

GOVERNMENT OF GOA  
QUALITY CONTROL LABORATORY  
WATER RESOURCES DEPARTMENT

Test Report No: WRD/QC/F.6-2/Cube -T : 6797,9798,6799,6800,6801,6802,6803/Lab/49/2023 - 24 Dated:- 09/05/2023.  
6804,6805,6806,6807,6808,6809,6810.

Laboratory : Bicholim - Goa.  
Sub Division V (QC)/WRD/ Bicholim- Goa.

**Name of work : Augmentation of Right Bank Main Canal of T.I.P at ch 12.950 km from Kalna river to secure uninterrupted raw water supply for drinking, agricultural and industrial purpose during the annual canal maintenance period of TIP dam and its appurtenances.**

Ref. to Requisition No : SDIV/WDVII/WRD/F.19/23-24/08. Dt.:- 28/04/2023

Qty. Recived : 14 Sets of cube Date of Receipt:- 28/04/2023. Tested on:- 28/04/2023 as per due dates. Ref to CPWD :2009, Vol. I

Sample: Cube Mix **1:1.5:3** O.S No : 1129,1130,1131,1132,1133,1134,1135,1136,1137,1138,1139,1140,1141,1142/RK Lab. Sample No: 6977 to 6990

Tested By: Mrs. R.R. Kadam A.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>1:1.5:3</b> , cast on 31/03/2023. RCC For Thrust blocks, Anchor block, RCC Drain chamber ch. 0.00 to 0.650, 0.650 to 1.300km. | 28 <sup>th</sup> day compressive strength | 269.57         | Kg/Cm <sup>2</sup> | 265.00 Kg/cm <sup>2</sup>  | 1.15             | Qty represents - 100.00 Cum for fourteen sets of Cube. |
|         |  |   | 262.77         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | 271.83         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | <b>Average</b> | <b>268.06</b>      |                            |                  |  |
| 2       | Cement concrete cube of mix <b>1:1.5:3</b> , cast on 31/03/2023. RCC For Thrust blocks, Anchor block, RCC Drain chamber ch. 0.00 to 0.650, 0.650 to 1.300km. | 28 <sup>th</sup> day compressive strength | 276.36         | Kg/Cm <sup>2</sup> | 265.00 Kg/cm <sup>2</sup>  | 3.15             | ---do---   |
|         |  |   | 265.04         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | 278.63         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | <b>Average</b> | <b>273.34</b>      |                            |                  |  |
| 3       | Cement concrete cube of mix <b>1:1.5:3</b> , cast on 31/03/2023. RCC For Thrust blocks, Anchor block, RCC Drain chamber ch. 0.00 to 0.650, 0.650 to 1.300km. | 28 <sup>th</sup> day compressive strength | 294.48         | Kg/Cm <sup>2</sup> | 265.00 Kg/cm <sup>2</sup>  | 5.43             | ---do---   |
|         |  |   | 276.36         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | 267.30         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | <b>Average</b> | <b>279.38</b>      |                            |                  |  |
| 4       | Cement concrete cube of mix <b>1:1.5:3</b> , cast on 31/03/2023. RCC For Thrust blocks, Anchor block, RCC Drain chamber ch. 0.00 to 0.650, 0.650 to 1.300km. | 28 <sup>th</sup> day compressive strength | 269.57         | Kg/Cm <sup>2</sup> | 265.00 Kg/cm <sup>2</sup>  | 6.57             | ---do---   |
|         |  |   | 292.22         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | 285.42         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | <b>Average</b> | <b>282.40</b>      |                            |                  |  |
| 5       | Cement concrete cube of mix <b>1:1.5:3</b> , cast on 31/03/2023. RCC For Thrust blocks, Anchor block, RCC Drain chamber ch. 0.00 to 0.650, 0.650 to 1.300km. | 28 <sup>th</sup> day compressive strength | 271.83         | Kg/Cm <sup>2</sup> | 265.00 Kg/cm <sup>2</sup>  | 2.58             | ---do---   |
|         |  |   | 262.77         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | 280.89         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | <b>Average</b> | <b>271.83</b>      |                            |                  |  |

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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>1:1.5:3</b> , cast on 31/03/2023. RCC For Thrust blocks, Anchor block, RCC Drain chamber ch. 0.00 to 0.650, 0.650 to 1.300km. | 28 <sup>th</sup> day compressive strength | 267.30         | Kg/Cm <sup>2</sup> | 265.00 Kg/cm <sup>2</sup>  | 4.00             | Qty represents - 100.00 Cum for fourteen sets of Cube. |
|         |  |   | 289.95         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | 269.57         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | <b>Average</b> | <b>275.61</b>      |                            |                  |  |
| 7       | Cement concrete cube of mix <b>1:1.5:3</b> , cast on 31/03/2023. RCC For Thrust blocks, Anchor block, RCC Drain chamber ch. 0.00 to 0.650, 0.650 to 1.300km. | 28 <sup>th</sup> day compressive strength | 283.16         | Kg/Cm <sup>2</sup> | 265.00 Kg/cm <sup>2</sup>  | 3.43             | ---do---   |
|         |  |   | 276.36         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | 262.77         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | <b>Average</b> | <b>274.10</b>      |                            |                  |  |
| 8       | Cement concrete cube of mix <b>1:1.5:3</b> , cast on 31/03/2023. RCC For Thrust blocks, Anchor block, RCC Drain chamber ch. 0.00 to 0.650, 0.650 to 1.300km. | 28 <sup>th</sup> day compressive strength | 280.89         | Kg/Cm <sup>2</sup> | 265.00 Kg/cm <sup>2</sup>  | 5.14             | ---do---   |
|         |  |   | 287.69         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | 267.30         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | <b>Average</b> | <b>278.63</b>      |                            |                  |  |
| 9       | Cement concrete cube of mix <b>1:1.5:3</b> , cast on 31/03/2023. RCC For Thrust blocks, Anchor block, RCC Drain chamber ch. 0.00 to 0.650, 0.650 to 1.300km. | 28 <sup>th</sup> day compressive strength | 278.63         | Kg/Cm <sup>2</sup> | 265.00 Kg/cm <sup>2</sup>  | 3.43             | ---do---   |
|         |  |   | 262.77         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | 280.89         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | <b>Average</b> | <b>274.10</b>      |                            |                  |  |
| 10      | Cement concrete cube of mix <b>1:1.5:3</b> , cast on 31/03/2023. RCC For Thrust blocks, Anchor block, RCC Drain chamber ch. 0.00 to 0.650, 0.650 to 1.300km. | 28 <sup>th</sup> day compressive strength | 265.04         | Kg/Cm <sup>2</sup> | 265.00 Kg/cm <sup>2</sup>  | 4.29             | ---do---   |
|         |  |   | 278.63         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | 285.42         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | <b>Average</b> | <b>276.36</b>      |                            |                  |  |
| 11      | Cement concrete cube of mix <b>1:1.5:3</b> , cast on 31/03/2023. RCC For Thrust blocks, Anchor block, RCC Drain chamber ch. 0.00 to 0.650, 0.650 to 1.300km. | 28 <sup>th</sup> day compressive strength | 280.89         | Kg/Cm <sup>2</sup> | 265.00 Kg/cm <sup>2</sup>  | 2.86             | ---do---   |
|         |  |   | 271.83         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | 265.04         | Kg/Cm <sup>2</sup> |                            |                  |  |
|         |  |   | <b>Average</b> | <b>272.59</b>      |                            |                  |  |

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| <b>SR. NO.</b> | <b>DISCRIPTION OF SAMPLE</b>   | <b>TESTED FOR</b>                         | <b>RESULTS</b> |                          | <b>Max./Min.Value permissable</b> | <b>% above or below</b> | <b>REMARK</b>  |
|----------------|--|---|----------------|--------------------------|-----------------------------------|-------------------------|--|
| 12             | Cement concrete cube of mix <b>1:1.5:3</b> , cast on 31/03/2023. RCC For Thrust blocks, Anchor block, RCC Drain chamber ch. 0.00 to 0.650, 0.650 to 1.300km. | 28 <sup>th</sup> day compressive strength | 283.16         | Kg/Cm <sup>2</sup>       | 265.00 Kg/cm <sup>2</sup>         | 5.14                    | Qty represents - 100.00 Cum for fourteen sets of Cube. |
|                |  |   | 267.30         | Kg/Cm <sup>2</sup>       |                                   |                         |  |
|                |  |   | 285.42         | Kg/Cm <sup>2</sup>       |                                   |                         |  |
|                |  | <b>Average</b>                            | <b>278.63</b>  | <b>Kg/Cm<sup>2</sup></b> |                                   |                         |  |
| 13             | Cement concrete cube of mix <b>1:1.5:3</b> , cast on 31/03/2023. RCC For Thrust blocks, Anchor block, RCC Drain chamber ch. 0.00 to 0.650, 0.650 to 1.300km. | 28 <sup>th</sup> day compressive strength | 274.10         | Kg/Cm <sup>2</sup>       | 265.00 Kg/cm <sup>2</sup>         | 4.00                    | ---do---   |
|                |  |   | 269.57         | Kg/Cm <sup>2</sup>       |                                   |                         |  |
|                |  |   | 283.16         | Kg/Cm <sup>2</sup>       |                                   |                         |  |
|                |  | <b>Average</b>                            | <b>275.61</b>  | <b>Kg/Cm<sup>2</sup></b> |                                   |                         |  |
| 14             | Cement concrete cube of mix <b>1:1.5:3</b> , cast on 31/03/2023. RCC For Thrust blocks, Anchor block, RCC Drain chamber ch. 0.00 to 0.650, 0.650 to 1.300km. | 28 <sup>th</sup> day compressive strength | 285.42         | Kg/Cm <sup>2</sup>       | 265.00 Kg/cm <sup>2</sup>         | 3.43                    | ---do---   |
|                |  |   | 262.77         | Kg/Cm <sup>2</sup>       |                                   |                         |  |
|                |  |   | 274.10         | Kg/Cm <sup>2</sup>       |                                   |                         |  |
|                |  | <b>Average</b>                            | <b>274.10</b>  | <b>Kg/Cm<sup>2</sup></b> |                                   |                         |  |

Copy to: 1. The Assistant Engineer, SDIV, WDVII, WRD, Dhargal Pernem - Goa.

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

3. Copy submitted to The Executive Engineer, WDVII, WRD, Dhargal Pernem - Goa.

4. QC Lab File.      5. Bill File.

**Assistant Engineer**