LUCID Laboratories Pvt. Ltd.
Testing to the Core

TC-5918

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TEST REPORT

Issued to:
AMMAN –TRY SPONGE & POWER PVT. LTD.
SF Nos. 268-271, Sirasanambedu (V)
Pellakuru (M) ,Naidupeta
Tirupati District - 524129
Andhra Pradesh - INDIA

ULR No.: TC591825100010910F
Report No: LL/24-25/009488
Issue Date: 07/02/2025.
C. Ref: Gate pass :145.
Ref. Date: 07/12/2024.

Sample Particulars: **TMT BAR – Ø8mm** **Grade: Fe550D** **BRAND NAME: AMMAN-TRY.**

Quantity: 1 Set. Packing: Loose. Sample Condition: Ambient.
Test Required: Chemical composition, Mass per running metre, TS/YS Ratio, 0.2% Proof Stress/Yield Stress, Elongation on 5.65 SoA mm GL, Bend test and Rebend test.
Date of receipt of sample : 04/01/2025.
Date of starting of analysis : 04/01/2025.
Date of completion of analysis : 05/02/2025.

TEST RESULTS

Sl. No	Test Parameters	UOM	Requirements as per IS: 1786-2008(RA 2018) Grade: Fe550D.	Results
I	**Chemical composition**			
1	Carbon as C	% by mass	0.25 + 0.02 Max.	0.22
2	Sulphur as S	% by mass	0.040 + 0.005Max.	0.033
3	Phosphorus as P	% by mass	0.040 + 0.005Max.	0.035
4	Manganese as Mn	% by mass	---	0.70
5	Sulphur + Phosphorus	% by mass	0.075 + 0.010 Max.	0.068
6	Silicon as Si	% by mass	--	0.26
7	Carbon equivalent, CE	.	0.61 Max	0.40
8	Micro-alloying elements (Nb+V+Ti+B)	% by mass	0.30 Max.	0.007
9	Nitrogen Content	% by mass	0.012 Max.	0.006
II	**Nominal Sizes**			
1	Nominal size of bar	mm	8.0	8.0
2	Nominal cross-sectional area	mm^2	50.3	48.43
3	Mass per metre	kg	0.395 - 8%	0.380
III	**Physical properties**			
1	TS/YS Ratio	---	≥ 1.08 (but TS not less than 600 N/mm^2)	1.15 (TS 660 N/mm^2)
2	0.2% Proof Stress/Yield Stress	N/mm^2	550 Min.	572
3	Elongation on 5.65 SoA mm Gauge Length	Percent	14.5 Min.	24.4
IV	Bend Test	Visual	Pass the test if there is no rupture or cracks in the bent portion.	No rupture or cracks observed.
V	Rebend Test	Visual	Pass the test if there is no rupture or cracks in the rebent portion.	No rupture or cracks observed.

Method of testing: As per IS: 8811-1998(RA2018), IS: 1608(P1)-2022, IS: 1599-2023, IS: 1786-2008(RA2018) & SOP MT 23 – 2021.
Remarks: The above submitted samples confirming to IS:1786-2008(RA2018), Gr.Fe550D w.r.t the above test parameters.
NOTE : This report and results relate only to the sample / items tested.

M.VIKAS
AUTHORISED SIGNATORY

V.SATHAIAH
AUTHORISED SIGNATORY

119267

Note: This report is subject to the terms and conditions mentioned overleaf

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TEST REPORT

Issued to:
AMMAN –TRY SPONGE & POWER PVT. LTD.
SF Nos. 268-271, Sirasanambedu (V)
Pellakuru (M) , Naidupeta
Tirupati District - 524129
Andhra Pradesh - INDIA

Report No: LL/24-25/009488/N
Issue Date: 07/02/2025.
C. Ref: Gate pass :145.
Ref. Date: 07/12/2024.

Sample Particulars: **TMT BAR – Ø8mm** **Grade: Fe550D** **BRAND NAME: AMMAN-TRY.**

Quantity: 1 Set. Packing: Loose. Sample Condition: Ambient.
Test Required: Pull out test , Deformation and surface characteristics & Total elongation at maximum force on 5.65 SoA mm GL.
Date of receipt of sample : 04/01/2025.
Date of starting of analysis : 04/01/2025.
Date of completion of analysis : 05/02/2025.

TEST RESULTS

Sl. No	Test Parameters	UOM	Requirements as per IS: 1786-2008(RA 2018) Grade: Fe550D.	Results
I	Pull-out test	Percent.	The bond strength calculated from the load at a measured slip of 0.025mm and 0.25mm for deformed bars/wires shall exceed that of a plain round bar of the same nominal size by 40 percent and 80 percent respectively.	The bond strength is 45.0 percent at 0.025mm slip and 85.5 percent at 0.25mm slip, When compare with plain round bar of same size.
II	**Requirements for Bond (Deformation and surface characteristics)**			
1	The mean projected rib area per unit length	mm^2/mm	0.12 Ø for Ø < 10mm (i.e., 0.96 Min.)	1.06
2	The mean projected area of transverse rib above	mm^2/mm	Shall not be less than one-third of the value given above. (i.e., 1/3 of 0.96 = 0.32Min)	1.06
3	Rolling and cold working of bars/wires	Visual.	The bars/wires shall be well and cleanly rolled and shall be sound and free from surface defects and pipe.	Bars are well and cleanly rolled, sound. Free from surface defects and pipe.
III	**Physical properties**			
1	Total elongation at maximum force on 5.65 SoA mm GL.	Percent	5.0 Min.	9.5

Method of testing: As per IS : 2770 (P1) & IS: 1786-2008 (RA 2018).
Remarks: The above submitted samples confirming to IS:1786-2008(RA2018), Gr:Fe550D w.r.t the above test parameters.
Note: The report and results relate only to the samples/items tested.

V.SATHAIAH
AUTHORISED SIGNATORY

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LUCID Laboratories Pvt. Ltd.
Testing to the Core

TC-5918

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TEST REPORT

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SF Nos. 268-271, Sirasanambedu (V)
Pellakuru (M) ,Naidupeta
Tirupati District - 524129
Andhra Pradesh - INDIA

ULR No.:TC591825100010911F
Report No: LL/24-25/009489
Issue Date: 07/02/2025.
C. Ref: Gate pass :145
Ref. Date: 07/12/2024.

Sample Particulars: **TMT BAR – Ø10mm** **Grade: Fe550D** **BRAND NAME: AMMAN-TRY.**

Quantity: 1 Set. Packing: Loose. Sample Condition: Ambient.
Test Required: Chemical composition, Mass per running metre, TS/YS Ratio, 0.2% Proof Stress/Yield Stress, Elongation on 5.65 SoA mm GL, Bend test and Rebend test.
Date of receipt of sample : 04/01/2025.
Date of starting of analysis : 04/01/2025.
Date of completion of analysis : 05/02/2025.

TEST RESULTS

Sl. No	Test Parameters	UOM	Requirements as per IS: 1786-2008(RA 2018) Grade: Fe550D.	Results
I	**Chemical composition**			
1	Carbon as C	% by mass	0.25 + 0.02 Max.	0.22
2	Sulphur as S	% by mass	0.040 + 0.005Max.	0.024
3	Phosphorus as P	% by mass	0.040 + 0.005Max.	0.033
4	Manganese as Mn	% by mass	---	0.62
5	Sulphur + Phosphorus	% by mass	0.075 + 0.010 Max.	0.057
6	Silicon as Si	% by mass	--	0.20
7	Carbon equivalent, CE	-	0.61 Max.	0.37
8	Micro-alloying elements (Nb+V+Ti+B)	% by mass	0.30 Max.	0.006
9	Nitrogen Content	% by mass	0.012 Max.	0.007
II	**Nominal Sizes**			
1	Nominal size of bar	mm	10.0	10.0
2	Nominal cross-sectional area	mm^2	78.6	74.41
3	Mass per metre	kg	0.617 - 8%	0.584
III	**Physical properties**			
1	TS/YS Ratio	---	≥ 1.08 (but TS not less than 600 N/mm^2)	1.17 (TS 654 N/mm^2)
2	0.2% Proof Stress/Yield Stress	N/mm^2	550 Min	558
3	Elongation on 5.65 SoA mm Gauge Length	Percent	14.5 Min.	24.8
IV	Bend Test	Visual	Pass the test if there is no rupture or cracks in the bent portion.	No rupture or cracks observed.
V	Rebend Test	Visual	Pass the test if there is no rupture or cracks in the rebent portion.	No rupture or cracks observed.

Method of testing: As per IS: 8811-1998(RA2018), IS: 1608(P1)-2022, IS: 1599-2023, IS: 1786-2008(RA2018) & SOP MT 23 – 2021.
Remarks: The above submitted samples confirming to IS:1786-2008(RA2018), Gr:Fe550D w.r.t the above test parameters.
NOTE : This report and results relate only to the sample / items tested.

M.VIKAS
AUTHORISED SIGNATORY

V.NATHAIAH
AUTHORISED SIGNATORY

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TEST REPORT

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SF Nos. 268-271, Sirasanambedu (V)
Pellakuru (M) , Naidupeta
Tirupati District - 524129
Andhra Pradesh - INDIA

Report No: LL/24-25/009489/N
Issue Date: 07/02/2025.
C. Ref: Gate pass :145.
Ref. Date: 07/12/2024.

Sample Particulars: **TMT BAR – Ø10mm** **Grade: Fe550D** **BRAND NAME: AMMAN-TRY.**

Quantity: 1 Set. Packing: Loose. Sample Condition: Ambient.
Test Required: Pull out test , Deformation and surface characteristics & Total elongation at maximum force on 5.65 SoA mm GL
Date of receipt of sample : 04/01/2025.
Date of starting of analysis : 04/01/2025.
Date of completion of analysis : 05/02/2025.

TEST RESULTS

Sl. No	Test Parameters	UOM	Requirements as per IS: 1786-2008(RA 2018) Grade: Fe550D.	Results
I	Pull-out test	Percent.	The bond strength calculated from the load at a measured slip of 0.025mm and 0.25mm for deformed bars/wires shall exceed that of a plain round bar of the same nominal size by 40 percent and 80 percent respectively.	The bond strength is 44.0 percent at 0.025mm slip and 83.5 percent at 0.25mm slip, When compare with plain round bar of same size.
II	**Requirements for Bond (Deformation and surface characteristics)**			
1	The mean projected rib area per unit length	mm^2/mm	0.12 Ø for Ø < 10mm (i.e., 1.20 Min.)	1.63
2	The mean projected area of transverse rib above	mm^2/mm	Shall not be less than one-third of the value given above. (i.e., 1/3 of 1.20 = 0.4Min)	1.63
3	Rolling and cold working of bars/wires	Visual.	The bars/wires shall be well and cleanly rolled and shall be sound and free from surface defects and pipe.	Bars are well and cleanly rolled, sound. Free from surface defects and pipe.
III	**Physical properties**			
1	Total elongation at maximum force on 5.65 SoA mm GL.	Percent	5.0 Min.	10.0

Method of testing: As per IS : 2770(P1) & IS: 1786-2008(RA 2018).
Remarks: The above submitted samples confirming to IS:1786-2008(RA2018), Gr.Fe550D w.r.t the above test parameters.
Note: The report and results relate only to the samples/items tested.

V.SATHAIAH
AUTHORISED SIGNATORY

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Pellakuru (M) ,Naidupeta
Tirupati District - 524129
Andhra Pradesh - INDIA

ULR No.: TC591825100010912F
Report No: LL/24-25/009490
Issue Date: 07/02/2025.
C. Ref: Gate pass :145.
Ref. Date: 07/12/2024.

Sample Particulars: **TMT BAR – Ø12mm** **Grade: Fe550D** **BRAND NAME: AMMAN-TRY.**

Quantity: 1 Set. Packing: Loose. Sample Condition: Ambient.
Test Required: Chemical composition, Mass per running metre, TS/YS Ratio, 0.2% Proof Stress/Yield Stress, Elongation on 5.65 SoA mm GL, Bend test and Rebend test.
Date of receipt of sample : 04/01/2025.
Date of starting of analysis : 04/01/2025.
Date of completion of analysis : 05/02/2025.

TEST RESULTS

Sl. No	Test Parameters	UOM	Requirements as per IS: 1786-2008(RA 2018) Grade: Fe550D.	Results
I	**Chemical composition**			
1	Carbon as C	% by mass	0.25 + 0.02 Max.	0.20
2	Sulphur as S	% by mass	0.040 + 0.005Max.	0.032
3	Phosphorus as P	% by mass	0.040 + 0.005Max.	0.033
4	Manganese as Mn	% by mass	---	0.69
5	Sulphur + Phosphorus	% by mass	0.075 + 0.010 Max.	0.065
6	Silicon as Si	% by mass	--	0.28
7	Carbon equivalent, CE	.	0.61 Max	0.38
8	Micro-alloying elements (Nb+V+Ti+B)	% by mass	0.30 Max.	0.002
9	Nitrogen Content	% by mass	0.012 Max.	0.007
II	**Nominal Sizes**			
1	Nominal size of bar	mm	12.0	12.0
2	Nominal cross-sectional area	mm^2	113.1	109.4
3	Mass per metre	kg	0.888 - 6%	0.859
III	**Physical properties**			
1	TS/YS Ratio	---	≥ 1.08 (but TS not less than 600 N/mm^2)	1.20 (TS 686 N/mm^2)
2	0.2% Proof Stress/Yield Stress	N/mm^2	550 Min.	573
3	Elongation on 5.65 SoA mm Gauge Length	Percent	14.5 Min.	21.9
IV	**Bend Test**	Visual	Pass the test if there is no rupture or cracks in the bent portion.	No rupture or cracks observed.
V	**Rebend Test**	Visual	Pass the test if there is no rupture or cracks in the bent portion.	No rupture or cracks observed.

Method of testing: As per IS: 8811-1998(RA2018), IS: 1608(P1)-2022, IS: 1599-2023, IS: 1786-2008(RA2018) & SOP MT 23 – 2021.
Remarks: The above submitted samples confirming to IS:1786-2008(RA2018), Gr.Fe550D w.r.t the above test parameters.
NOTE : This report and results relate only to the sample / items tested.

M.VIKAS
AUTHORISED SIGNATORY

V.SATHAIAH
AUTHORISED SIGNATORY

119271

LUCID Laboratories Pvt. Ltd.
Testing to the Core

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TEST REPORT

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SF Nos. 268-271, Sirasanambedu (V)
Pellakuru (M) , Naidupeta
Tirupati District - 524129
Andhra Pradesh - INDIA

Report No: LL/24-25/009490/N
Issue Date: 07/02/2025.
C. Ref: Gate pass :145.
Ref. Date: 07/12/2024.

Sample Particulars: **TMT BAR – Ø12mm** **Grade: Fe550D** **BRAND NAME: AMMAN-TRY.**

Quantity: 1 Set. Packing: Loose. Sample Condition: Ambient.
Test Required: Pull out test, Requirements for Bond (Deformation and surface characteristics) & Total elongation at maximum force on 5.65 SoA mm GL.
Date of receipt of sample : 04/01/2025.
Date of starting of analysis : 04/01/2025.
Date of completion of analysis : 05/02/2025.

TEST RESULTS

Sl. No	Test Parameters	UOM	Requirements as per IS: 1786-2008(RA 2018) Grade: Fe550D.	Results
I	Pull-out test	Percent.	The bond strength calculated from the load at a measured slip of 0.025mm and 0.25mm for deformed bars/wires shall exceed that of a plain round bar of the same nominal size by 40 percent and 80 percent respectively.	The bond strength is 43.0 percent at 0.025mm slip and 82.5 percent at 0.25mm slip, When compare with plain round bar of same size.
II	**Requirements for Bond (Deformation and surface characteristics)**			
1	The mean projected rib area per unit length	mm^2/mm	0.15 Ø for 10mm Ø < 16mm (i.e., 1.80 Min.)	1.95
2	The mean projected area of transverse rib above	mm^2/mm	Shall not be less than one-third of the value given above. (i.e., 1/3 of 1.80 = 0.60Min)	1.95
3	Rolling and cold working of bars/wires	Visual.	The bars/wires shall be well and cleanly rolled and shall be sound and free from surface defects and pipe.	Bars are well and cleanly rolled, sound. Free from surface defects and pipe.
III	**Physical properties**			
1	Total elongation at maximum force on 5.65 SoA mm GL.	Percent	5.0 Min.	9.2

Method of testing: As per IS : 2770(P1) & IS: 1786-2008 (RA 2018).
Remarks: The above submitted samples confirming to IS:1786-2008(RA2018), Gr:Fe550D w.r.t the above test parameters.
Note: The report and results relate only to the samples/items tested.

V.SATHAIAH
AUTHORISED SIGNATORY

Note: This report is subject to the terms and conditions mentioned overleaf 119272

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Tirupati District - 524129
Andhra Pradesh - INDIA

ULR No.: TC591825100010913F
Report No: LL/24-25/009491
Issue Date: 07/02/2025.
C. Ref: Gate pass :145.
Ref. Date: 07/12/2024.

Sample Particulars: **TMT BAR – Ø16mm** **Grade: Fe550D** **BRAND NAME: AMMAN-TRY.**

Quantity: 1 Set. Packing: Loose. Sample Condition: Ambient.
Test Required: Chemical composition, Mass per running metre, TS/YS Ratio, 0.2% Proof Stress/Yield Stress, Elongation on 5.65 SoA mm GL, Bend test and Rebend test.
Date of receipt of sample : 04/01/2025.
Date of starting of analysis : 04/01/2025.
Date of completion of analysis : 05/02/2025.

TEST RESULTS

Sl. No	Test Parameters	UOM	Requirements as per IS: 1786-2008(RA 2018) Grade: Fe550D.	Results
I	**Chemical composition**			
1	Carbon as C	% by mass	0.25 + 0.02 Max.	0.24
2	Sulphur as S	% by mass	0.040 + 0.005Max.	0.032
3	Phosphorus as P	% by mass	0.040 + 0.005Max.	0.032
4	Manganese as Mn	% by mass	---	0.75
5	Sulphur + Phosphorus	% by mass	0.075 + 0.010 Max.	0.064
6	Silicon as Si	% by mass	--	0.29
7	Carbon equivalent, CE	.	0.61 Max.	0.43
8	Micro-alloying elements (Nb+V+Ti+B)	% by mass	0.30 Max.	0.006
9	Nitrogen Content	% by mass	0.012 Max.	0.006
II	**Nominal Sizes**			
1	Nominal size of bar	mm	16.0	16.0
2	Nominal cross-sectional area	mm^2	201.2	195.3
3	Mass per metre	kg	1.58 - 6%	1.53
III	**Physical properties**			
1	TS/YS Ratio	---	≥ 1.08 (but TS not less than 600 N/mm^2)	1.22 (TS 695 N/mm^2)
2	0.2% Proof Stress/Yield Stress	N/mm^2	550 Min.	572
3	Elongation on 5.65 SoA mm Gauge Length	Percent	14.5 Min.	21.9
IV	Bend Test	Visual	Pass the test if there is no rupture or cracks in the bent portion.	No rupture or cracks observed.
V	Rebend Test	Visual	Pass the test if there is no rupture or cracks in the bent portion.	No rupture or cracks observed.

Method of testing: As per IS: 8811-1998(RA2018), IS: 1608(P1)-2022, IS: 1599-2023, IS: 1786-2008(RA2018) & SOP MT 23 – 2021.
Remarks: The above submitted samples confirming to IS:1786-2008(RA2018), Gr:Fe550D w.r.t. the above test parameters.
NOTE : This report and results relate only to the sample / items tested.

M.VIKAS
AUTHORISED SIGNATORY

VSATHAIAH
AUTHORISED SIGNATORY

Note: This report is subject to the terms and conditions mentioned overleaf 119273

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Testing to the Core

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TEST REPORT

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Pellakuru (M) , Naidupeta
Tirupati District - 524129
Andhra Pradesh - INDIA

Report No: LL/24-25/009491/N
Issue Date: 07/02/2025.
C. Ref: Gate pass :145
Ref. Date: 07/12/2024.

Sample Particulars: **TMT BAR – Ø16mm** **Grade: Fe550D** **BRAND NAME: AMMAN-TRY.**

Quantity: 1 Set. Packing: Loose. Sample Condition: Ambient.
Test Required: Pull out test , Deformation and surface characteristics & Total elongation at maximum force on 5.65 SoA mm GL.
Date of receipt of sample : 04/01/2025.
Date of starting of analysis : 04/01/2025.
Date of completion of analysis : 05/02/2025.

TEST RESULTS

Sl. No	Test Parameters	UOM	Requirements as per IS: 1786-2008(RA 2018) Grade: Fe550D.	Results
I	Pull-out test	Percent	The bond strength calculated from the load at a measured slip of 0.025mm and 0.25mm for deformed bars/wires shall exceed that of a plain round bar of the same nominal size by 40 percent and 80 percent respectively.	The bond strength is 43.5 percent at 0.025mm slip and 84.0 percent at 0.25mm slip, When compare with plain round bar of same size.
II	**Requirements for Bond (Deformation and surface characteristics)**			
1	The mean projected rib area per unit length	mm^2/mm	0.15 Ø for 10mm Ø < 16mm (i.e., 2.40 Min.)	3.93
2	The mean projected area of transverse rib above	mm^2/mm	Shall not be less than one-third of the value given above. (i.e., 1/3 of 2.40 = 0.80 Min)	3.93
3	Rolling and cold working of bars/wires	Visual.	The bars/wires shall be well and cleanly rolled and shall be sound and free from surface defects and pipe.	Bars are well and cleanly rolled, sound. Free from surface defects and pipe.
III	**Physical properties**			
1	Total elongation at maximum force on 5.65 SoA mm GL.	Percent	5.0 Min.	9.2

Method of testing: As per IS : 2770(P1) & IS: 1786-2008(RA 2018).
Remarks: The above submitted samples confirming to IS:1786-2008(RA2018), Gr:Fe550D w.r.t the above test parameters.
Note: The report and results relate only to the samples/items tested.

V.SATHAIAH
AUTHORISED SIGNATORY

 119274

LUCID Laboratories Pvt. Ltd.
Testing to the Core

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TEST REPORT

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Tirupati District - 524129
Andhra Pradesh - INDIA

ULR No.: TC591825100010914F
Report No: LL/24-25/009492
Issue Date: 07/02/2025.
C. Ref: Gate pass :145.
Ref. Date: 07/12/2024.

Sample Particulars: **TMT BAR – Ø20mm** **Grade: Fe550D** **BRAND NAME: AMMAN-TRY.**

Quantity: 1 Set. Packing: Loose. Sample Condition: Ambient.
Test Required: Chemical composition, Mass per running metre, TS/YS Ratio, 0.2% Proof Stress/Yield Stress, Elongation on 5.65 SoA mm GL, Bend test and Rebend test.
Date of receipt of sample : 04/01/2025.
Date of starting of analysis : 04/01/2025.
Date of completion of analysis : 05/02/2025.

TEST RESULTS

Sl. No	Test Parameters	UOM	Requirements as per IS: 1786-2008(RA 2018) Grade: Fe550D.	Results
I	**Chemical composition**			
1	Carbon as C	% by mass	0.25 + 0.02 Max.	0.20
2	Sulphur as S	% by mass	0.040 + 0.005Max.	0.028
3	Phosphorus as P	% by mass	0.040 + 0.005Max.	0.039
4	Manganese as Mn	% by mass	---	0.72
5	Sulphur + Phosphorus	% by mass	0.075 + 0.010 Max.	0.067
6	Silicon as Si	% by mass	--	0.30
7	Carbon equivalent, CE	,	0.61 Max.	0.37
8	Micro-alloying elements (Nb+V+Ti+B)	% by mass	0.30 Max.	0.011
9	Nitrogen Content	% by mass	0.012 Max.	0.006
II	**Nominal Sizes**			
1	Nominal size of bar	mm	20.0	20.0
2	Nominal cross-sectional area	mm^2	314.3	309.0
3	Mass per metre	kg	2.47 - 4%	2.42
III	**Physical properties**			
1	TS/YS Ratio	---	≥ 1.08 (but TS not less than 600 N/mm^2)	1.15 (TS 683 N/mm^2)
2	0.2% Proof Stress/Yield Stress	N/mm^2	550 Min	595
3	Elongation on 5.65 SoA mm Gauge Length	Percent	14.5 Min.	26.3
IV	Bend Test	Visual	Pass the test if there is no rupture or cracks in the bent portion.	No rupture or cracks observed.
V	Rebend Test	Visual	Pass the test if there is no rupture or cracks in the bent portion.	No rupture or cracks observed.

Method of testing: As per IS: 8811-1998(RA2018), IS: 1608(P1)-2022, IS: 1599-2023, IS: 1786-2008(RA2018) & SOP MT 23 – 2021.
Remarks: The above submitted samples confirming to IS:1786-2008(RA2018), Gr:Fe550D w.r.t the above test parameters.
NOTE : This report and results relate only to the sample / items tested.

M.VIKAS
AUTHORISED SIGNATORY

V.SATHAIAH
AUTHORISED SIGNATORY

119275

LUCID Laboratories Pvt. Ltd.
Testing to the Core

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TEST REPORT

Issued to:
AMMAN –TRY SPONGE & POWER PVT. LTD.
SF Nos. 268-271, Sirasanambedu (V)
Pellakuru (M) , Naidupeta
Tirupati District - 524129
Andhra Pradesh - INDIA

Report No: LL/24-25/009492/N
Issue Date: 07/02/2025.
C. Ref: Gate pass :145.
Ref. Date: 07/12/2024.

Sample Particulars: **TMT BAR – Ø20mm** **Grade: Fe550D** **BRAND NAME: AMMAN-TRY.**

Quantity: 1 Set. Packing: Loose. Sample Condition: Ambient.
Test Required: Pull out test , Deformation and surface characteristics & Total elongation at maximum force on 5.65 SoA mm GL.
Date of receipt of sample : 04/01/2025.
Date of starting of analysis : 04/01/2025.
Date of completion of analysis : 05/02/2025.

TEST RESULTS

Sl. No	Test Parameters	UOM	Requirements as per IS: 1786-2008(RA 2018) Grade: Fe550D.	Results
I	Pull-out test	Percent.	The bond strength calculated from the load at a measured slip of 0.025mm and 0.25mm for deformed bars/wires shall exceed that of a plain round bar of the same nominal size by 40 percent and 80 percent respectively.	The bond strength is 43.5 percent at 0.025mm slip and 84.5 percent at 0.25mm slip, When compare with plain round bar of same size.
II	**Requirements for Bond (Deformation and surface characteristics)**			
1	The mean projected rib area per unit length	mm^2/mm	0.17 Ø for Ø > 16mm (i.e., 3.40 Min.)	4.28
2	The mean projected area of transverse rib above	mm^2/mm	Shall not be less than one-third of the value given above. (i.e., 1/3 of 3.40 = 1.13Min)	4.28
3	Rolling and cold working of bars/wires	Visual.	The bars/wires shall be well and cleanly rolled and shall be sound and free from surface defects and pipe.	Bars are well and cleanly rolled, sound. Free from surface defects and pipe.
III	**Physical properties**			
1	Total elongation at maximum force on 5.65 SoA mm GL.	Percent	5.0 Min.	10.1

Method of testing: As per IS : 2770(P1) & IS: 1786-2008(RA 2018).
Remarks: The above submitted samples confirming to IS:1786-2008(RA2018), Gr:Fe550D w.r.t the above test parameters.
Note: The report and results relate only to the samples/items tested.

V.SATHAIAH
AUTHORISED SIGNATORY

Note: This report is subject to the terms and conditions mentioned overleaf 119276

LUCID Laboratories Pvt. Ltd.
Testing to the Core

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TEST REPORT

Issued to:
AMMAN –TRY SPONGE & POWER PVT. LTD.
SF Nos. 268-271, Sirasanambedu (V)
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Tirupati District - 524129
Andhra Pradesh - INDIA

ULR No.: TC591825100010915F
Report No: LL/24-25/009493
Issue Date: 07/02/2025.
C. Ref: Gate pass :145.
Ref. Date: 07/12/2024.

Sample Particulars: **TMT BAR – Ø25mm** **Grade: Fe550D** **BRAND NAME: AMMAN-TRY.**

Quantity: 1 Set. Packing: Loose. Sample Condition: Ambient.
Test Required: Chemical composition, Mass per running metre, TS/YS Ratio, 0.2% Proof Stress/Yield Stress, Elongation on 5.65 SoA mm GL, Bend test and Rebend test.
Date of receipt of sample : 04/01/2025.
Date of starting of analysis : 04/01/2025.
Date of completion of analysis : 05/02/2025.

TEST RESULTS

Sl. No	Test Parameters	UOM	Requirements as per IS: 1786-2008(RA 2018) Grade: Fe550D.	Results
I	**Chemical composition**			
1	Carbon as C	% by mass	0.25 + 0.02 Max.	0.19
2	Sulphur as S	% by mass	0.040 + 0.005Max.	0.032
3	Phosphorus as P	% by mass	0.040 + 0.005Max.	0.032
4	Manganese as Mn	% by mass	---	0.66
5	Sulphur + Phosphorus	% by mass	0.075 + 0.010 Max.	0.064
6	Silicon as Si	% by mass	--	0.23
7	Carbon equivalent, CE	.	0.61 Max.	0.36
8	Micro-alloying elements (Nb+V+Ti+B)	% by mass	0.30 Max.	0.006
9	Nitrogen Content	% by mass	0.012 Max.	0.006
II	**Nominal Sizes**			
1	Nominal size of bar	mm	25.0	25.0
2	Nominal cross-sectional area	mm^2	491.1	481.5
3	Mass per metre	kg	3.85 - 4%	3.784
III	**Physical properties**			
1	TS/YS Ratio	---	≥ 1.08 (but TS not less than 600 N/mm^2)	1.20 (TS 689 N/mm^2)
2	0.2% Proof Stress/Yield Stress	N/mm^2	550 Min	574
3	Elongation on 5.65 SoA mm Gauge Length	Percent	14.5 Min.	20.0
IV	Bend Test	Visual	Pass the test if there is no rupture or cracks in the bent portion.	No rupture or cracks observed.
V	Rebend Test	Visual	Pass the test if there is no rupture or cracks in the bent portion.	No rupture or cracks observed.

Method of testing: As per IS: 8811-1998(RA2018), IS: 1608(P1)-2022, IS: 1599-2023, IS: 1786-2008(RA2018) & SOP MT 23 – 2021.
Remarks: The above submitted samples confirming to IS:1786-2008(RA2018), Gr:Fe550D w.r.t the above test parameters.
NOTE : This report and results relate only to the sample / items tested.

M.VIKAS
AUTHORISED SIGNATORY

V.SATHAIAH
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Note: This report is subject to the terms and conditions mentioned overleaf 119277

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TEST REPORT

Issued to:
AMMAN –TRY SPONGE & POWER PVT. LTD.
SF Nos. 268-271, Sirasanambedu (V)
Pellakuru (M) , Naidupeta
Tirupati District - 524129
Andhra Pradesh - INDIA

Report No: LL/24-25/009493/N
Issue Date: 07/02/2025.
C. Ref: Gate pass :145.
Ref. Date: 07/12/2024.

Sample Particulars: **TMT BAR – Ø25mm** **Grade: Fe550D** **BRAND NAME: AMMAN-TRY.**

Quantity: 1 Set. Packing: Loose. Sample Condition: Ambient.
Test Required: Pull out test , Deformation and surface characteristics & Total elongation at maximum force on 5.65 SoA mm GL.
Date of receipt of sample : 04/01/2025.
Date of starting of analysis : 04/01/2025.
Date of completion of analysis : 05/02/2025.

TEST RESULTS

Sl. No	Test Parameters	UOM	Requirements as per IS: 1786-2008(RA 2018) Grade: Fe550D.	Results
I	Pull-out test	Percent.	The bond strength calculated from the load at a measured slip of 0.025mm and 0.25mm for deformed bars/wires shall exceed that of a plain round bar of the same nominal size by 40 percent and 80 percent respectively.	The bond strength is 42.5 percent at 0.025mm slip and 82.5 percent at 0.25mm slip, When compare with plain round bar of same size.
II	**Requirements for Bond (Deformation and surface characteristics)**			
1	The mean projected rib area per unit length	mm^2/mm	0.17 Ø for Ø > 16mm (i.e., 4.25 Min.)	4.59
2	The mean projected area of transverse rib above	mm^2/mm	Shall not be less than one-third of the value given above. (i.e., 1/3 of 4.25 = 1.42Min)	4.59
3	Rolling and cold working of bars/wires	Visual.	The bars/wires shall be well and cleanly rolled and shall be sound and free from surface defects and pipe.	Bars are well and cleanly rolled, sound. Free from surface defects and pipe.
III	**Physical properties**			
1	Total elongation at maximum force on 5.65 SoA mm GL.	Percent	5.0 Min.	8.9

Method of testing: As per IS : 2770(P1) & IS: 1786-2008(RA 2018).
Remarks: The above submitted samples confirming to IS:1786-2008(RA2018), Gr.Fe550D w.r.t the above test parameters.
Note: The report and results relate only to the samples/items tested.

V.SATHAIAH
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Note: This report is subject to the terms and conditions mentioned overleaf 119278

LUCID Laboratories Pvt. Ltd.
Testing to the Core

TC-5918

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TEST REPORT

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SF Nos. 268-271, Sirasanambedu (V)
Pellakuru (M) ,Naidupeta
Tirupati District - 524129
Andhra Pradesh - INDIA

ULR No.: TC591825100010916F
Report No: LL/24-25/009494
Issue Date: 07/02/2025.
C. Ref: Gate pass :145.
Ref. Date: 07/12/2024.

Sample Particulars: **TMT BAR – Ø32mm** **Grade: Fe550D** **BRAND NAME: AMMAN-TRY.**

Quantity: 1 Set. Packing: Loose. Sample Condition: Ambient.
Test Required: Chemical composition, Mass per running metre, TS/YS Ratio, 0.2% Proof Stress/Yield Stress, Elongation on 5.65 SoA mm GL, Bend test and Rebend test.
Date of receipt of sample : 04/01/2025.
Date of starting of analysis : 04/01/2025.
Date of completion of analysis : 05/02/2025.

TEST RESULTS

Sl. No	Test Parameters	UOM	Requirements as per IS: 1786-2008(RA 2018) Grade: Fe550D.	Results
I	**Chemical composition**			
1	Carbon as C	% by mass	0.25 + 0.02 Max.	0.20
2	Sulphur as S	% by mass	0.040 + 0.005Max.	0.027
3	Phosphorus as P	% by mass	0.040 + 0.005Max.	0.037
4	Manganese as Mn	% by mass	---	0.65
5	Sulphur + Phosphorus	% by mass	0.075 + 0.010 Max.	0.064
6	Silicon as Si	% by mass	--	0.17
7	Carbon equivalent, CE	.	0.61 Max.	0.36
8	Micro-alloying elements (Nb+V+Ti+B)	% by mass	0.30 Max.	0.006
9	Nitrogen Content	% by mass	0.012 Max.	0.008
II	**Nominal Sizes**			
1	Nominal size of bar	mm	32.0	32.0
2	Nominal cross-sectional area	mm^2	804.6	791.1
3	Mass per metre	kg	6.31 - 4%	6.21
III	**Physical properties**			
1	TS/YS Ratio	---	≥ 1.08 (but TS not less than 600 N/mm^2)	1.22 (TS 722 N/mm^2)
2	0.2% Proof Stress/Yield Stress	N/mm^2	550 Min	589
3	Elongation on 5.65 SoA mm Gauge Length	Percent	14.5 Min.	21.5
IV	**Bend Test**	Visual	Pass the test if there is no rupture or cracks in the bent portion.	No rupture or cracks observed.
V	**Rebend Test**	Visual	Pass the test if there is no rupture or cracks in the bent portion.	No rupture or cracks observed.

Method of testing: As per IS: 8811-1998(RA2018), IS: 1608(P1)-2022, IS: 1599-2023, IS: 1786-2008(RA2018) & SOP MT 23 – 2021.
Remarks: The above submitted samples confirming to IS:1786-2008(RA2018), Gr:Fe550D w.r.t the above test parameters.
NOTE : This report and results relate only to the sample / items tested.

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119279

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TEST REPORT

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SF Nos. 268-271, Sirasanambedu (V)
Pellakuru (M) , Naidupeta
Tirupati District - 524129
Andhra Pradesh - INDIA

Report No: LL/24-25/009494/N
Issue Date: 07/02/2025.
C. Ref: Gate pass :145
Ref. Date: 07/12/2024.

Sample Particulars: **TMT BAR – Ø32mm** **Grade: Fe550D** **BRAND NAME: AMMAN-TRY.**

Quantity: 1 Set. Packing: Loose. Sample Condition: Ambient.
Test Required: Pull out test , Deformation and surface characteristics & Total elongation at maximum force on 5.65 SoA mm GL.
Date of receipt of sample : 04/01/2025.
Date of starting of analysis : 04/01/2025.
Date of completion of analysis : 05/02/2025.

TEST RESULTS

Sl. No	Test Parameters	UOM	Requirements as per IS: 1786-2008(RA 2018) Grade: Fe550D.	Results
I	Pull-out test	Percent.	The bond strength calculated from the load at a measured slip of 0.025mm and 0.25mm for deformed bars/wires shall exceed that of a plain round bar of the same nominal size by 40 percent and 80 percent respectively.	The bond strength is 43.5 percent at 0.025mm slip and 84.0 percent at 0.25mm slip, When compare with plain round bar of same size.
II	**Requirements for Bond (Deformation and surface characteristics)**			
1	The mean projected rib area per unit length	mm^2/mm	0.17 Ø for Ø > 16mm (i.e., 5.44 Min.)	6.24
2	The mean projected area of transverse rib above	mm^2/mm	Shall not be less than one-third of the value given above. (i.e., 1/3 of 5.44 = 1.81Min)	6.24
3	Rolling and cold working of bars/wires	Visual	The bars/wires shall be well and cleanly rolled and shall be sound and free from surface defects and pipe.	Bars are well and cleanly rolled, sound. Free from surface defects and pipe.
III	**Physical properties**			
1	Total elongation at maximum force on 5.65 SoA mm GL.	Percent	5.0 Min.	9.2

Method of testing: As per IS : 2770(P1) & IS: 1786-2008(RA 2018).
Remarks: The above submitted samples confirming to IS:1786-2008(RA2018), Gr:Fe550D w.r.t the above test parameters.
Note: The report and results relate only to the samples/items tested.

V.SATHAIAH
AUTHORISED SIGNATORY

Note: This report is subject to the terms and conditions mentioned overleaf 119230