



SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH

(A unit of Shriram Scientific and Industrial Research Foundation)

19, University Road, Delhi – 110007 (India)
An ISO - 9001, 14001 & 45001 Certified Institute

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E-mail id : customercare@shriraminstitute.org
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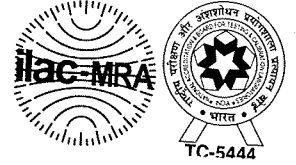
ULR NO. : TC54442200009327F

TEST REPORT

NO : C1/0000295303

Issued To :
Client Code : (KRUK01P0668)
P.W.D. (KURUKSHETRA)
PROVINCIAL SUB DIVISION NO. 2, PWD B&R BR.,
KURUKSHETRA
HARYANA-136119

Date : 30-06-2022
Job No : 2206-1-MET-2098
Booking No : RG2223/1/3074
Booking Date : 22-06-2022
Customer Ref No. : NO. 943
Customer Ref Dt. : 17-06-2022



Sample Detail :

ONE SAMPLE DESCRIBED AS TMT STEEL BAR FE- 500 D DIAS OF SAKAHAMBRI ISPAT & POWER LTD
[BRAND -ELEGANT STEEL.EMBOSS- ELEGANT QST ,DIA IN MM:32, WAS RECEIVED.

The sampling was not carried out by SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH.

The sample particulars provided in the test report are based on the declaration by the Customer.

Job No : 2206-1-MET-2098

TEST RESULTS

(As Per IS: 1786-2008 ,RA 2018 with Amendment No. 4)

S.No.	Test Parameter	Observation	Requirement Grade FE-500D	Conformity	Protocol Adopted
DISCIPLINE: CHEMICAL					
GROUP: METAL & ALLOYS					
A.	Chemical Test % by mass				
i	Carbon	0.14	0.25 Max.	Yes	IS:228 (Pt-1)1987,RA-2018
ii	Sulphur	0.025	0.040 Max.	Yes	IS:228 (Pt-9)1989,RA-2019
iii	Phosphorous	0.030	0.040 Max.	Yes	IS:228 (Pt-3)1987,RA-2018
iv	Sulphur+Phosphorous	0.055	0.075 Max.	Yes	IS:1786-2008,RA 2018
v	Carbon equivalent	0.29	0.50 Max.	Yes	IS:1786-2008,RA 2018
vi.	Low Alloying Elements				
a.	Chromium	0.11	--	--	SRI/CHE-MET-01
b.	Copper	0.02	--	--	SRI/CHE-MET-01
c.	Nickel	0.01	--	--	SRI/CHE-MET-01
d.	Molybdenum	0.01	--	--	SRI/CHE-MET-01

AUTHORISED SIGNATORY
EMPLOYEE CODE: (517)

Note: The results relate only to the items tested / calibrated above.
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ULR NO. : TC544422000009327F

TEST REPORT

NO : C1/0000295303

DISCIPLINE: MECHANICAL

GROUP: MECHANICAL PROPERTIES OF METALS

B. Physical Tests

1	TS/YS ratio ¹⁾	1.20	≥ 1.10 but TS	Yes	IS: 1786-2008,RA 2018
	Tensile Strength, N/mm ²	684	not less than 565	Yes	IS: 1608 (Pt-1)-2022
2	Yield Stress, N/mm ²	572.1	500.0 Min.	Yes	IS: 1608 (Pt-1)-2022
3	Elongation (%) (Gauge Length 5.65 Sq Root Area)	20.1	16.0 Min	Yes	IS: 1608 (Pt-1)-2022
4	Bend Test	Passes the test. (No rupture or cracks on bent portion observed)	To pass the test. (There shall be no rupture or cracks on bent portion)	Yes	IS: 1599-2019
5	Rebend Test	Passes the test. (No rupture or cracks on rebent portion observed)	To pass the test. (There shall be no rupture or cracks on rebent portion)	Yes	IS: 1786-2008,RA 2018
6	Mass per metre run (Kg)	6.245	Not less than 6.068	Yes	IS: 1786-2008,RA 2018 SOP/Metal & Alloys/03:2021
7	Deformation & Surface Characteristics				
a.	Mean ribs area in mm ² /mm length	9.29	5.44 Min.	Yes	IS: 1786-2008,RA 2018 SOP/Metal & Alloys/03:2021
b.	Mean projected area of transverse ribs in mm ² /mm length	9.29	1.81 Min.	Yes	IS: 1786-2008,RA 2018 SOP/Metal & Alloys/03:2021

Note: ¹⁾ TS/YS ratio refers to ratio of tensile strength to the yield stress of the test piece.

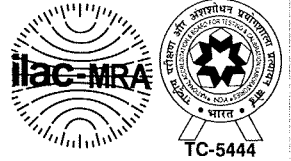
Remarks:- The sample conforms to IS: 1786-2008 , RA 2018 with amendment No. 4 for Grade FE 500D
w.r.t. above test parameters.

DOR: 22/06/2022

DOS: 22/06/2022

DOC: 30/06/2022

**** End of Report****



TC-5444

AUTHORISED SIGNATORY
EMPLOYEE CODE: (5117)

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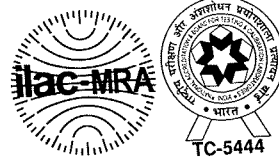
ULR NO. : TC54442200009328F

TEST REPORT

NO : C1/0000295305

Issued To :
Client Code : (KRUK01P0668)
P.W.D. (KURUKSHETRA)
PROVINCIAL SUB DIVISION NO. 2, PWD B&R BR.,
KURUKSHETRA
HARYANA-136119

Date : 30-06-2022
Job No : 2206-1-MET-2099
Booking No : RG2223/1/3074
Booking Date : 22-06-2022
Customer Ref No. : NO. 943
Customer Ref Dt. : 17-06-2022



Sample Detail :

ONE SAMPLE DESCRIBED AS TMT STEEL BAR FE- 500 D DIAS OF SAKAHAMBRI ISPAT & POWER LTD
[BRAND -ELEGANT STEEL.EMBOSS- ELEGANT QST ,DIA IN MM:25, WAS RECEIVED.

The sampling was not carried out by SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH.

The sample particulars provided in the test report are based on the declaration by the Customer.

Job No : 2206-1-MET-2099

TEST RESULTS

(As Per IS: 1786-2008 ,RA 2018 with Amendment No. 4)

S.No.	Test Parameter	Observation	Requirement Grade FE-500D	Conformity	Protocol Adopted
DISCIPLINE: CHEMICAL					
GROUP: METAL & ALLOYS					
A.	Chemical Test % by mass				
i.	Carbon	0.21	0.25 Max.	Yes	IS:228 (Pt-1)1987,RA-2018
ii.	Sulphur	0.022	0.040 Max.	Yes	IS:228 (Pt-9)1989,RA-2019
iii.	Phosphorous	0.034	0.040 Max.	Yes	IS:228 (Pt-3)1987,RA-2018
iv.	Sulphur+Phosphorous	0.056	0.075 Max.	Yes	IS:1786-2008,RA 2018
v.	Carbon equivalent	0.37	0.50 Max.	Yes	IS:1786-2008,RA 2018
vi.	Low Alloying Elements				
a.	Chromium	0.17	--	--	SRI/CHE-MET-01
b.	Copper	0.02	--	--	SRI/CHE-MET-01
c.	Nickel	0.03	--	--	SRI/CHE-MET-01
d.	Molybdenum	0.02	--	--	SRI/CHE-MET-01

AUTHORISED SIGNATORY
EMPLOYEE CODE:(5117)

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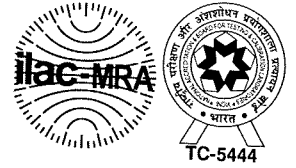
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ULR NO. : TC54442200009328F

TEST REPORT

NO : C1/0000295305



DISCIPLINE: MECHANICAL

GROUP: MECHANICAL PROPERTIES OF METALS

B. Physical Tests

1	TS/YS ratio ¹⁾	1.18	≥ 1.10 but TS	Yes	IS: 1786-2008, RA 2018
	Tensile Strength, N/mm ²	740	not less than 565	Yes	IS: 1608 (Pt-1)-2022
2	Yield Stress, N/mm ²	626.9	500.0 Min.	Yes	IS: 1608 (Pt-1)-2022
3	Elongation (%) (Gauge Length 5.65 Sq Root Area)	17.5	16.0 Min	Yes	IS: 1608 (Pt-1)-2022
4	Bend Test	Passes the test. (No rupture or cracks on bent portion observed)	To pass the test. (There shall be no rupture or cracks on bent portion)	Yes	IS: 1599-2019
5	Rebend Test	Passes the test. (No rupture or cracks on rebent portion observed)	To pass the test. (There shall be no rupture or cracks on rebent portion)	Yes	IS: 1786-2008, RA 2018
6	Mass per metre run (Kg)	3.878	Not less than 3.696	Yes	IS: 1786-2008, RA 2018 SOP/Metal & Alloys/03:2021
7	Deformation & Surface Characteristics				
a.	Mean ribs area in mm ² /mm length	6.98	4.25 Min.	Yes	IS: 1786-2008, RA 2018 SOP/Metal & Alloys/03:2021
b.	Mean projected area of transverse ribs in mm ² /mm length	6.98	1.42 Min.	Yes	IS: 1786-2008, RA 2018 SOP/Metal & Alloys/03:2021

Note: ¹⁾ TS/YS ratio refers to ratio of tensile strength to the yield stress of the test piece.

Remarks:- The sample conforms to IS: 1786-2008 , RA 2018 with amendment No. 4 for Grade FE 500D w.r.t. above test parameters.

DOR: 22/06/2022

DOS: 22/06/2022

DOC: 30/06/2022

**** End of Report****

AUTHORISED SIGNATORY
EMPLOYEE CODE: (5117)

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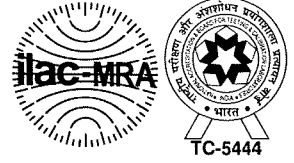
TEST REPORT

NO : C1/0000295306

Issued To :

Client Code : (KRU01P0668)
P.W.D. (KURUKSHETRA)
PROVINCIAL SUB DIVISION NO. 2, PWD B&R BR.,
KURUKSHETRA
HARYANA-136119

Date : 30-06-2022
Job No : 2206-1-MET-2100
Booking No : RG2223/1/3074
Booking Date : 22-06-2022
Customer Ref No. : NO. 943
Customer Ref Dt. : 17-06-2022



Sample Detail :

ONE SAMPLE DESCRIBED AS TMT STEEL BAR FE- 500 D DIAS OF SAKAHAMBRI ISPAT & POWER LTD
| BRAND -ELEGANT STEEL.EMBOSS- ELEGANT QST ,DIA IN MM:20, WAS RECEIVED.

The sampling was not carried out by SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH.

The sample particulars provided in the test report are based on the declaration by the Customer.

Job No : 2206-1-MET-2100

TEST RESULTS

(As Per IS: 1786-2008 ,RA 2018 with Amendment No. 4)

S.No.	Test Parameter	Observation	Requirement Grade FE-500D	Conformity	Protocol Adopted
DISCIPLINE: CHEMICAL					
GROUP: METAL & ALLOYS					
A.	Chemical Test % by mass				
i	Carbon	0.17	0.25 Max.	Yes	IS:228 (Pt-1)1987,RA-2018
ii	Sulphur	0.022	0.040 Max.	Yes	IS:228 (Pt-9)1989,RA-2019
iii	Phosphorous	0.031	0.040 Max.	Yes	IS:228 (Pt-3)1987,RA-2018
iv	Sulphur+Phosphorous	0.053	0.075 Max.	Yes	IS:1786-2008,RA 2018
v	Carbon equivalent	0.35	0.50 Max.	Yes	IS:1786-2008,RA 2018
vi.	Low Alloying Elements				
a.	Chromium	0.31	--	--	SRI/CHE-MET-01
b.	Copper	0.02	--	--	SRI/CHE-MET-01
c.	Nickel	0.04	--	--	SRI/CHE-MET-01
d.	Molybdenum	0.01	--	--	SRI/CHE-MET-01

AUTHORISED SIGNATORY
EMPLOYEE CODE:(5117)

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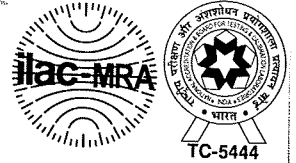
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ULR NO. : TC54442200009329F

TEST REPORT

NO : C1/0000295306



DISCIPLINE: MECHANICAL

GROUP: MECHANICAL PROPERTIES OF METALS

B. Physical Tests

1	TS/YS ratio ¹⁾	1.15	≥ 1.10 but TS	Yes	IS: 1786-2008,RA 2018
	Tensile Strength, N/mm ²	688	not less than 565	Yes	IS: 1608 (Pt-1)-2022
2	Yield Stress, N/mm ²	601.1	500.0 Min.	Yes	IS: 1608 (Pt-1)-2022
3	Elongation (%) (Gauge Length 5.65 Sq Root Area)	19.2	16.0 Min	Yes	IS: 1608 (Pt-1)-2022
4	Bend Test	Passes the test. (No rupture or cracks on bent portion observed)	To pass the test. (There shall be no rupture or cracks on bent portion)	Yes	IS: 1599-2019
5	Rebend Test	Passes the test. (No rupture or cracks on rebent portion observed)	To pass the test. (There shall be no rupture or cracks on rebent portion)	Yes	IS: 1786-2008,RA 2018
6	Mass per metre run (Kg)	2.416	Not less than 2.371	Yes	IS: 1786-2008,RA 2018 SOP/Metal & Alloys/03:2021
7	Deformation & Surface Characteristics				
a.	Mean ribs area in mm ² /mm length	6.19	3.40 Min.	Yes	IS: 1786-2008,RA 2018 SOP/Metal & Alloys/03:2021
b.	Mean projected area of transverse ribs in mm ² /mm length	6.19	1.13 Min.	Yes	IS: 1786-2008,RA 2018 SOP/Metal & Alloys/03:2021

Note: ¹⁾ TS/YS ratio refers to ratio of tensile strength to the yield stress of the test piece.

Remarks:- The sample conforms to IS: 1786-2008 , RA 2018 with amendment No. 4 for Grade FE 500D
w.r.t. above test parameters.

DOR: 22/06/2022

DOS: 22/06/2022

DOC: 30/06/2022

**** End of Report****

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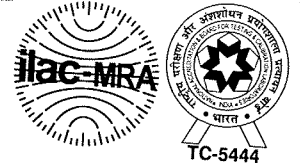
ULR NO. : TC54442200009330F

TEST REPORT

NO : C1/0000295307

Issued To :
Client Code : (KRUK01P0668)
P.W.D. (KURUKSHETRA)
PROVINCIAL SUB DIVISION NO. 2, PWD B&R BR.,
KURUKSHETRA
HARYANA-136119

Date : 30-06-2022
Job No : 2206-1-MET-2101
Booking No : RG2223/1/3074
Booking Date : 22-06-2022
Customer Ref No. : NO. 943
Customer Ref Dt. : 17-06-2022



Sample Detail :

ONE SAMPLE DESCRIBED AS TMT STEEL BAR FE- 500 D DIAS OF SAKAHAMBRI ISPAT & POWER LTD
[BRAND -ELEGANT STEEL.EMBOSS- ELEGANT QST ,DIA IN MM:16, WAS RECEIVED.

The sampling was not carried out by SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH.

The sample particulars provided in the test report are based on the declaration by the Customer.

Job No : 2206-1-MET-2101

TEST RESULTS

(As Per IS: 1786-2008 ,RA 2018 with Amendment No. 4)

S.No.	Test Parameter	Observation	Requirement Grade FE-500D	Conformity	Protocol Adopted
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DISCIPLINE: CHEMICAL

GROUP: METAL & ALLOYS

A. Chemical Test % by mass

i	Carbon	0.18	0.25 Max.	Yes	IS:228 (Pt-1)1987,RA-2018
ii	Sulphur	0.020	0.040 Max.	Yes	IS:228 (Pt-9)1989,RA-2019
iii	Phosphorous	0.026	0.040 Max.	Yes	IS:228 (Pt-3)1987,RA-2018
iv	Sulphur+Phosphorous	0.046	0.075 Max.	Yes	IS:1786-2008,RA 2018
v	Carbon equivalent	0.39	0.50 Max.	Yes	IS:1786-2008,RA 2018
vi.	Low Alloying Elements				
a.	Chromium	0.36	--	--	SRI/CHE-MET-01
b.	Copper	0.02	--	--	SRI/CHE-MET-01
c.	Nickel	0.04	--	--	SRI/CHE-MET-01
d.	Molybdenum	0.03	--	--	SRI/CHE-MET-01

AUTHORISED SIGNATORY

EMPLOYEE CODE:(5117)

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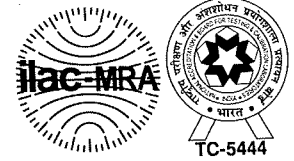
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ULR NO. : TC54442200009330F

TEST REPORT

NO : C1/0000295307



DISCIPLINE: MECHANICAL

GROUP: MECHANICAL PROPERTIES OF METALS

B. Physical Tests

1	TS/YS ratio ¹⁾	1.16	≥ 1.10 but TS	Yes	IS: 1786-2008,RA 2018
	Tensile Strength, N/mm ²	704	not less than 565	Yes	IS: 1608 (Pt-1)-2022
2	Yield Stress, N/mm ²	606.3	500.0 Min.	Yes	IS: 1608 (Pt-1)-2022
3	Elongation (%) (Gauge Length 5.65 Sq Root Area)	20.3	16.0 Min	Yes	IS: 1608 (Pt-1)-2022
4	Bend Test	Passes the test. (No rupture or cracks on bent portion observed)	To pass the test. (There shall be no rupture or cracks on bent portion)	Yes	IS: 1599-2019
5	Rebend Test	Passes the test. (No rupture or cracks on rebent portion observed)	To pass the test. (There shall be no rupture or cracks on rebent portion)	Yes	IS: 1786-2008,RA 2018
6	Mass per metre run (Kg)	1.526	Not less than 1.485	Yes	IS: 1786-2008,RA 2018 SOP/Metal & Alloys/03:2021
7	Deformation & Surface Characteristics				
a.	Mean ribs area in mm ² /mm length	4.72	2.40 Min.	Yes	IS: 1786-2008,RA 2018 SOP/Metal & Alloys/03:2021
b.	Mean projected area of transverse ribs in mm ² /mm length	4.72	0.80 Min.	Yes	IS: 1786-2008,RA 2018 SOP/Metal & Alloys/03:2021

Note: ¹⁾ TS/YS ratio refers to ratio of tensile strength to the yield stress of the test piece.

Remarks:- The sample conforms to IS: 1786-2008 , RA 2018 with amendment No. 4 for Grade FE 500D
w.r.t. above test parameters.

DOR: 22/06/2022

DOS: 22/06/2022

DOC: 30/06/2022

*** End of Report***

AUTHORISED SIGNATORY
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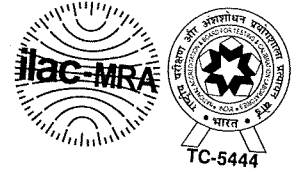
ULR NO. : TC54442200009331F

TEST REPORT

NO : C1/0000295308

Issued To :
Client Code : (KRUK01P0668)
P.W.D. (KURUKSHETRA)
PROVINCIAL SUB DIVISION NO. 2, PWD B&R BR.,
KURUKSHETRA
HARYANA-136119

Date : 30-06-2022
Job No : 2206-1-MET-2102
Booking No : RG2223/1/3074
Booking Date : 22-06-2022
Customer Ref No. : NO. 943
Customer Ref Dt. : 17-06-2022



Sample Detail :

ONE SAMPLE DESCRIBED AS TMT STEEL BAR FE- 500 D DIAS OF SAKAHAMBRI ISPAT & POWER LTD
[BRAND -ELEGANT STEEL.EMBOSSD- ELEGANT QST ,DIA IN MM:12, WAS RECEIVED.

The sampling was not carried out by SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH.

The sample particulars provided in the test report are based on the declaration by the Customer.

Job No : 2206-1-MET-2102

TEST RESULTS

(As Per IS: 1786-2008 ,RA 2018 with Amendment No. 4)

S.No.	Test Parameter	Observation	Requirement Grade FE-500D	Conformity	Protocol Adopted
DISCIPLINE: CHEMICAL					
GROUP: METAL & ALLOYS					
A.	Chemical Test % by mass				
i	Carbon	0.22	0.25 Max.	Yes	IS:228 (Pt-1)1987,RA-2018
ii	Sulphur	0.027	0.040 Max.	Yes	IS:228 (Pt-9)1989,RA-2019
iii	Phosphorous	0.023	0.040 Max.	Yes	IS:228 (Pt-3)1987,RA-2018
iv	Sulphur+Phosphorous	0.050	0.075 Max.	Yes	IS:1786-2008,RA 2018
v	Carbon equivalent	0.42	0.50 Max.	Yes	IS:1786-2008,RA 2018
vi.	Low Alloying Elements				
a.	Chromium	0.20	--	--	SRI/CHE-MET-01
b.	Copper	0.02	--	--	SRI/CHE-MET-01
c.	Nickel	0.02	--	--	SRI/CHE-MET-01
d.	Molybdenum	0.01	--	--	SRI/CHE-MET-01

AUTHORISED SIGNATORY
EMPLOYEE CODE:(5117)

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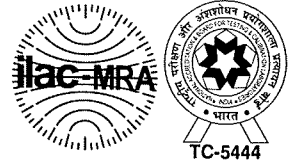
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Website : www.shriraminstitute.org
E-mail id : customercare@shriraminstitute.org
qad@shriraminstitute.org

ULR NO. : TC544422000009331F

TEST REPORT

NO : C1/0000295308



DISCIPLINE: MECHANICAL

GROUP: MECHANICAL PROPERTIES OF METALS

B. Physical Tests

1	TS/YS ratio ¹⁾	1.15	≥ 1.10 but TS not less than 565	Yes Yes	IS: 1786-2008,RA 2018 IS: 1608 (Pt-1)-2022
	Tensile Strength, N/mm ²	726			
2	Yield Stress, N/mm ²	630.7	500.0 Min.	Yes	IS: 1608 (Pt-1)-2022
3	Elongation (%) (Gauge Length 5.65 Sq Root Area)	23.7	16.0 Min	Yes	IS: 1608 (Pt-1)-2022
4	Bend Test	Passes the test. (No rupture or cracks on bent portion observed)	To pass the test. (There shall be no rupture or cracks on bent portion)	Yes	IS: 1599-2019
5	Rebend Test	Passes the test. (No rupture or cracks on rebent portion observed)	To pass the test. (There shall be no rupture or cracks on rebent portion)	Yes	IS: 1786-2008,RA 2018
6	Mass per metre run (Kg)	0.851	Not less than 0.835	Yes	IS: 1786-2008,RA 2018 SOP/Metal & Alloys/03:2021
7	Deformation & Surface Characteristics				
a.	Mean ribs area in mm ² /mm length	2.81	1.80 Min.	Yes	IS: 1786-2008,RA 2018 SOP/Metal & Alloys/03:2021
b.	Mean projected area of transverse ribs in mm ² /mm length	2.81	0.60 Min.	Yes	IS: 1786-2008,RA 2018 SOP/Metal & Alloys/03:2021

Note: ¹⁾ TS/YS ratio refers to ratio of tensile strength to the yield stress of the test piece.

Remarks:- The sample conforms to IS: 1786-2008 , RA 2018 with amendment No. 4 for Grade FE 500D
w.r.t. above test parameters.

DOR: 22/06/2022

DOS: 22/06/2022

DOC: 30/06/2022

**** End of Report****

AUTHORISED SIGNATORY

EMPLOYEE CODE: (5117)

Note: The results are only valid for the items tested / calibrated above.
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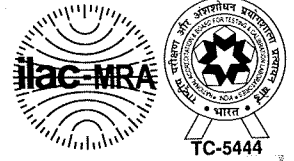
ULR NO. : TC54442200009332F

TEST REPORT

NO : C1/0000295309

Issued To :
Client Code : (KRUK01P0668)
P.W.D. (KURUKSHETRA)
PROVINCIAL SUB DIVISION NO. 2, PWD B&R BR.,
KURUKSHETRA
HARYANA-136119

Date : 30-06-2022
Job No : 2206-1-MET-2103
Booking No : RG2223/1/3074
Booking Date : 22-06-2022
Customer Ref No. : NO. 943
Customer Ref Dt. : 17-06-2022



Sample Detail :

ONE SAMPLE DESCRIBED AS TMT STEEL BAR FE- 500 D DIAS OF SAKAHAMBRI ISPAT & POWER LTD
[BRAND -ELEGANT STEEL.EMBOSS- ELEGANT QST ,DIA IN MM:10, WAS RECEIVED.

The sampling was not carried out by SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH.

The sample particulars provided in the test report are based on the declaration by the Customer.

Job No : 2206-1-MET-2103

TEST RESULTS

(As Per IS: 1786-2008 ,RA 2018 with Amendment No. 4)

S.No.	Test Parameter	Observation	Requirement Grade FE-500D	Conformity	Protocol Adopted
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DISCIPLINE: CHEMICAL

GROUP: METAL & ALLOYS

A. Chemical Test % by mass

i	Carbon	0.16	0.25 Max.	Yes	IS:228 (Pt-1)1987,RA-2018
ii	Sulphur	0.017	0.040 Max.	Yes	IS:228 (Pt-9)1989,RA-2019
iii	Phosphorous	0.034	0.040 Max.	Yes	IS:228 (Pt-3)1987,RA-2018
iv	Sulphur+Phosphorous	0.051	0.075 Max.	Yes	IS:1786-2008,RA 2018
v	Carbon equivalent	0.38	0.50 Max.	Yes	IS:1786-2008,RA 2018
vi.	Low Alloying Elements				
a.	Chromium	0.38	--	--	SRI/CHE-MET-01
b.	Copper	0.02	--	--	SRI/CHE-MET-01
c.	Nickel	0.05	--	--	SRI/CHE-MET-01
d.	Molybdenum	0.02	--	--	SRI/CHE-MET-01

AUTHORISED SIGNATORY
EMPLOYEE CODE:(5117)

Note: The results relate only to the items tested / calibrated above.
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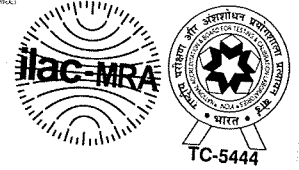
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Website : www.shriraminstitute.org
E-mail id : customercare@shriraminstitute.org
qad@shriraminstitute.org

ULR NO. : TC54442200009332F

TEST REPORT

NO : C1/0000295309



DISCIPLINE: MECHANICAL

GROUP: MECHANICAL PROPERTIES OF METALS

B. Physical Tests

1	TS/YS ratio ¹⁾	1.13	≥ 1.10 but TS	Yes	IS: 1786-2008,RA 2018
	Tensile Strength, N/mm ²	626	not less than 565	Yes	IS: 1608 (Pt-1)-2022
2	Yield Stress, N/mm ²	556.9	500.0 Min.	Yes	IS: 1608 (Pt-1)-2022
3	Elongation (%) (Gauge Length 5.65 Sq Root Area)	26.5	16.0 Min	Yes	IS: 1608 (Pt-1)-2022
4	Bend Test	Passes the test. (No rupture or cracks on bent portion observed)	To pass the test. (There shall be no rupture or cracks on bent portion)	Yes	IS: 1599-2019
5	Rebend Test	Passes the test. (No rupture or cracks on rebent portion observed)	To pass the test. (There shall be no rupture or cracks on rebent portion)	Yes	IS: 1786-2008,RA 2018
6	Mass per metre run (Kg)	0.583	Not less than 0.568	Yes	IS: 1786-2008,RA 2018 SOP/Metal & Alloys/03:2021
7	Deformation & Surface Characteristics				
a.	Mean ribs area in mm ² /mm length	2.13	1.20 Min.	Yes	IS: 1786-2008,RA 2018 SOP/Metal & Alloys/03:2021
b.	Mean projected area of transverse ribs in mm ² /mm length	2.13	0.40 Min.	Yes	IS: 1786-2008,RA 2018 SOP/Metal & Alloys/03:2021

Note: ¹⁾ TS/YS ratio refers to ratio of tensile strength to the yield stress of the test piece.

Remarks:- The sample conforms to IS: 1786-2008 , RA 2018 with amendment No. 4 for Grade FE 500D w.r.t. above test parameters.

DOR: 22/06/2022

DOS: 22/06/2022

DOC: 30/06/2022

**** End of Report****

AUTHORISED SIGNATORY

EMPLOYEE CODE:(5117)

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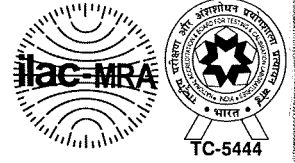
ULR NO. : TC54442200009333F

TEST REPORT

NO : C1/0000295310

Issued To :
Client Code : (KRUK01P0668)
P.W.D. (KURUKSHETRA)
PROVINCIAL SUB DIVISION NO. 2, PWD B&R BR.,
KURUKSHETRA
HARYANA-136119

Date : 30-06-2022
Job No : 2206-1-MET-2104
Booking No : RG2223/1/3074
Booking Date : 22-06-2022
Customer Ref No. : NO. 943
Customer Ref Dt. : 17-06-2022



Sample Detail :

ONE SAMPLE DESCRIBED AS TMT STEEL BAR FE- 500 D DIAS OF SAKAHAMBRI ISPAT & POWER LTD
[BRAND -ELEGANT STEEL.EMBOSS- ELEGANT QST ,DIA IN MM:8, WAS RECEIVED.

The sampling was not carried out by SHRIRAM INSTITUTE FOR INDUSTRIAL RESEARCH.

The sample particulars provided in the test report are based on the declaration by the Customer.

Job No : 2206-1-MET-2104

TEST RESULTS

(As Per IS: 1786-2008 ,RA 2018 with Amendment No. 4)

S.No.	Test Parameter	Observation	Requirement	Conformity	Protocol Adopted
DISCIPLINE: CHEMICAL					
GROUP: METAL & ALLOYS					
A.	Chemical Test % by mass				
i	Carbon	0.19	0.25 Max.	Yes	IS:228 (Pt-1)1987,RA-2018
ii	Sulphur	0.023	0.040 Max.	Yes	IS:228 (Pt-9)1989,RA-2019
iii	Phosphorous	0.031	0.040 Max.	Yes	IS:228 (Pt-3)1987,RA-2018
iv	Sulphur+Phosphorous	0.054	0.075 Max.	Yes	IS:1786-2008,RA 2018
v	Carbon equivalent	0.45	0.50 Max.	Yes	IS:1786-2008,RA 2018
vi.	Low Alloying Elements				
a.	Chromium	0.43	--	--	SRI/CHE-MET-01
b.	Copper	0.01	--	--	SRI/CHE-MET-01
c.	Nickel	0.02	--	--	SRI/CHE-MET-01
d.	Molybdenum	0.05	--	--	SRI/CHE-MET-01

AUTHORISED SIGNATORY
EMPLOYEE CODE: (5117)

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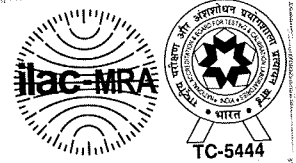
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Website : www.shriraminstitute.org
E-mail id : customercare@shriraminstitute.org
qad@shriraminstitute.org

ULR NO. : TC54442200009333F

TEST REPORT

NO : C1/0000295310



DISCIPLINE: MECHANICAL

GROUP: MECHANICAL PROPERTIES OF METALS

B. Physical Tests

1	TS/YS ratio ¹⁾	1.32	≥ 1.10 but TS	Yes	IS: 1786-2008,RA 2018
	Tensile Strength, N/mm ²	742	not less than 565	Yes	IS: 1608 (Pt-1)-2022
2	Yield Stress, N/mm ²	560.7	500.0 Min.	Yes	IS: 1608 (Pt-1)-2022
3	Elongation (%) (Gauge Length 5.65 Sq Root Area)	22.5	16.0 Min	Yes	IS: 1608 (Pt-1)-2022
4	Bend Test	Passes the test. (No rupture or cracks on bent portion observed)	To pass the test. (There shall be no rupture or cracks on bent portion)	Yes	IS: 1599-2019
5	Rebend Test	Passes the test. (No rupture or cracks on rebent portion observed)	To pass the test. (There shall be no rupture or cracks on rebent portion)	Yes	IS: 1786-2008,RA 2018
6	Mass per metre run (Kg)	0.386	Not less than 0.363	Yes	IS: 1786-2008,RA 2018 SOP/Metal & Alloys/03:2021
7	Deformation & Surface Characteristics				
a.	Mean ribs area in mm ² /mm length	1.70	0.96 Min.	Yes	IS: 1786-2008,RA 2018 SOP/Metal & Alloys/03:2021
b.	Mean projected area of transverse ribs in mm ² /mm length	1.70	0.32 Min.	Yes	IS: 1786-2008,RA 2018 SOP/Metal & Alloys/03:2021

Note: ¹⁾ TS/YS ratio refers to ratio of tensile strength to the yield stress of the test piece.

Remarks:- The sample conforms to IS: 1786-2008 , RA 2018 with amendment No. 4 for Grade FE 500D
w.r.t. above test parameters.

DOR: 22/06/2022

DOS: 22/06/2022

DOC: 30/06/2022

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