

GOVERNMENT OF GOA  
QUALITY CONTROL LABORATORY  
WATER RESOURCES DEPARTMENT

Test Report No.: WRD / QC / F.6-2 / Cube -T : 4737,4738,4790,4791,4871,/ Lab / **140** / 2022 - 23 Dated:- 01/07/2022. Laboratory : Bicholim - Goa.  
4872,4903,4904,4962,4963,4995,4996,5050,5051,5079,5080,5121,5122,5128,5129,5150 & 5151 Sub Division V (QC)/WRD/ Bicholim- Goa.

**Name of work : "Flood Mitigation measures and construction of flood water pumping station at Mala, Panaji - Goa".**

Ref. to Requisition No.: SDIV/WDI/WRD/F.38/22-23/182 Dt.:- 01/ 06/ 2022

Qty. Recived. : 22 Sets of cube Date of Receipt:- 01/ 06 / 2022. Tested on: 01,04,10,12,15,17,21,23,26,27 & 29/06/2022 as per due dates. Ref to CPWD :2009, Vol. I

Sample: Cube Mix **1:1.5:3,M-30,M-20 & 1:2:4** O.S No.:8701,8702,8755,8756,8837,8838,8872,8873,8936,8937,8969,8970,9024,9025,9053,9054,9095,9096,9102, 9103/SS , 0796 & 0797/R.K Lab. Sample No.: **4618 to 4639** Tested By: Mrs. R. R. Kadam A.E. & Mrs. S. B. Naik Shirodkar. J.E.

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SR. NO	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissible	% above or below	REMARK
1	Cement concrete cube of mix <b>1:1.5:3</b> , cast on 04/05/2022. For Delivery line Block & thrust block.	28 th day compressive strength	292.22	Kg/Cm <sup>2</sup>	265.00 Kg/cm <sup>2</sup>	6.85	Qty represents - 6.00 M3 for two sets of cubes.
			283.16	Kg/Cm <sup>2</sup>			
			274.10	Kg/Cm <sup>2</sup>			
		<b>Average</b>	<b>283.16</b>	<b>Kg/Cm<sup>2</sup></b>			
2	Cement concrete cube of mix <b>1:1.5:3</b> , cast on 04/05/2022. For Delivery line Block & thrust block.	28 th day compressive strength	294.48	Kg/Cm <sup>2</sup>	265.00 Kg/cm <sup>2</sup>	10.27	----- do -----
			305.81	Kg/Cm <sup>2</sup>			
			276.36	Kg/Cm <sup>2</sup>			
		<b>Average</b>	<b>292.22</b>	<b>Kg/Cm<sup>2</sup></b>			
3	Cement concrete cube of mix <b>M-30</b> , cast on 07/05/2022. For Column Concrete Casting.	28 th day compressive strength	353.38	Kg/Cm <sup>2</sup>	345.00 Kg/cm <sup>2</sup>	4.18	Qty represents - 10.00 M3 for two sets of cubes.
			351.12	Kg/Cm <sup>2</sup>			
			373.77	Kg/Cm <sup>2</sup>			
		<b>Average</b>	<b>359.42</b>	<b>Kg/Cm<sup>2</sup></b>			
4	Cement concrete cube of mix <b>M-30</b> , cast on 07/05/2022. For Column Concrete Casting.	28 th day compressive strength	362.44	Kg/Cm <sup>2</sup>	345.00 Kg/cm <sup>2</sup>	2.87	----- do -----
			364.71	Kg/Cm <sup>2</sup>			
			337.52	Kg/Cm <sup>2</sup>			
		<b>Average</b>	<b>354.89</b>	<b>Kg/Cm<sup>2</sup></b>			
5	Cement concrete cube of mix <b>M-30</b> , cast on 13/05/2022. For Cutting Edge Concrete Casting Intake Well-2.	28 th day compressive strength	360.18	Kg/Cm <sup>2</sup>	345.00 Kg/cm <sup>2</sup>	2.21	Qty represents - 10.00 M3 for two sets of cubes.
			335.26	Kg/Cm <sup>2</sup>			
			362.44	Kg/Cm <sup>2</sup>			
		<b>Average</b>	<b>352.63</b>	<b>Kg/Cm<sup>2</sup></b>			
6	Cement concrete cube of mix <b>M-30</b> , cast on 13/05/2022. For Cutting Edge Concrete Casting Intake Well-2.	28 th day compressive strength	337.52	Kg/Cm <sup>2</sup>	345.00 Kg/cm <sup>2</sup>	3.52	----- do -----
			353.38	Kg/Cm <sup>2</sup>			
			380.56	Kg/Cm <sup>2</sup>			
		<b>Average</b>	<b>357.16</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
7	Cement concrete cube of mix <b>1:1.5:3</b> , cast on 15/05/2022. For Delivery line block & Drain wall 1 <sup>st</sup> lift & thrust block.	28 th day compressive strength	294.48	Kg/Cm <sup>2</sup>	265.00 Kg/cm <sup>2</sup>	6.00	Qty represents - 12.00 M3 for two sets of cubes.
			280.89	Kg/Cm <sup>2</sup>			
			267.30	Kg/Cm <sup>2</sup>			
			<b>Average</b>	<b>280.89</b>			
8	Cement concrete cube of mix <b>1:1.5:3</b> , cast on 15/05/2022. For Delivery line block & Drain wall 1 <sup>st</sup> lift & thrust block.	28 th day compressive strength	283.16	Kg/Cm <sup>2</sup>	265.00 Kg/cm <sup>2</sup>	10.56	----- do -----
			294.48	Kg/Cm <sup>2</sup>			
			301.28	Kg/Cm <sup>2</sup>			
			<b>Average</b>	<b>292.97</b>			
9	Cement concrete cube of mix <b>1:1.5:3</b> , cast on 18/05/2022. For Delivery line block & Drain wall 1 <sup>st</sup> lift & Road P.C.C.	28 th day compressive strength	296.75	Kg/Cm <sup>2</sup>	265.00 Kg/cm <sup>2</sup>	5.14	Qty represents - 12.00 M3 for two sets of cubes.
			271.83	Kg/Cm <sup>2</sup>			
			267.30	Kg/Cm <sup>2</sup>			
			<b>Average</b>	<b>278.63</b>			
10	Cement concrete cube of mix <b>1:1.5:3</b> , cast on 18/05/2022. For Delivery line block & Drain wall 1 <sup>st</sup> lift & Road P.C.C.	28 th day compressive strength	253.71	Kg/Cm <sup>2</sup>	265.00 Kg/cm <sup>2</sup>	2.58	----- do -----
			278.63	Kg/Cm <sup>2</sup>			
			283.16	Kg/Cm <sup>2</sup>			
			<b>Average</b>	<b>271.83</b>			
11	Cement concrete cube of mix <b>1:1.5:3</b> , cast on 20/05/2022. For Drain wall 2 <sup>nd</sup> lift & Block Concrete Casting.	28 th day compressive strength	271.83	Kg/Cm <sup>2</sup>	265.00 Kg/cm <sup>2</sup>	7.99	Qty represents - 12.00 M3 for two sets of cubes.
			294.48	Kg/Cm <sup>2</sup>			
			292.22	Kg/Cm <sup>2</sup>			
			<b>Average</b>	<b>286.18</b>			
12	Cement concrete cube of mix <b>1:1.5:3</b> , cast on 20/05/2022. For Drain wall 2 <sup>nd</sup> lift & Block Concrete Casting.	28 th day compressive strength	265.04	Kg/Cm <sup>2</sup>	265.00 Kg/cm <sup>2</sup>	4.00	----- do -----
			278.63	Kg/Cm <sup>2</sup>			
			283.16	Kg/Cm <sup>2</sup>			
			<b>Average</b>	<b>275.61</b>			
13	Cement concrete cube of mix <b>M-30</b> , cast on 24/05/2022. For lintel Beam & Chajja Concrete Casting.	28 th day compressive strength	382.83	Kg/Cm <sup>2</sup>	345.00 Kg/cm <sup>2</sup>	5.27	Qty represents - 9.00 M3 for two sets of cubes.
			360.18	Kg/Cm <sup>2</sup>			
			346.59	Kg/Cm <sup>2</sup>			
			<b>Average</b>	<b>363.20</b>			
14	Cement concrete cube of mix <b>M-30</b> , cast on 24/05/2022. For lintel Beam & Chajja Concrete Casting.	28 th day compressive strength	366.97	Kg/Cm <sup>2</sup>	345.00 Kg/cm <sup>2</sup>	2.21	----- do -----
			357.91	Kg/Cm <sup>2</sup>			
			332.99	Kg/Cm <sup>2</sup>			
			<b>Average</b>	<b>352.63</b>			
15	Cement concrete cube of mix <b>M-30</b> , cast on 26/05/2022. For Intake well 6 <sup>th</sup> lift.	28 th day compressive strength	351.12	Kg/Cm <sup>2</sup>	345.00 Kg/cm <sup>2</sup>	4.62	Qty represents - 12.00 M3 for two sets of cubes.
			369.24	Kg/Cm <sup>2</sup>			
			362.44	Kg/Cm <sup>2</sup>			
			<b>Average</b>	<b>360.93</b>			

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SR. NO	DISCRIPTION OF SAMPLE	TESTED FOR	RESULTS		Max./Min.Value permissible	% above or below	REMARK
16	Cement concrete cube of mix <b>M-30</b> , cast on 26/05/2022. For Intake well 6 <sup>th</sup> lift.	28 th day compressive strength	339.79	Kg/Cm <sup>2</sup>	345.00 Kg/cm <sup>2</sup>	3.74	Qty represents - 12.00 M3 for two sets of cubes.
			362.44	Kg/Cm <sup>2</sup>			
			371.50	Kg/Cm <sup>2</sup>			
		<b>Average</b>	<b>357.91</b>	<b>Kg/Cm<sup>2</sup></b>			
17	Cement concrete cube of mix <b>M-20</b> , cast on 29/05/2022. For Intake well no.2 1 <sup>st</sup> lift.	28 th day compressive strength	226.53	Kg/Cm <sup>2</sup>	236.00 Kg/cm <sup>2</sup>	5.58	Qty represents - 12.00 M3 for two sets of cubes.
			258.24	Kg/Cm <sup>2</sup>			
			262.77	Kg/Cm <sup>2</sup>			
		<b>Average</b>	<b>249.18</b>	<b>Kg/Cm<sup>2</sup></b>			
18	Cement concrete cube of mix <b>M-20</b> , cast on 29/05/2022. For Intake well no.2 1 <sup>st</sup> lift.	28 th day compressive strength	235.59	Kg/Cm <sup>2</sup>	236.00 Kg/cm <sup>2</sup>	4.62	----- do -----
			249.18	Kg/Cm <sup>2</sup>			
			255.97	Kg/Cm <sup>2</sup>			
		<b>Average</b>	<b>246.91</b>	<b>Kg/Cm<sup>2</sup></b>			
19	Cement concrete cube of mix <b>1:2:4</b> , cast on 30/05/2022. For Intake well no.1 Raft Pcc bed.	28 th day compressive strength	258.24	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	15.78	Qty represents - 8.00 M3 for two sets of cubes.
			244.65	Kg/Cm <sup>2</sup>			
			226.53	Kg/Cm <sup>2</sup>			
		<b>Average</b>	<b>243.14</b>	<b>Kg/Cm<sup>2</sup></b>			
20	Cement concrete cube of mix <b>1:2:4</b> , cast on 30/05/2022. For Intake well no.1 Raft Pcc bed.	28 th day compressive strength	249.18	Kg/Cm <sup>2</sup>	210.00 Kg/cm <sup>2</sup>	10.75	----- do -----
			217.47	Kg/Cm <sup>2</sup>			
			231.06	Kg/Cm <sup>2</sup>			
		<b>Average</b>	<b>232.57</b>	<b>Kg/Cm<sup>2</sup></b>			
21	Cement concrete cube of mix <b>M-30</b> , cast on 01/06/2022. For Intake well 2 <sup>nd</sup> lift concrete casting.	28 th day compressive strength	335.26	Kg/Cm <sup>2</sup>	345.00 Kg/cm <sup>2</sup>	1.77	Qty represents - 12.00 M3 for two sets of cubes.
			353.38	Kg/Cm <sup>2</sup>			
			364.71	Kg/Cm <sup>2</sup>			
		<b>Average</b>	<b>351.12</b>	<b>Kg/Cm<sup>2</sup></b>			
22	Cement concrete cube of mix <b>M-30</b> , cast on 01/06/2022. For Intake well 2 <sup>nd</sup> lift concrete casting.	28 th day compressive strength	344.32	Kg/Cm <sup>2</sup>	345.00 Kg/cm <sup>2</sup>	3.96	----- do -----
			362.44	Kg/Cm <sup>2</sup>			
			369.24	Kg/Cm <sup>2</sup>			
		<b>Average</b>	<b>358.67</b>	<b>Kg/Cm<sup>2</sup></b>			

Copy to: 1. The Assistant Engineer , SD IV , WDI , WRD, Porvorim - Goa.

2. Copy submitted to The Superintending Engineer ,CPO,WRD, Sinchai Bhavan, Porvorim Goa for kind Information.

3. Copy submitted to The Executive Engineer , WDI ,WRD, Porvorim - Goa.

4. QC Lab File.      5. Bill File.

Junior Engineer

Assistant Engineer