

Report #	CM 746/25-26	KERALA ENGINEERING RESEARCH INSTITUTE, PEECHI PIN 680653	Form #	KERI-F-173
Date of issue	16.03.2026		Rev.#	0
Invoice Sample #	CM 746/25-26		Invoice Date	03.03.2026

CONSTRUCTION MATERIALS DIVISION

MARCH 2026

**Report of the Tests on Steel Bars supplied by
The Assistant Engineer, Quality Control Section ,
Eswaramangalam**

Irrigation Department

GOVERNMENT OF KERALA

Report No.	CM 746/25-26	KERALA ENGINEERING RESEARCH INSTITUTE, PEECHI PIN 680653	Form #	KERI-F-175
			Date of Issue	16.03.2026
Test Method: IS Code Reference		IS 1608 : 2022 & IS 1786: 2008 (Reaffirmed 2018)		
Name of test : Test on Steel				
Note: 1. KERI has not taken part in selecting samples for the test. 2. Results are valid only for the samples supplied at KERI by the applicant.				

Name of the Customer : Assistant Engineer, Quality Control Section, Irrigation , Eswaramangalam

TEST REPORT ON MECHANICAL PROPERTIES OF STEEL BARS

Test Sample Description : 20,16,12,&10 mm (SUMANGALA TMT 550 D),

Sample received on : 03.03.2026

Requisition No. & Date : QCS/MPM/TR/2024 dated 19.02.2026

Name of Work : NABARD-RIDF-XXX- Interlinking of Bharathapuzha and Biyyam lake in
Ponnani Taluk, Malappuram District

Date of testing : 09.03.2026

Table 1. Results on Mechanical properties- 20,16,12,&10 mm Steel samples

Specified Diameter, mm	Marking	Mass per meter (kg/m)	Dia in mm related to weight	Area of cross section in mm ²	Tensile test							Bend Test	Rebend Test
					Yield Point load in kN	Ultimate Load in kN	Yield Strength in N/mm ²	Average Yield Strength in N/mm ²	Ultimate strength in N/mm ²	Average Ultimate strength in N/mm ²	Percentage Elongation		
20 mm	SUMANGALA TMT 550 D	2.407	19.77	306.666	183.00	209.40	596.74	594.60	682.83	680.28	22.0	Passed	Passed
		2.409	19.77	306.923	182.40	209.00	594.29		680.95		22.0		
		2.408	19.77	306.693	181.80	207.65	592.78		677.06		20.0		
16 mm	SUMANGALA TMT 550 D	1.499	15.59	190.905	114.00	132.85	597.16	586.77	695.90	669.62	25.0	Passed	Passed
		1.508	15.64	192.076	110.00	124.05	572.69		645.84		22.5		
		1.510	15.66	192.389	113.60	128.35	590.47		667.14		25.0		
12 mm	SUMANGALA TMT 550 D	0.861	11.82	109.677	66.00	74.05	601.77	605.72	675.17	667.51	18.3	Passed	Passed
		0.871	11.89	110.979	67.25	74.40	605.97		670.40		16.7		
		0.867	11.86	110.433	67.30	72.55	609.42		656.96		20.0		
10 mm	SUMANGALA TMT 550 D	0.596	9.84	75.934	44.00	53.20	579.45	565.11	700.61	674.44	20.0	Passed	Passed
		0.594	9.82	75.654	43.20	49.60	571.02		655.61		18.0		
		0.597	9.84	76.075	41.45	50.75	544.85		667.10		20.0		



Assistant Director II



Deputy Director

End of Test Report