TCR Engineering Services Pvt. Ltd.
VKB House, EL-182 MIDC-TTC
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TEST REPORT

ULR - TC690521000014794F
Date: 13-07-2021

T.C. No. : **CD1669**
Issued To. : **M/s SHRI KARVIR NIVASINI MAHALAXMI ISPAT PVT. LTD.**
A-8,MIDC, Gokul, Shirgaon. KOLHAPUR-416 234

Party Ref.	: M/23/21-22	**Condition of Sample**	:	Cut Length
Ref. Date	: 28-06-2021			
Description of Sample	: TMT Steel Bar			
Specification	: IS 1786 : 2008 (Ra 2018) Grade Fe 500	**Sample Received on**	:	30-06-2021
Sample Drawn By	Party	**Date of Completion**	:	13-07-2021
		Enclosure	:	NIL

Test : TENSILE, BEND, REBEND, Deformations and Surface Characteristics, SECTIONAL WEIGHT, SPECTRO CHEMICAL ANALYSIS

Size 32mm Dia

I. Mechanical Testing

1. Mechanical Properties of Metals

TENSILE TEST — **Test Method : IS 1608 Part 1:2018**

Equipment : ZD 100/0-1000KN

		Requirement
Weight of specimen (gm)	3822	
Length of specimen (mm)	610.00	
Sectional weight (kg/m)	6.2656	
Cross- sectional area (mm^2)	798.16	
Original gauge length (mm)	160.00	
0.2% Proof load (N)	410429	
0.2% Proof strength (N/mm^2)	514.22	500 min.
Ultimate tensile load (N)	520120	
U.T.S (N/mm^2)	651.65	545 min.
Final gauge length (mm)	193.32	
TS/YS ratio (N/mm^2)	1.27	1.08 min.
Elongation (%)	20.82	12.00 min.
Fracture	W.G.L	
Result	Satisfactory	

D.N. GAICHOR
(HOD Chemical)

AVINASH TAMBEWAGH
(Head-Advanced Testing)

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Test : TENSILE, BEND, REBEND, Deformations and Surface Characteristics, SECTIONAL WEIGHT, SPECTRO CHEMICAL ANALYSIS

Size 32mm Dia

BEND TEST **Test Method : IS 1599 - 2012 (RA-2017)**
Equipment : ZD 100/0-1000KN

Mandrel diameter for bend (mm)	160.00
Angle of bend (°)	180
Observation(without magnification)	No crack
Result	Satisfactory

REBEND TEST **Test Method : IS 1786:2008 (RA2018)**
Equipment : ZD 100/0-1000KN

Mandrel diameter (mm)	224.00
Bent included angle (°)	135
Specimen aging (in boiling water) Temperature (°C)	100
Bent back included angle	157.5
Observation	No crack
Result	Satisfactory

II. Chemical Testing
2. Metals and Alloys

SPECTRO CHEMICAL ANALYSIS

	Result	Test Method	Requirement
% Carbon	0.21	ASTM E415:2017	0.30 max.
% Sulphur	0.032	ASTM E415:2017	0.055 max.
% Phosphorus	0.033	ASTM E415:2017	0.055 max.
% S+P	0.065		0.105 max.
Result	Satisfactory		

Remark: The above result(s) meets the specified requirements of IS 1786 : 2008 (Ra 2018) Grade Fe 500 with respect to test(s) carried out.

Note : For Deformations and Surface Characteristics & Sectional Weight please refer T.C.No.: CD/1669-1

******END OF REPORT******

vk/-

CHECKED BY TCR

Checked By

Issued By
D.N. GAICHOR
(HOD Chemical)

Reviewed & Authorised By
AVINASH TAMBEWAGH
(Head-Advanced Testing)

TCR ENGINEERING

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TEST REPORT

Date: 13-07-2021

T.C. No. : **CD1669-1**

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A-8,MIDC, Gokul, Shirgaon. KOLHAPUR-416 234

Party Ref.	: M/23/21-22	**Condition of Sample**	: Cut Length
Ref. Date	: 28-06-2021		
Description of Sample	: TMT Steel Bar		
Specification	: IS 1786 : 2008 (Ra 2018) Grade Fe 500	**Sample Received on**	: 30-06-2021
Sample Drawn By	Party	**Date of Completion**	: 13-07-2021
		Enclosure	: NIL

Test : TENSILE, BEND, REBEND, Deformations and Surface Characteristics, SECTIONAL WEIGHT, SPECTRO CHEMICAL ANALYSIS

Size 32mm Dia

I. Mechanical Testing

1. Mechanical Properties of Metals

Deformations and Surface Characteristics — **Test Method : IS 1786:2008 (RA2018)**

		Requirement
Mean projected rib area (mm^2/mm).	5.89	5.44 min.
Result	Satisfactory	

SECTIONAL WEIGHT — **Test Method : IS 1786:2008 (RA2018)**

Equipment : Range 0-30 Kg, Digital Weight Balance, Serial No. 04981

		Requirement
Weight of specimen (gm)	6314	
Length of specimen (mm)	1009	
Sectional weight (kg/m)	6.2577	6.058 min.
Result	Satisfactory	

********END OF REPORT********

vk/-

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