cm ²	4.00	Qty represents - 26.00 Cum.
			299.01	Kg/Cm ²			
			262.77	Kg/Cm ²			
		Average	275.61	Kg/Cm²			
11	Cement concrete cube of mix 1 :1.5 : 3 , cast on 09/05/2021. For Wall X above foundation 3 rd lift of O.T.B at Ganjem Right side Ch39.70 to 54.30mt	28 th day compressive strength	301.28	Kg/Cm ²	265.00 Kg/cm ²	11.13	Qty represents -5.13 Cum.
			294.48	Kg/Cm ²			
			287.69	Kg/Cm ²			
		Average	294.48	Kg/Cm²			
12	Cement concrete cube of mix 1 :1.5 : 3 , cast on 11/05/2021. For Wall X above foundation 3 rd lift of O.T.B at Ganjem Right side Ch54.30 to 72.53mt	28 th day compressive strength	292.22	Kg/Cm ²	265.00 Kg/cm ²	3.72	Qty represents - 6.56 Cum.
			271.83	Kg/Cm ²			
			260.51	Kg/Cm ²			
		Average	274.85	Kg/Cm²			
13	Cement concrete cube of mix 1 :1.5 : 3 , cast on 11/05/2021. For Wall X Key wall O.T.B at Ganjem Right side 1 st lift Ch.0.00 to 12.00mt	28 th day compressive strength	283.16	Kg/Cm ²	265.00 Kg/cm ²	7.14	Qty represents - 2400 Cum.
			296.75	Kg/Cm ²			
			271.83	Kg/Cm ²			
		Average	283.91	Kg/Cm²			
14	Cement concrete cube of mix 1 :1.5 : 3 , cast on 11/05/2021. For Wall IX Key wall foundation O.T.B at Ganjem left side. Ch.0.00 to 24.35mt	28 th day compressive strength	267.30	Kg/Cm ²	265.00 Kg/cm ²	2.29	Qty represents - 42.00 Cum for two sets of cubes.
			280.89	Kg/Cm ²			
			265.04	Kg/Cm ²			
		Average	271.08	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
15	Cement concrete cube of mix 1 :1.5 : 3 , cast on 11/05/2021. For Wall IX Key wall foundation O.T.B at Ganjem left side. Ch.0.00 to 24.35mt	28 th day compressive strength	262.77	Kg/Cm ²	265.00 Kg/cm ²	4.29	Qty represents - 42.00 Cum for two sets of cubes.
			287.69	Kg/Cm ²			
			278.63	Kg/Cm ²			
		Average	276.36	Kg/Cm²			
16	Cement concrete cube of mix 1 :1.5 : 3 , cast on 12/05/2021. For Wall X Key wall 2 nd lift O.T.B at Ganjem Right side. Ch.0.00 to 12.00mt	28 th day compressive strength	260.51	Kg/Cm ²	265.00 Kg/cm ²	3.72	Qty represents - 11.00 Cum.
			274.10	Kg/Cm ²			
			289.95	Kg/Cm ²			
		Average	274.85	Kg/Cm²			
17	Cement concrete cube of mix 1 :1.5 : 3 , cast on 12/05/2021. For Wall X Key wall 1 st lift O.T.B at Ganjem left side. Ch.0.00 to 24.35mt	28 th day compressive strength	283.16	Kg/Cm ²	265.00 Kg/cm ²	3.72	Qty represents - 32.87 Cum.
			262.77	Kg/Cm ²			
			278.63	Kg/Cm ²			
		Average	274.85	Kg/Cm²			
18	Cement concrete cube of mix 1 :1.5 : 3 , cast on 12/05/2021. For Cross wall Right side Ch 0.00 to 18.00mt	28 th day compressive strength	294.48	Kg/Cm ²	265.00 Kg/cm ²	7.42	Qty represents - 45.00 Cum for two sets of cubes.
			280.89	Kg/Cm ²			
			278.63	Kg/Cm ²			
		Average	284.67	Kg/Cm²			
19	Cement concrete cube of mix 1 :1.5 : 3 , cast on 12/05/2021. For Cross wall Right side Ch 0.00 to 18.00mt	28 th day compressive strength	274.10	Kg/Cm ²	265.00 Kg/cm ²	2.58	----- do -----
			276.36	Kg/Cm ²			
			265.04	Kg/Cm ²			
		Average	271.83	Kg/Cm²			
20	Cement concrete cube of mix 1 :1.5 : 3 , cast on 13/05/2021. For Cross wall Right side Ch 18.00 to 54.10mt	28 th day compressive strength	283.16	Kg/Cm ²	265.00 Kg/cm ²	4.57	Qty represents -109.00 Cum for Four sets of cubes.
			262.77	Kg/Cm ²			
			285.42	Kg/Cm ²			
		Average	277.12	Kg/Cm²			
21	Cement concrete cube of mix 1 :1.5 : 3 , cast on 13/05/2021. For Cross wall Right side Ch 18.00 to 54.10mt	28 th day compressive strength	292.22	Kg/Cm ²	265.00 Kg/cm ²	7.14	----- do -----
			287.69	Kg/Cm ²			
			271.83	Kg/Cm ²			
		Average	283.91	Kg/Cm²			
22	Cement concrete cube of mix 1 :1.5 : 3 , cast on 13/05/2021. For Cross wall Right side Ch 18.00 to 54.10mt	28 th day compressive strength	292.22	Kg/Cm ²	265.00 Kg/cm ²	5.14	----- do -----
			260.51	Kg/Cm ²			
			283.16	Kg/Cm ²			
		Average	278.63	Kg/Cm²			

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SR. NO	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissible	% above or below	REMARK
23	Cement concrete cube of mix 1 :1.5 : 3 , cast on 13/05/2021. For Cross wall Right side Ch 18.00 to 54.10mt	28 th day compressive strength	283.16	Kg/Cm ²	265.00 Kg/cm ²	4.86	Qty represents -109.00 Cum for Four sets of cubes.
			278.63	Kg/Cm ²			
			271.83	Kg/Cm ²			
		Average	277.87	Kg/Cm²			
24	Cement concrete cube of mix 1 :1.5 : 3 , cast on 14/05/2021. For Cross wall left side Ch 0.00 to 35.00mt	28 th day compressive strength	269.57	Kg/Cm ²	265.00 Kg/cm ²	2.86	Qty represents -103.00 Cum for Four sets of cubes.
			265.04	Kg/Cm ²			
			283.16	Kg/Cm ²			
		Average	272.59	Kg/Cm²			
25	Cement concrete cube of mix 1 :1.5 : 3 , cast on 14/05/2021. For Cross wall left side Ch 0.00 to 35.00mt	28 th day compressive strength	280.89	Kg/Cm ²	265.00 Kg/cm ²	4.57	----do----
			260.51	Kg/Cm ²			
			289.95	Kg/Cm ²			
		Average	277.12	Kg/Cm²			
26	Cement concrete cube of mix 1 :1.5 : 3 , cast on 14/05/2021. For Cross wall left side Ch 0.00 to 35.00mt	28 th day compressive strength	303.55	Kg/Cm ²	265.00 Kg/cm ²	9.99	----do----
			294.48	Kg/Cm ²			
			276.36	Kg/Cm ²			
		Average	291.46	Kg/Cm²			
27	Cement concrete cube of mix 1 :1.5 : 3 , cast on 14/05/2021. For Cross wall left side Ch 0.00 to 35.00mt	28 th day compressive strength	274.10	Kg/Cm ²	265.00 Kg/cm ²	3.72	----do----
			269.57	Kg/Cm ²			
			280.89	Kg/Cm ²			
		Average	274.85	Kg/Cm²			
28	Cement concrete cube of mix 1 :1.5 : 3 , cast on 15/05/2021. For Cross wall left side Ch 35.00 to 71.60mt	28 th day compressive strength	280.89	Kg/Cm ²	265.00 Kg/cm ²	7.14	Qty represents -110.00 Cum for Four sets of cubes.
			283.16	Kg/Cm ²			
			287.69	Kg/Cm ²			
		Average	283.91	Kg/Cm²			
29	Cement concrete cube of mix 1 :1.5 : 3 , cast on 15/05/2021. For Cross wall left side Ch 35.00 to 71.60mt	28 th day compressive strength	287.69	Kg/Cm ²	265.00 Kg/cm ²	6.28	----do----
			285.42	Kg/Cm ²			
			271.83	Kg/Cm ²			
		Average	281.65	Kg/Cm²			
30	Cement concrete cube of mix 1 :1.5 : 3 , cast on 15/05/2021. For Cross wall left side Ch 35.00 to 71.60mt	28 th day compressive strength	260.51	Kg/Cm ²	265.00 Kg/cm ²	3.43	----do----
			283.16	Kg/Cm ²			
			278.63	Kg/Cm ²			
		Average	274.10	Kg/Cm²			

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SR. NO	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissable	% above or below	REMARK
31	Cement concrete cube of mix 1 :1.5 : 3 , cast on 15/05/2021. For Cross wall left side Ch 35.00 to 71.60mt	28 th day compressive strength	283.16	Kg/Cm ²	265.00 Kg/cm ²	8.85	Qty represents -110.00 Cum for Four sets of cubes.
			294.48	Kg/Cm ²			
			287.69	Kg/Cm ²			
		Average	288.44	Kg/Cm²			
32	Cement concrete cube of mix 1 :1.5 : 3 , cast on 17/05/2021. For Tie wall foundation 1st lift. Ch 0.00 to 33.00mt	28 th day compressive strength	287.69	Kg/Cm ²	265.00 Kg/cm ²	6.00	Qty represents -25.00 Cum.
			262.77	Kg/Cm ²			
			292.22	Kg/Cm ²			
		Average	280.89	Kg/Cm²			
33	Cement concrete cube of mix 1 :1.5 : 3 , cast on 17/05/2021. For Tie wall foundation 1st lift. Ch 0.00 to 33.00mt	28 th day compressive strength	292.22	Kg/Cm ²	265.00 Kg/cm ²	5.71	Qty represents -30.00 Cum for two sets of cubes.
			267.30	Kg/Cm ²			
			280.89	Kg/Cm ²			
		Average	280.14	Kg/Cm²			
34	Cement concrete cube of mix 1 :1.5 : 3 , cast on 17/05/2021. For Tie wall foundation 1st lift. Ch 0.00 to 33.00mt	28 th day compressive strength	283.16	Kg/Cm ²	265.00 Kg/cm ²	5.14	----do----
			269.57	Kg/Cm ²			
			283.16	Kg/Cm ²			
		Average	278.63	Kg/Cm²			
35	Cement concrete cube of mix 1 :1.5 : 3 , cast on 18/05/2021. For Tie wall foundation 2 nd lift. Ch 0.00 to 33.00mt	28 th day compressive strength	292.22	Kg/Cm ²	265.00 Kg/cm ²	7.71	Qty represents - 19.00 Cum.
			276.36	Kg/Cm ²			
			287.69	Kg/Cm ²			
		Average	285.42	Kg/Cm²			
36	Cement concrete cube of mix 1 :1.5 : 3 , cast on 18/05/2021. For Wall IX Key wall 2 nd lift Above Foundation left side O.T.B Ganjem Ch 0.00 to 24.35mt	28 th day compressive strength	283.16	Kg/Cm ²	265.00 Kg/cm ²	7.71	Qty represents -22.00 Cum.
			296.75	Kg/Cm ²			
			276.36	Kg/Cm ²			
		Average	285.42	Kg/Cm²			
37	Cement concrete cube of mix 1 :1.5 : 3 , cast on 20/05/2021. For Wall IX Key wall 3 rd lift Above Foundation left side O.T.B Ganjem Ch 0.00 to 24.35mt	28 th day compressive strength	283.16	Kg/Cm ²	265.00 Kg/cm ²	5.43	Qty represents - 11.00 Cum.
			260.51	Kg/Cm ²			
			294.48	Kg/Cm ²			
		Average	279.38	Kg/Cm²			

Copy to: 1. 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 , WD VI ,WRD, Bicholim- Goa.

4. QC Lab File. 5. Bill File.

Junior Engineer

Assistant Engineer