GOVERNMENT OF GOA QUALITY CONTROL LABORATORY WATER RESOURCES DEPARTMENT

Test Report No.: WRD / QC / F.6-2 / Cube -T :2257,2258,2259,2265,2266,2267,2278 / Lab / **117** / 2021 - 22 Dated:-21 /06 / 2021. Laboratory : Bicholim - Goa. ,2279,2280,2296,2297,2298,2311,2312,2313 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 II-Upgradation of pump house including supply and installation of pumps, motors, control panel and substation, providing and laying 1000mm DI pipe gravity main.

Ref. to Requisition No.:F.216/WRD/WDVI/SDI/94/20-21 Dated :- 09/06/2021.

Qty. Recived. : 15 Sets of cube Date of Receipt:- 11/06/2021. Tested on: - 14 to 18/06/2021 as per due dates. Ref to CPWD :2009, Vol. I Sample: Cube Mix 1:2:4 O.S No. : 6488,6489,6490,6496,6497,6498,6511,6512,6513,6529,6530,6531,6544,6545,6546/SS Lab. Sample No.: 1770 to 1784 Tested By: Mrs. Shirodkar. J.E.

SR. NO	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissable	% above or below	REMARK
1	Cement concrete cube of mix 1:2:4 , cast on 17/05/2021. PCC for 2nd step of wall along the nallah from ch.3804m to 3824m along nallah.	28 th day compressive strength	231.06 215.20 208.40	Kq/Cm ² Kq/Cm ² Kq/Cm ²	210.00 Kg/cm ²	3.91	Qty represents -18.00 Cum.
		Average	218.22	Kg/Cm ²			
2	Cement concrete cube of mix $1:2:4$, cast on 17/05/2021. PCC for 3^{rd} step of wall along the nallah from ch.3744m to 3764m along nallah.	28 th day compressive	244.65 235.59 246.91	Kq/Cm ² Kq/Cm ²	210.00 Kg/cm ²	15.42	Qty represents -10.00 Cum.
		strenath Average	240.91 242.38	Kg/Cm ² Kg/Cm ²			
	Cement concrete cube of mix $1:2:4$, cast on 17/05/2021. PCC for 3^{rd} step of wall along the nallah from ch.3764m to 3804m along nallah.	28 th day	258.24	Kg/Cm ²	210.00 Kg/cm ²	17.58	Qty represents - 24.00 Cum.
3		compressive strength	244.65 237.85	Kg/Cm ² Kg/Cm ²			
		Average	246.91	Kg/Cm ²			
4	Cement concrete cube of mix $1:2:4$, cast on 18/05/2021. PCC for 3^{rd} step of wall along the nallah from ch.3804m to 3834m along nallah.	28 th day compressive strength	262.77 244.65 235.59	Ka/Cm ² Ka/Cm ² Ka/Cm ²	210.00 Kg/cm ²	17.94	Qty represents - 15.00 Cum.
		Average	247.67	Kq/Cm ²			
5	Cement concrete cube of mix 1:2:4 , cast on 18/05/2021. PCC for Found of wall along the nallah from ch.3840m to 3850m along nallah.	28 th day compressive strength	246.91 253.71 233.32	Kq/Cm ² Kq/Cm ² Kq/Cm ²	210.00 Kg/cm ²	16.50	Qty represents - 18.00 Cum.
		Average	244.65	Kg/Cm ²			

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SR. NO		TESTED FOR	RESULTS		Max./Min.Value permissable	% above or below	REMARK				
6	Cement concrete cube of mix 1:2:4 , cast on 18/05/2021. PCC for Found of wall along the nallah from ch.3850m to 3860m along nallah.	28 th day compressive strength Average	249.18 222.00 255.97 242.38	Kq/Cm ² Kq/Cm ² Kq/Cm ² Kq/Cm ²	210.00 Kg/cm ²	15.42	Qty represents - 18.00 Cum.				
7	Cement concrete cube of mix 1:2:4 , cast on 19/05/2021. PCC for Found of wall along the nallah from ch.3860m to 3870m along nallah.	28 th day compressive strenath Average	249.18 235.59 231.06 238.61	Kq/Cm ² Kq/Cm ² Kq/Cm ² Kq/Cm ²	210.00 Kg/cm ²	13.62	Qty represents -18.00 Cum.				
8	Cement concrete cube of mix 1:2:4 , cast on 19/05/2021. PCC for Found of wall along the nallah from ch.3870m to 3880m along nallah.	28 th day compressive strength Average	242.38 231.06 235.59 236.34	Kq/Cm ² Kq/Cm ² Kq/Cm ² Kq/Cm ²	210.00 Kg/cm ²	12.54	Qty represents -18.00 Cum.				
9	Cement concrete cube of mix 1:2:4 , cast on 19/05/2021. PCC for Found of wall along the nallah from ch.3880m to 3900m along nallah.	28 th day compressive strength Average	226.53 246.91 240.12 237.85	Kg/Cm ² Kg/Cm ² Kg/Cm ² Kg/Cm ²	210.00 Kg/cm ²	13.26	Qty represents -36.00 Cum.				
10	Cement concrete cube of mix 1 : 2 : 4 , cast on 20/05/2021. PCC for 1 st step of wall along the nallah from ch.3840m to 3860m along nallah.	28 th day compressive strength Average	249.18 240.12 244.65 244.65	Kg/Cm ² Kg/Cm ² Kg/Cm ² Kg/Cm ²	210.00 Kg/cm ²	16.50	Qty represents -27.00 Cum.				
11	Cement concrete cube of mix 1:2:4 , cast on 20/05/2021. PCC for 1 st step of wall along the nallah from ch.3860m to 3880m along nallah.	28 th day compressive strength Average	255.97 226.53 222.00 234.83	Kg/Cm ² Kg/Cm ² Kg/Cm ² Kg/Cm ²	210.00 Kg/cm ²	11.82	Qty represents -27.00 Cum.				
12	Cement concrete cube of mix 1:2:4 , cast on 20/05/2021. PCC for found of wall along the nallah from ch.3900m to 3920m along nallah.	28 th day compressive strength Average	262.77 237.85 226.53 242.38	Kg/Cm ² Kg/Cm ² Kg/Cm ² Kg/Cm ²	210.00 Kg/cm ²	15.42	Qty represents - 36.00 Cum.				

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SR. NO		TESTED FOR	RESULTS		Max./Min.Value permissable	% above or below	REMARK
13	Cement concrete cube of mix 1:2:4 , cast on 21/05/2021. PCC for 1 st step of wall along the nallah from ch.3880m to 3900m along nallah.	28 th day compressive strength	237.85	Kg/Cm ²	210.00 Kg/cm ²	18.66	Qty represents - 27.00 Cum.
			260.51	Kg/Cm ²			
			249.18	Kg/Cm ²			
		Average	249.18	Kg/Cm ²			
	Cement concrete cube of mix 1:2:4 , cast on 21/05/2021. PCC for 2 nd step of wall along the nallah from ch.3840m to 3880m along nallah.	28 th day	231.06	Kg/Cm ²	210.00 Kg/cm ²	11.47	Qty represents - 36.00 Cum.
11		0011101000110	244.65	Kg/Cm ²			
			226.53	Kg/Cm ²			
		Average	234.08	Kg/Cm ²			
	Cement concrete cube of mix 1:2:4 , cast on 21/05/2021. PCC for found of wall along the nallah from ch.3920m to 3940m along nallah.	28 th day	233.32	Kg/Cm ²	210.00 Kg/cm ²	14.34	Qty represents - 36.00 Cum.
15		compressive	249.18	Kg/Cm ²			
		strength	237.85	Kg/Cm ²			
		Average	240.12	Kg/Cm ²			

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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.

Junior Engineer

Assistant Engineer