

MSME TESTING CENTRE CHENNAIULR No. :
TC513521000004717F

DOC No. : 2021_SEP_160
Telephone : 9445662299
FAX : -
E-Mail : dctc-sr@dcmsme.gov.in
BO Code : None

Test REPORT AS PER : IS 1786 (2008)**REPORT NO : 806419/2021/SS/1_1**

DATE : 20 Oct, 2021

PART A. PARTICULARS OF SAMPLE SUBMITTED

a) Customer Name & Address : SHRI AMMAN STEEL AND ALIED INDUSTRIES PVT LTD
SILAMPUDAYANPATTI ROAD, NAGAMANGALAM,
TRICHY, TIRUCHIRAPPALLI, TAMIL NADU, INDIA - 620012

b) Nature of sample : SS

c) Grade/Variety/Type/Class Size etc : Fe-550 D / TMT / 25 mm

d) Declare values, if any : Rs.55000 /M.T

e) Batch No. & Date of Manufacture : AMMAN/TMT/25/754/

f) Quantity : 3 M.T

g) Date of Receipt : 09 Sep, 2021

h) BIS Seal : Verified by Sample Cell

i) IO's Signature : Verified by Sample Cell

j) Any other Information / Expiry Date, If any : -/NIL

k) Date of Commencement of Testing :

l) Date of Completion of Testing :

m) Section Code : 21CF423, 21M1DA7

n) Section Report No. : 21CF423_1, 21M1DA7_1

o) Report Type : New

p) Reference Report No. :

q) Remarks : -

Ambrose Royson C
OIC SAMPLE CELL
(Authorized Signatory)
Authorized on: 20 Oct, 2021 12:42 PM

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PART B. SUPPLEMENTARY INFORMATION

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|--|----------------|
| 1. Reference to sampling procedure, wherever applicable. | Not Applicable |
| 2. Supporting documents for the measurements taken and results derived like graphs, table sketches and or photographs as appropriate to test report, if any. | Not Applicable |
| 3. Deviation from the test methods as prescribed in relevant ISS/Work instruction, if any. | Not Applicable |

M Annabackiam
OIC Chemical
(Authorized Signatory)
Authorized on: 07 Oct, 2021 18:06 PM

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PART C. TEST RESULT

S.No.	Clause No Table No. Sl. No	Parameter - Method of test	Test Description	Min Limit	Max Limit	Unit	Result/ Observation
1	4.1	Carbon %	%	-	0.25	%	0.22
2	4.1	Manganese %	%	-	-	-	Range not specified 0.568
3	4.1	Phosphorus %	%	-	0.04	%	0.036 (%)
4	4.1	Sulphur %	%	-	0.04	%	0.028
5	4.1	Silicon %	%	-	-	-	Test Not Applicable
6	4.1	Copper %	%	-	-	-	Range not specified 0.103
7	4.1	Aluminium %	%	-	-	-	Range not specified 0.0005 BDL (DL: 0.007%)
8	4.1	Nb	%	-	-	-	Range Not Specified 0.0005 BDL (DL: 0.022%)
9	4.1	V	%	-	-	-	Range Not Specified 0.00 BDL (DL: 0.026%)
10	4.1	Ti	%	-	-	-	Range Not specified Result: 0.0033
11	4.1	Cr	%	-	-	-	Range Not Specified Result:0.129
12	4.1	Mo	%	-	-	-	Range Not Specified 0.00 BDL (DL: 0.013%)
13	4.1	Ni	%	-	-	-	Range not specified Result: 0.043
14	4.1	CE	%	-	0.61	%	0.35
15	4.1	Sulphur and phosphorous	%	-	0.075	%	0.064
16	Clause - 4.2 & 4.2.1	Fe- 415, Fe- 415D, Fe-500, Fe-500D, Fe-550, Fe-550D, Fe-600 CARBON +EQUIVELENT	percent	-	-	-	Fe 550D Carbon+ Equivalent

M Annabackiam
OIC Chemical
 (Authorized Signatory)
 Authorized on: 07 Oct, 2021 18:06 PM

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PART D. REMARKS

M Annabackiam
OIC Chemical
(Authorized Signatory)
Authorized on: 07 Oct, 2021 18:06 PM

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PART B. SUPPLEMENTARY INFORMATION

- | | |
|--|----------------|
| 1. Reference to sampling procedure, wherever applicable. | Not Applicable |
| 2. Supporting documents for the measurements taken and results derived like graphs, table sketches and or photographs as appropriate to test report, if any. | Not Applicable |
| 3. Deviation from the test methods as prescribed in relevant ISS/Work instruction, if any. | Not Applicable |

Goberu Venkata Ranga Rao
OIC Mechanical
(Authorized Signatory)
Authorized on: 20 Oct, 2021 12:32 PM

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PART C. TEST RESULT

S.No.	Clause No Table No. Sl. No	Parameter - Method of test	Test Description	Min Limit	Max Limit	Unit	Result/ Observation
1	Cl. 5	Cl. 5 - Mean projected area of transverse ribs (1/3 of Ar)	mm ² /mm	-	-	-	Specified Observed i)The mean projected 4.25 5.04 rib area per unit length mm ² / mm (Min) ii) The mean projected 1.41 5.04 transverse rib area mm ² /mm (Min)
2	Cl. 8.1 Table 3	Yield Stress (YS)	N/mm ²	550.0	-	N/mm ²	585.0
3	Cl. 8.1 Table 3	Tensile Strength (TS)	N/mm ²	600.0	-	N/mm ²	702.0
4	Cl. 8.1 Table 3	TS/YS ratio	Ratio	-	-	-	Specified Observed TS/YS Ratio 1.08 1.20 N/Sq.mm (> or =)
5	Cl. 8.1 Table 3	Elongation, percentage	%	-	-	-	Specified Observed i) % Elongation 14.5 15.2 mm (Min) ii) Total Elongation 5 6 at Maximum Force mm % (Min)
6	Cl. 9.3, Table 4	Bend Test	The bend test shall be performed in accordance with the requirements of IS 1599. The test piece, when cold, shall be doubled over the mandrel by continuous pressure until the sides are parallel. The specimen shall be considered to have passed the test if there is no rupture or cracks visible to a person of normal or corrected vision on the bent portion.	-	-	-	No rupture/crack was observed in the bent portion after the test on visual examination
7	Cl.9.4 & Cl. 9.4.1	Rebend test	The test piece shall be bent to an include angle of 135 degrees using a mandrel of appropriate diameter. The bent piece shall be aged by keeping in boiling water (100°C) for 30 min and then allowed to cool. The piece shall then be bent back to have an included angle of 157.5 degrees. The specimen shall be considered to have passed the test if there is no rupture or cracks visible to a person of normal or corrected vision on the rebent portion.	-	-	-	No rupture/crack was observed in the bent portion after the test on visual examination

8	CI 5	Deformations and Surface Characteristics	Pull out test	-	-	-	Plain Steel Bar TMT Bar i) Average load at a 1620 N 2464 N slip of 0.025 mm at the free end ii) Average load at a 2580 N 4910 N slip of 0.25 mm at the free end iii) Average Maximum 53000 N 92000 N load of failure
9	CI 6.1	Length, Width & Thickness	Nominal Size	-	-	-	Nominal Size in mm = 25
10	CI 7.2	Weight	0.888 kg_6%	3.85	-	Kg/m	3.894
11	CI 8.1	UTM	Specified Requirements: i) Yield Stress 500.0 N/mm ² Min, ii) TS / YS ratio (≥ 1.08 , but TS not less than 545.0 N/mm ²) & iii) Elongation percentage 12.0 % Min	550.0	-	N/mm ²	585.0
12	CI 9.3	Load In One Direction	Bend Test	-	-	-	No rupture/crack was observed in the bent portion after the test on visual examination
13	CI 9.4	Load In Other Direction From Bend	Rebend Test	-	-	-	No rupture/crack was observed in the bent portion after the test on visual examination

Goberu Venkata Ranga Rao
OIC Mechanical
 (Authorized Signatory)
 Authorized on: 20 Oct, 2021 12:32 PM

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PART D. REMARKS

Goberu Venkata Ranga Rao
OIC Mechanical
(Authorized Signatory)
Authorized on: 20 Oct, 2021 12:32 PM

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MSME TESTING CENTRE CHENNAIULR No. :
TC513521000004553F

DOC No. : 2021_SEP_073
Telephone : 9445662299
FAX : -
E-Mail : dctc-sr@dcmsme.gov.in
BO Code : None

Test REPORT AS PER : IS 1786 (2008)**REPORT NO : 805770/2021/SS/1_1**

DATE : 20 Oct, 2021

PART A. PARTICULARS OF SAMPLE SUBMITTED

a) Customer Name & Address : AMMAN-TRY STEELS PVT LTD
ERANGUDI ROAD, KUMBAKURICHY,
SETHURAPATTY VILLAGE, TRICHY,
TIRUCHIRAPPALLI, TAMIL NADU, INDIA - 620012

b) Nature of sample : SS

c) Grade/Variety/Type/Class Size etc : Fe-550 D / TMT / 25 MM

d) Declare values, if any : Rs.55000 /M.T

e) Batch No. & Date of Manufacture : AMMAN/25/TMT/1135A/

f) Quantity : 3 M.T

g) Date of Receipt : 09 Sep, 2021

h) BIS Seal : Verified by Sample Cell

i) IO's Signature : Verified by Sample Cell

j) Any other Information / Expiry Date, If any : -/NIL

k) Date of Commencement of Testing :

l) Date of Completion of Testing :

m) Section Code : 21C8005, 21M8804

n) Section Report No. : 21C8005_1, 21M8804_1

o) Report Type : New

p) Reference Report No. :

q) Remarks : -

Ambrose Royson C
OIC SAMPLE CELL
(Authorized Signatory)
Authorized on: 20 Oct, 2021 12:43 PM

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PART B. SUPPLEMENTARY INFORMATION

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| 1. Reference to sampling procedure, wherever applicable. | Not Applicable |
| 2. Supporting documents for the measurements taken and results derived like graphs, table sketches and or photographs as appropriate to test report, if any. | Not Applicable |
| 3. Deviation from the test methods as prescribed in relevant ISS/Work instruction, if any. | Not Applicable |

OIC Chemical
(Authorized Signatory)

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PART C. TEST RESULT

S.No.	Clause No Table No. Sl. No	Parameter - Method of test	Test Description	Min Limit	Max Limit	Unit	Result/ Observation
1	4.1	Carbon %	%	-	0.25	%	0.18
2	4.1	Manganese %	%	-	-	-	Range Not Specified Result: 0.547
3	4.1	Phosphorus %	%	-	0.04	%	0.0284
4	4.1	Sulphur %	%	-	0.04	%	0.0246
5	4.1	Silicon %	%	-	-	-	Test Not Applicable
6	4.1	Copper %	%	-	-	-	Range Not Specified Result :0.105
7	4.1	Aluminium %	%	-	-	-	Range Not Specified Result: 0.00135 BDL (DL: 0.007)
8	4.1	Nb	%	-	-	-	Range Not Specified Result : 0.00037 BDL (DL0.022)
9	4.1	V	%	-	-	-	Range Not Specified Result : 0.000 (DL: 0.002)
10	4.1	Ti	%	-	-	-	Range Not Specified Result: 0.0018
11	4.1	Cr	%	-	-	-	Range Not Specified Result:0.162
12	4.1	Mo	%	-	-	-	Range Not Specified Result 0.00 BDL (DL: 0.013)
13	4.1	Ni	%	-	-	-	Range Not specified Result : 0.052
14	4.1	CE	%	-	0.61	%	0.31
15	4.1	Sulphur and phosphorous	%	-	0.075	%	0.053
16	Clause - 4.2 & 4.2.1	Fe- 415, Fe- 415D, Fe-500, Fe-500D, Fe-550, Fe-550D, Fe-600 CARBON +EQUIVELENT	percent	-	-	-	FE 550 D+ Carbon Equivalent

OIC Chemical
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PART D. REMARKS

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PART B. SUPPLEMENTARY INFORMATION

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| 1. Reference to sampling procedure, wherever applicable. | Not Applicable |
| 2. Supporting documents for the measurements taken and results derived like graphs, table sketches and or photographs as appropriate to test report, if any. | Not Applicable |
| 3. Deviation from the test methods as prescribed in relevant ISS/Work instruction, if any. | Not Applicable |

Goberu Venkata Ranga Rao
OIC Mechanical
(Authorized Signatory)
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PART C. TEST RESULT

S.No.	Clause No Table No. Sl. No	Parameter - Method of test	Test Description	Min Limit	Max Limit	Unit	Result/ Observation
1	Cl. 5	Cl. 5 - Mean projected area of transverse ribs (1/3 of Ar)	mm ² /mm	-	-	-	Specified observed i) The mean projected 4.25 6.24 rib area per unit length, Sq.mm/mm (Min) ii) The mean projected 1.41 6.24 area of transverse ribs Sq.mm/mm (Min)
2	Cl. 8.1 Table 3	Yield Stress (YS)	N/mm ²	550.0	-	N/mm ²	565.0
3	Cl. 8.1 Table 3	Tensile Strength (TS)	N/mm ²	600.0	-	N/mm ²	698.0
4	Cl. 8.1 Table 3	TS/YS ratio	Ratio	-	-	-	Specified Observed Ratio N/Sq.mm 1.08 1.23 (> or =)
5	Cl. 8.1 Table 3	Elongation, percentage	%	-	-	-	Specified observed i) % Elogation (Min) 14.5 18.8 ii) Total Elongation 5 7.6 at maximum Force % (Min)
6	Cl. 9.3, Table 4	Bend Test	The bend test shall be performed in accordance with the requirements of IS 1599. The test piece, when cold, shall be doubled over the mandrel by continuous pressure until the sides are parallel. The specimen shall be considered to have passed the test if there is no rupture or cracks visible to a person of normal or corrected vision on the bent portion.	-	-	-	No rupture/crack was observed in the bent portion after the test on visual examination
7	Cl.9.4 & Cl. 9.4.1	Rebend test	The test piece shall be bent to an include angle of 135 degrees using a mandrel of appropriate diameter. The bent piece shall be aged by keeping in boiling water (100°C) for 30 min and then allowed to cool. The piece shall then be bent back to have an included angle of 157.5 degrees. The specimen shall be considered to have passed the test if there is no rupture or cracks visible to a person of normal or corrected vision on the rebent portion.	-	-	-	No rupture/crack was observed in the bent portion after the test on visual examination

8	CI 5	Deformations and Surface Characteristics	Pull out test	-	-	-	Plain Steel bar TMT Bar i) Average load at a 1540 N 2350 N slip of 0.025 mm at the free end ii) Average load at a 2500 N 4750 N slip of 0.25 mm at the free end\ iii) Average Maximum 51000 90200 N load of failure
9	CI 6.1	Length, Width & Thickness	Nominal Size	-	-	-	Nominal Size = 25 mm
10	CI 7.2	Weight	0.888 kg_6%	3.85	-	Kg/m	3.8 (with in the tolerance limit)
11	CI 8.1	UTM	Specified Requirements: i) Yield Stress 500.0 N/mm ² Min, ii) TS / YS ratio (≥ 1.08 , but TS not less than 545.0 N/mm ²) & iii) Elongation percentage 12.0 % Min	500.0	-	N/sq.mm	565.0
12	CI 9.3	Load In One Direction	Bend Test	-	-	-	No rupture/crack was observed in the bent portion after the test on visual examination
13	CI 9.4	Load In Other Direction From Bend	Rebend Test	-	-	-	No rupture/crack was observed in the bent portion after the test on visual examination

Goberu Venkata Ranga Rao
OIC Mechanical

(Authorized Signatory)
 Authorized on: 20 Oct, 2021 11:32 AM

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PART D. REMARKS

Goberu Venkata Ranga Rao
OIC Mechanical
(Authorized Signatory)
Authorized on: 20 Oct, 2021 11:32 AM

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