

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

Test Report No.: WRD/QC/F.6-2/Cube -T : 9494 To 9503, 9510 To 9517 / Lab / **22** / 2020 - 21

Dated:- 23 / 05/ 2020

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 Reg. Construction of Barrage , providing and laying 1000 mm dia. D.I. pipe Rising main and Break Pressure Tank at Ganjem in Sattari Taluka.**

Ref. to Requisition No1.: WRD/WDVI/SD I /F.W.215/2020-21/ **37** Dated :- 18-05-2020

Ref. to Requisition No.2: WRD/WDVI/SD I /F.W.215/2020-21/ **38** Dated :- 19-05-2020

Qty. Recived. : 10+8=18 Sets of cube Date of Receipt: -18 & 19 /05/2020. Tested on:- 18 & 19/05/2020 as per due dates. Ref to CPWD :2009, Vol. I

Sample: 1 : 2 : 4 Mix O.S No. : 3605,3606,3614 TO 3617/SS. Lab. Sample No.: 8701 To 8710, 8773 To 8780 Tested By: - Mrs. S.B. Naik 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 <b>1:2:4</b> , cast on 20/04/2020. PCC for Plumb concrete below floor ch. 95 - 113 m.	28th day compressive strength	224.26	Kg/Cm <sup>2</sup>	210.00 Kg/Cm <sup>2</sup>	7.15	Represents Qty. 20.00 Cum.
			219.73	Kg/Cm <sup>2</sup>			
			231.06	Kg/Cm <sup>2</sup>			
		Average	<b>225.02</b>	<b>Kg/Cm<sup>2</sup></b>			
2	Cement concrete cube of mix <b>1:2:4</b> , cast on 20/04/2020. PCC for Plumb concrete below floor ch. 95 - 113 m.	28th day compressive strength	222.00	Kg/Cm <sup>2</sup>	210.00 Kg/Cm <sup>2</sup>	8.59	'--- do ---
			233.32	Kg/Cm <sup>2</sup>			
			228.79	Kg/Cm <sup>2</sup>			
		Average	<b>228.04</b>	<b>Kg/Cm<sup>2</sup></b>			
3	Cement concrete cube of mix <b>1:2:4</b> , cast on 20/04/2020. PCC for Plumb concrete below floor ch. 95 - 113 m.	28th day compressive strength	226.53	Kg/Cm <sup>2</sup>	210.00 Kg/Cm <sup>2</sup>	9.31	'--- do ---
			235.59	Kg/Cm <sup>2</sup>			
			226.53	Kg/Cm <sup>2</sup>			
		Average	<b>229.55</b>	<b>Kg/Cm<sup>2</sup></b>			
4	Cement concrete cube of mix <b>1:2:4</b> , cast on 20/04/2020. PCC for Plumb concrete below floor ch. 95 - 113 m.	28th day compressive strength	240.12	Kg/Cm <sup>2</sup>	210.00 Kg/Cm <sup>2</sup>	6.79	'--- do ---
			215.20	Kg/Cm <sup>2</sup>			
			217.47	Kg/Cm <sup>2</sup>			
		Average	<b>224.26</b>	<b>Kg/Cm<sup>2</sup></b>			
5	Cement concrete cube of mix <b>1:2:4</b> , cast on 20/04/2020. PCC for Plumb concrete below floor ch. 95 - 113 m.	28th day compressive strength	212.93	Kg/Cm <sup>2</sup>	210.00 Kg/Cm <sup>2</sup>	6.07	'--- do ---
			244.65	Kg/Cm <sup>2</sup>			
			210.67	Kg/Cm <sup>2</sup>			
		Average	<b>222.75</b>	<b>Kg/Cm<sup>2</sup></b>			

Junior Engineer

Assistant Engineer

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SR.NO.	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissable	% above or below	REMARK
6	Cement concrete cube of mix <b>1:2:4</b> , cast on 20/04/2020. PCC for Plumb concrete below floor ch. 95 - 113 m.	28th day compressive strength	226.53	Kg/Cm <sup>2</sup>	210.00 Kg/Cm <sup>2</sup>	8.59	Represents Qty. 20.00 Cum.
			231.06	Kg/Cm <sup>2</sup>			
			226.53	Kg/Cm <sup>2</sup>			
			Average	<b>228.04</b>			
7	Cement concrete cube of mix <b>1:2:4</b> , cast on 20/04/2020. PCC for Plumb concrete below floor ch. 95 - 113 m.	28th day compressive strength	224.26	Kg/Cm <sup>2</sup>	210.00 Kg/Cm <sup>2</sup>	8.95	'--- do ---
			215.20	Kg/Cm <sup>2</sup>			
			246.91	Kg/Cm <sup>2</sup>			
			Average	<b>228.79</b>			
8	Cement concrete cube of mix <b>1:2:4</b> , cast on 20/04/2020. PCC for Plumb concrete below floor ch. 95 - 113 m.	28th day compressive strength	226.53	Kg/Cm <sup>2</sup>	210.00 Kg/Cm <sup>2</sup>	10.39	'--- do ---
			231.06	Kg/Cm <sup>2</sup>			
			237.85	Kg/Cm <sup>2</sup>			
			Average	<b>231.81</b>			
9	Cement concrete cube of mix <b>1:2:4</b> , cast on 20/04/2020. PCC for Plumb concrete below floor ch. 95 - 113 m.	28th day compressive strength	233.32	Kg/Cm <sup>2</sup>	210.00 Kg/Cm <sup>2</sup>	10.03	'--- do ---
			217.47	Kg/Cm <sup>2</sup>			
			242.38	Kg/Cm <sup>2</sup>			
			Average	<b>231.06</b>			
10	Cement concrete cube of mix <b>1:2:4</b> , cast on 20/04/2020. PCC for Plumb concrete below floor ch. 95 - 113 m.	28th day compressive strength	246.91	Kg/Cm <sup>2</sup>	210.00 Kg/Cm <sup>2</sup>	12.54	'--- do ---
			235.59	Kg/Cm <sup>2</sup>			
			226.53	Kg/Cm <sup>2</sup>			
			Average	<b>236.34</b>			
11	Cement concrete cube of mix <b>1:2:4</b> , cast on 21/04/2020. PCC for Plumb concrete below floor ch. 95 - 113 m.	28th day compressive strength	226.53	Kg/Cm <sup>2</sup>	210.00 Kg/Cm <sup>2</sup>	8.23	'--- do ---
			237.85	Kg/Cm <sup>2</sup>			
			217.47	Kg/Cm <sup>2</sup>			
			Average	<b>227.28</b>			
12	Cement concrete cube of mix <b>1:2:4</b> , cast on 21/04/2020. PCC for Plumb concrete below floor ch. 95 - 113 m.	28th day compressive strength	233.32	Kg/Cm <sup>2</sup>	210.00 Kg/Cm <sup>2</sup>	5.35	'--- do ---
			219.73	Kg/Cm <sup>2</sup>			
			210.67	Kg/Cm <sup>2</sup>			
			Average	<b>221.24</b>			
13	Cement concrete cube of mix <b>1:2:4</b> , cast on 21/04/2020. PCC for Plumb concrete below floor ch. 95 - 113 m.	28th day compressive strength	240.12	Kg/Cm <sup>2</sup>	210.00 Kg/Cm <sup>2</sup>	11.82	'--- do ---
			226.53	Kg/Cm <sup>2</sup>			
			237.85	Kg/Cm <sup>2</sup>			
			Average	<b>234.83</b>			

Junior 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 <b>1:2:4</b> , cast on 21/04/2020. PCC for Plumb concrete below floor ch. 95 - 113 m.	28th day compressive strength	237.85	Kg/Cm <sup>2</sup>	210.00 Kg/Cm <sup>2</sup>	13.98	Represents Qty. 20.00 Cum.
			244.65	Kg/Cm <sup>2</sup>			
			235.59	Kg/Cm <sup>2</sup>			
		Average	<b>239.36</b>	<b>Kg/Cm<sup>2</sup></b>			
15	Cement concrete cube of mix <b>1:2:4</b> , cast on 21/04/2020. PCC for Plumb concrete below floor ch. 95 - 113 m.	28th day compressive strength	222.00	Kg/Cm <sup>2</sup>	210.00 Kg/Cm <sup>2</sup>	9.31	'--- do ---
			235.59	Kg/Cm <sup>2</sup>			
			231.06	Kg/Cm <sup>2</sup>			
		Average	<b>229.55</b>	<b>Kg/Cm<sup>2</sup></b>			
16	Cement concrete cube of mix <b>1:2:4</b> , cast on 21/04/2020. PCC for Plumb concrete below floor ch. 95 - 113 m.	28th day compressive strength	251.44	Kg/Cm <sup>2</sup>	210.00 Kg/Cm <sup>2</sup>	12.54	'--- do ---
			233.32	Kg/Cm <sup>2</sup>			
			224.26	Kg/Cm <sup>2</sup>			
		Average	<b>236.34</b>	<b>Kg/Cm<sup>2</sup></b>			
17	Cement concrete cube of mix <b>1:2:4</b> , cast on 21/04/2020. PCC for Plumb concrete below floor ch. 95 - 113 m.	28th day compressive strength	228.79	Kg/Cm <sup>2</sup>	210.00 Kg/Cm <sup>2</sup>	10.03	'--- do ---
			242.38	Kg/Cm <sup>2</sup>			
			222.00	Kg/Cm <sup>2</sup>			
		Average	<b>231.06</b>	<b>Kg/Cm<sup>2</sup></b>			
18	Cement concrete cube of mix <b>1:2:4</b> , cast on 21/04/2020. PCC for Plumb concrete below floor ch. 95 - 113 m.	28th day compressive strength	224.26	Kg/Cm <sup>2</sup>	210.00 Kg/Cm <sup>2</sup>	8.95	'--- do ---
			249.18	Kg/Cm <sup>2</sup>			
			212.93	Kg/Cm <sup>2</sup>			
		Average	<b>228.79</b>	<b>Kg/Cm<sup>2</sup></b>			

1. Copy to: 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 ,WDVI,WRD, Bicholim-Goa.

4. QC Lab File.      5. Bill File.

Junior Engineer

Assistant Engineer