

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

Test Report No.: WRD/QC/F.6-2/Cube -T : 7256 To 7283 / Lab / **194** / 2019 - 20 Dated:- 17 / 06 / 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 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 No.: WRD/WDVI/SD I /F.W.215/2019-20/ **205** Dated :- 15-06-2019

Qty. Recived. : 28 Sets of cube Date of Receipt: - 15/06/2019. Tested on: -15/06/2019 & 16/06/2019 Ref to CPWD :2002, Vol. I

Sample: RCC 1 : 1.5 : 3 Mix O.S No. : 871 To 898/AF. Lab. Sample No.: 6144 To 6171. Tested By: - Mr. Anil R. Fadte,J.E.

**REPORT PAGE 01 OF 04**

SR.NO.	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissable	% above or below	REMARK
1	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 18/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	323.93	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	21.10	Represents Qty. 20.00 Cum.
			326.20	Kg/Cm <sup>2</sup>			
			312.61	Kg/Cm <sup>2</sup>			
		Average	<b>320.91</b>	<b>Kg/Cm<sup>2</sup></b>			
2	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 18/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	317.14	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	20.24	Represents Qty. 20.00 Cum.
			310.34	Kg/Cm <sup>2</sup>			
			328.46	Kg/Cm <sup>2</sup>			
		Average	<b>318.65</b>	<b>Kg/Cm<sup>2</sup></b>			
3	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 18/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	321.67	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	19.96	Represents Qty. 20.00 Cum.
			314.87	Kg/Cm <sup>2</sup>			
			317.14	Kg/Cm <sup>2</sup>			
		Average	<b>317.89</b>	<b>Kg/Cm<sup>2</sup></b>			
4	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 18/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	328.46	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	20.53	Represents Qty. 20.00 Cum.
			319.40	Kg/Cm <sup>2</sup>			
			310.34	Kg/Cm <sup>2</sup>			
		Average	<b>319.40</b>	<b>Kg/Cm<sup>2</sup></b>			
5	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 18/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	310.34	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	20.53	Represents Qty. 20.00 Cum.
			326.20	Kg/Cm <sup>2</sup>			
			321.67	Kg/Cm <sup>2</sup>			
		Average	<b>319.40</b>	<b>Kg/Cm<sup>2</sup></b>			
6	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 18/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	312.61	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	21.38	Represents Qty. 20.00 Cum.
			328.46	Kg/Cm <sup>2</sup>			
			323.93	Kg/Cm <sup>2</sup>			
		Average	<b>321.67</b>	<b>Kg/Cm<sup>2</sup></b>			

Junior Engineer

Assistant Engineer

**REPORT PAGE 02 OF 04**

SR.NO.	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissable	% above or below	REMARK
7	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 18/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	310.34	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	20.81	Represents Qty. 20.00 Cum.
			326.20	Kg/Cm <sup>2</sup>			
			323.93	Kg/Cm <sup>2</sup>			
		Average	<b>320.16</b>	<b>Kg/Cm<sup>2</sup></b>			
8	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 18/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	326.20	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	20.24	Represents Qty. 20.00 Cum.
			303.55	Kg/Cm <sup>2</sup>			
			326.20	Kg/Cm <sup>2</sup>			
		Average	<b>318.65</b>	<b>Kg/Cm<sup>2</sup></b>			
9	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 18/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	328.46	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	21.38	Represents Qty. 20.00 Cum.
			323.93	Kg/Cm <sup>2</sup>			
			312.61	Kg/Cm <sup>2</sup>			
		Average	<b>321.67</b>	<b>Kg/Cm<sup>2</sup></b>			
10	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 18/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	330.73	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	19.96	Represents Qty. 20.00 Cum.
			308.08	Kg/Cm <sup>2</sup>			
			314.87	Kg/Cm <sup>2</sup>			
		Average	<b>317.89</b>	<b>Kg/Cm<sup>2</sup></b>			
11	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 18/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	296.75	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	18.53	Represents Qty. 20.00 Cum.
			330.73	Kg/Cm <sup>2</sup>			
			314.87	Kg/Cm <sup>2</sup>			
		Average	<b>314.12</b>	<b>Kg/Cm<sup>2</sup></b>			
12	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 18/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	319.40	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	20.24	Represents Qty. 20.00 Cum.
			326.20	Kg/Cm <sup>2</sup>			
			310.34	Kg/Cm <sup>2</sup>			
		Average	<b>318.65</b>	<b>Kg/Cm<sup>2</sup></b>			
13	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 18/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	323.93	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	20.81	Represents Qty. 20.00 Cum.
			312.61	Kg/Cm <sup>2</sup>			
			323.93	Kg/Cm <sup>2</sup>			
		Average	<b>320.16</b>	<b>Kg/Cm<sup>2</sup></b>			
14	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 18/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	323.93	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	21.67	Represents Qty. 20.00 Cum.
			328.46	Kg/Cm <sup>2</sup>			
			314.87	Kg/Cm <sup>2</sup>			
		Average	<b>322.42</b>	<b>Kg/Cm<sup>2</sup></b>			
15	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 19/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	326.20	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	22.81	Represents Qty. 20.00 Cum.
			330.73	Kg/Cm <sup>2</sup>			
			319.40	Kg/Cm <sup>2</sup>			
		Average	<b>325.44</b>	<b>Kg/Cm<sup>2</sup></b>			

Junior Engineer

Assistant Engineer

SR.NO.	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissable	% above or below	REMARK
16	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 19/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	330.73	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	21.95	Represents Qty. 20.00 Cum.
			323.93	Kg/Cm <sup>2</sup>			
			314.87	Kg/Cm <sup>2</sup>			
		Average	<b>323.18</b>	<b>Kg/Cm<sup>2</sup></b>			
17	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 19/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	326.20	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	20.81	Represents Qty. 20.00 Cum.
			319.40	Kg/Cm <sup>2</sup>			
			314.87	Kg/Cm <sup>2</sup>			
		Average	<b>320.16</b>	<b>Kg/Cm<sup>2</sup></b>			
18	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 19/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	312.61	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	20.53	Represents Qty. 20.00 Cum.
			314.87	Kg/Cm <sup>2</sup>			
			330.73	Kg/Cm <sup>2</sup>			
		Average	<b>319.40</b>	<b>Kg/Cm<sup>2</sup></b>			
19	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 19/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	330.73	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	21.10	Represents Qty. 20.00 Cum.
			308.08	Kg/Cm <sup>2</sup>			
			323.93	Kg/Cm <sup>2</sup>			
		Average	<b>320.91</b>	<b>Kg/Cm<sup>2</sup></b>			
20	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 19/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	312.61	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	19.39	Represents Qty. 20.00 Cum.
			308.08	Kg/Cm <sup>2</sup>			
			328.46	Kg/Cm <sup>2</sup>			
		Average	<b>316.38</b>	<b>Kg/Cm<sup>2</sup></b>			
21	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 19/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	326.20	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	22.24	Represents Qty. 20.00 Cum.
			330.73	Kg/Cm <sup>2</sup>			
			314.87	Kg/Cm <sup>2</sup>			
		Average	<b>323.93</b>	<b>Kg/Cm<sup>2</sup></b>			
22	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 19/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	303.55	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	19.96	Represents Qty. 20.00 Cum.
			326.20	Kg/Cm <sup>2</sup>			
			323.93	Kg/Cm <sup>2</sup>			
		Average	<b>317.89</b>	<b>Kg/Cm<sup>2</sup></b>			
23	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 19/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	330.73	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	21.38	Represents Qty. 20.00 Cum.
			323.93	Kg/Cm <sup>2</sup>			
			310.34	Kg/Cm <sup>2</sup>			
		Average	<b>321.67</b>	<b>Kg/Cm<sup>2</sup></b>			
24	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 19/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	314.87	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	22.24	Represents Qty. 20.00 Cum.
			326.20	Kg/Cm <sup>2</sup>			
			330.73	Kg/Cm <sup>2</sup>			
		Average	<b>323.93</b>	<b>Kg/Cm<sup>2</sup></b>			

**REPORT PAGE 04 OF 04**

SR.NO.	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissable	% above or below	REMARK
25	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 19/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	328.46	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	19.96	Represents Qty. 20.00 Cum.
			301.28	Kg/Cm <sup>2</sup>			
			323.93	Kg/Cm <sup>2</sup>			
		Average	<b>317.89</b>	<b>Kg/Cm<sup>2</sup></b>			
26	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 19/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	330.73	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	22.81	Represents Qty. 20.00 Cum.
			326.20	Kg/Cm <sup>2</sup>			
			319.40	Kg/Cm <sup>2</sup>			
		Average	<b>325.44</b>	<b>Kg/Cm<sup>2</sup></b>			
27	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 19/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	310.34	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	21.38	Represents Qty. 20.00 Cum.
			326.20	Kg/Cm <sup>2</sup>			
			328.46	Kg/Cm <sup>2</sup>			
		Average	<b>321.67</b>	<b>Kg/Cm<sup>2</sup></b>			
28	Reinforced Cement concrete cube of mix 1:1.5:3 , cast on 19/05/2019, RCC for floor of Barage from 55-88 m.	28th day compressive strength	310.34	Kg/Cm <sup>2</sup>	265.00 Kg/Cm <sup>2</sup>	21.38	Represents Qty. 20.00 Cum.
			328.46	Kg/Cm <sup>2</sup>			
			326.20	Kg/Cm <sup>2</sup>			
		Average	<b>321.67</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