



**BUREAU  
VERITAS**



*NABL Accredited Lab  
as per ISO/IEC: 17025*  
Date : 14-07-2020

Test order / Report No. BVIPL / STEEL : BL/735/7/2020/1

Date of Receipt : 14-07-2020

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ULR-TC600620000007870F

**KRISHI INFRATECH**

No. 19, 4th Cross, 5th block, BSK 3rd Stage, 3rd Phase, Bangalore-560085

**MECHANICAL TESTING**  
Mechanical Properties Of Metals

**TEST REPORT ON REINFORCING STEEL**

Source of sample : Sample supplied by the customer  
Customers Reference : Letter No. LC No. \_48/ROB/48 dated 13.07.2020  
Project # : Construction of Proposed 4 lane ROB and its approaches in lieu of existing level crossing : no. 48E/C at Km. 96/800 (Railway chainage 74/431) on NH-205 in the state of Andhra Pradesh on EPC Mode  
Date of Test : 14-07-2020  
Reference No # : 1. L.S.C.R. Agreement No. 23/2017-18 dated 11.01.2018, 2. 148/SE, NH, ATP/AEE1/2019-20, dated 24.06.2019, 3. Our letter no. LC No\_48/ROB/43, dated 03.07.2020, 4. Your letter no. STCPL/816/TL/07-2020/227, dated 11.07.2020  
Brand # : M/s. Bhuwalka Premier TMT Bars  
Condition of Sample : Satisfactory  
Test Method : IS: 1608 (Part 1)-2018, IS:1599-2019 and IS:1786-2008 (Reaffirmed 2013)

**PHYSICAL PROPERTIES :**

Sl.No	UIN	Identification#	Nominal Dia# (mm)	Mass (Wt.) (kg/m)	0.2% Proof Stress / Yield Stress (N/mm <sup>2</sup> )	UTS (N/mm <sup>2</sup> )	Elongation (%)	Bend Test	Rebend Test
1	20013599	Grade - Fe 500	8	0.389	553	634	25.0	Passes	Passes
2	20013599	Grade - Fe 500	10	0.578	602	680	20.0	Passes	Passes
3	20013599	Grade - Fe 500	12	0.870	592	678	16.7	Passes	Passes
4	20013599	Grade - Fe 500	16	1.536	606	696	25.0	Passes	Passes
5	20013599	Grade - Fe 500	20	2.485	527	640	20.0	Passes	Passes
6	20013599	Grade - Fe 500	25	3.771	577	700	20.0	Passes	Passes

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*B.N.*  
*14/07/2020*

**PANIRAJ. B.N.**  
Technical Manager

**MECHANICAL TESTING**  
Mechanical Properties Of Metals

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**PHYSICAL PROPERTIES -**

Sl.No	UIN	Identification#	Nominal Dia# (mm)	Mass (Wt.) (kg/m)	0.2% Proof Stress / Yield Stress (N/mm <sup>2</sup> )	U T S (N/mm <sup>2</sup> )	Elongation (%)	Bend Test	Re bend Test
7	20013599	Grade - Fe 500	32	6.218	569	658	20.0	Passes	Passes
8	20013599	Grade - Fe 550	8	0.373	644	745	25.0	Passes	Passes
9	20013599	Grade - Fe 550	10	0.593	618	714	20.0	Passes	Passes
10	20013599	Grade - Fe 550	12	0.860	627	726	16.7	Passes	Passes
11	20013599	Grade - Fe 550	16	1.533	673	766	23.8	Passes	Passes
12	20013599	Grade - Fe 550	20	2.447	602	704	19.0	Passes	Passes
13	20013599	Grade - Fe 550	25	3.802	626	752	19.2	Passes	Passes
14	20013599	Grade - Fe 550	32	6.286	688	801	18.8	Passes	Passes

**Requirements as per IS : 1786 - 2008**

Dia (mm)	Mass (wt.) (Kg/m) (Min.)	Dia (mm)	Mass (wt.) (Kg/m) (Min.)	Grade	0.2% Proof Stress (N/mm <sup>2</sup> ) (Min.)	U T S (N/mm <sup>2</sup> ) (Min.)	Elongation (%) (Min.)
8	0.363	20	2.366	Fe - 415	415	485 or 10% more than Actual Proof Stress whichever is higher	14.5
10	0.567	25	3.697	Fe - 500	500	545 or 8% more than Actual Proof Stress whichever is higher	12.0
12	0.834	28	4.638	Fe - 550	550	585 or 6% more than Actual Proof Stress whichever is higher	10.0
16	1.483	32	6.058	Fe - 550	550	585 or 6% more than Actual Proof Stress whichever is higher	10.0

# As furnished by the customer

Remarks : The tested sample of 8mm, 10mm, 12mm, 16mm, 20mm, 25mm & 32mm dia conform to IS:1786-2008(RA 2013) requirements for Fe-500 Grade with respect to Physical tests conducted and the other tested samples of 8mm, 10mm, 12mm, 16mm, 20mm, 25mm & 32mm dia conform to IS:1786-2008(RA 2013) requirements for Fe-550 Grade with respect to Physical tests conducted.

- Note :**
1. The Results relate only to the samples tested
  2. Report shall not be reproduced, except in full, without the written approval of the lab.
  3. Any correction invalidates this report.

**for BUREAU VERITAS (INDIA) PRIVATE LIMITED**  
Construction Services Laboratory

*P.N.*  
14/07/2020

**PANIRAJ. B.N.**  
Technical Manager



**BUREAU  
VERITAS**



Test order / Report No. BVIPL : STEEL : BL/735/7/2020/2

Date of Receipt : 14-07-2020

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ULR-TC600620000007871F

**KRISHI INFRATECH**

No. 19, 4th Cross, 5th block, BSK 3rd Stage, 3rd Phase, Bangalore-560085

**CHEMICAL TESTING**  
Metals and Alloys

**TEST REPORT ON REINFORCING STEEL**

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Customers Reference : Letter No. LC No. \_48/ROB/48 dated 13.07.2020  
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Brand # : M/s. Bhuvalka Premier TMT Bars  
Condition of Sample : Satisfactory  
Test Method : IS: 8811 – 1998 (Reaffirmed 2012)

**CHEMICAL COMPOSITION -**

Sl.No	UIN	Identification#	Nominal Dia# (mm)	Carbon (%)	Phosphorus (%)	Sulphur (%)	Sulphur + Phosphorus
1	20013599	Grade - Fe 550	8	0.210	0.027	0.039	0.066
2	20013599	Grade - Fe 500	8	0.204	0.028	0.039	0.067
3	20013599	Grade - Fe 500	10	0.167	0.045	0.041	0.086
4	20013599	Grade - Fe 500	12	0.168	0.037	0.035	0.072
5	20013599	Grade - Fe 500	16	0.190	0.048	0.054	0.102
6	20013599	Grade - Fe 500	20	0.171	0.045	0.041	0.086

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*D. Dinesh H.T.*

14/07/2020

**Dr. DINESH. H.T**  
Manager - Chemical Lab





Test order / Report No. BVIPL : STEEL : BL/735/7/2020/2  
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**CHEMICAL TESTING**  
Metals and Alloys

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**CHEMICAL COMPOSITION -**

Sl.No	UIN	Identification#	Nominal Dia# (mm)	Carbon (%)	Phosphorus (%)	Sulphur (%)	Sulphur + Phosphorus
7	20013599	Grade - Fe 500	25	0.230	0.033	0.034	0.067
8	20013599	Grade - Fe 500	32	0.258	0.046	0.045	0.091
9	20013599	Grade - Fe 550	10	0.167	0.046	0.041	0.087
10	20013599	Grade - Fe 550	12	0.170	0.038	0.036	0.074
11	20013599	Grade - Fe 550	16	0.191	0.049	0.054	0.103
12	20013599	Grade - Fe 550	20	0.175	0.053	0.034	0.087
13	20013599	Grade - Fe 550	25	0.223	0.048	0.039	0.087
14	20013599	Grade - Fe 550	32	0.200	0.056	0.041	0.097

**Requirements as per IS : 1786 - 2008 (% Max) with tolerance**

Grade	Fe - 415	Fe - 500	Fe - 550
Carbon (C)	0.320	0.320	0.320
Phosphorus (P)	0.065	0.060	0.060
Sulphur (S)	0.065	0.060	0.060
S & P	0.120	0.115	0.110

# As furnished by the customer

Remarks : The tested samples of 8mm, 10mm, 12mm, 16mm, 20mm, 25mm & 32mm dia conform to IS:1786-2008(RA 2013) requirements for Fe-500 Grade with respect to Chemical tests conducted and the other tested samples of 8mm, 10mm, 12mm, 16mm, 20mm, 25mm & 32mm dia conform to IS:1786-2008(RA 2013) requirements for Fe-550 Grade with respect to Chemical tests conducted.

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**for BUREAU VERITAS (INDIA) PRIVATE LIMITED**  
Construction Services Laboratory

14/07/2020

**Dr. DINESH. H.T**  
Manager - Chemical Lab