



No. NITM•8/(04-Civil)/PR&C/2022/09

Dt: 21/04/2022

To,
The Superintending Engineer,
Building Division,
Public Works Department (PWD), Govt. of Manipur
Imphal (W) - 795001, Manipur

Sub: Test Conduct Report of Maithan TMT Fe 600 Rebars 3 nos (20mm, 25mm and 32mm)

Ref: SE/BLD/CONS-tst/TMT/ of Maithan Steel, dt 18th April, 2022

Sir,

In reference to the subject stated and the agreed upon Terms & Conditions the Report/Certification for the Test conducted is as follows:

Name of Test(s): Testing of Reinforcement Steel Maithan TMT Fe 600 Rebars 3 nos (20 mm, 25 mm and 32 mm)
Name of Agency: Maithan Steel & Power Ltd.
Test Lab: Department of Civil Engineering, NIT Manipur.
Date of Testing: 20th April, 2022

TEST RESULTS

Rebar diameter r (Φ)	Actual diameter	Tensile Strength (MPa)	Avg. Tensile Strength (MPa)	Elongation (%)	Actual density (kg/m ³)
20mm	20mm	768	759	20	7897
		751			
		759			
25mm	24.7mm	821	809	20	8121
		811			
		795			
32mm	31.8mm	792	792	19	7975
		801			
		785			

Note:

1. Three samples were tested for each rebar and the average value was considered as its tensile strength.
2. The actual diameter of the rebar was measured by using Vernier Callipers.
3. Density of rebar is found by dividing the mass of the bar by its volume. The mass of 20 mm 25 mm and 32 mm, was found to be 2.55 kg, 3.86 kg and 6.38 kg respectively, for 1 m length of each bar sample.
4. For 25mm rebar the cross-section is observed to be oval in shape and not circular.


HEAD. Dept. of Civil Engineering
NIT Manipur

contd/-



Rebar diameter (Φ)	Yield Stress (MPa)/ 2% proof stress (MPa)	
	Upper yield strength (ReH)	Lower yield strength (ReL)
20mm	690	685
	674	669
	676	671
25mm	776	771
	764	759
	745	739
32mm	697	693
	704	698
	689	684

Remarks: The results are as per the test conditions of materials as provided to the Dept. of Civil Engineering, nit Manipur, and on the very date of testing. Test conditions may vary depending on instrument(s)/apparatus used. Tests have been conducted conforming to IS: 1786 (2008), MORT&H etc provisions. Test results are intended only for the Client and Co-Client and not to any other third party.


7/21/04/2022
(Dr. Ng. Romeji)
HoD,
Dept. of Civil Engineering,
NIT Manipur

HEAD, Dept. of Civil Engineering
NIT Manipur

CC: ✓
Goutam Bhattacharya,
General Manager (Sales & Marketing),
Maithan Steel & Power Ltd., Kolkata