

TEST CERTIFICATE

TEST CERTIFICATE ACCORDING TO EN10204 TYPE 3.1

| | | | | | |
|--|--|---|------------------------|--|-----------------|
| Customer Address: M/S - SHIVOM TRADING. C/O OM HOUSEHOLD APPLIANCES PVT. LTD. OPP. P.S. PLYWOOD, SURVEY NO.192 8-B, NATIONAL HIGHWAY, GONDAL ROAD, VERAVAL(SHAPER) DISST. RAJKOT | | Material Specification Heat No. AR-K0078 Grade ST52.3 Supply Size 120 MMØ Supply Condition AS HOT ROLLED Colour Code GREY | Induction Route | Test Certificate No. Date 18-12-2024 Invoice No. 001674 Weight (MT.) 9.205 INGOT SIZE 10"X12" Reduction Ratio 6.96:1 No's of Pcs 26 No's of Bundle 4 Multiple | 2024-25/0023314 |
|--|--|---|------------------------|--|-----------------|

TEST RESULT

CHEMICAL ANALYSIS (ASTM E 415 / IS 8811)

| Element | | C% | Mn% | Si% | S% | P% | - | - | - | Al% | - | - | - |
|----------|-----|-------|-------|-------|-------|-------|---|---|---|-------|---|---|---|
| Spec. | Min | - | - | - | - | - | - | - | - | - | - | - | - |
| | Max | 0.220 | 1.600 | 0.500 | 0.035 | 0.035 | - | - | - | - | - | - | - |
| Achieved | | 0.174 | 1.190 | 0.290 | 0.016 | 0.027 | - | - | - | 0.025 | - | - | - |

TC ISSUED BY :

Shivom Trading Co. (Shapar)

QTY. 165

Inv. No. ST2428-1235

Date : 7/1/2025

Chd

Mechanical Properties

| Parameters | | IS:1608 / ASTM A370 | | | | | | | | IS:1500 Surface Hardness As Rolled | |
|------------|-----|---------------------|---|----------------|---|------------|---|----------------|---|--|--|
| | | Tensile Strength | | Yield Strength | | Elongation | | Reduction Area | | | |
| Spec. | Min | - | - | - | - | - | - | - | - | | |
| | Max | - | - | - | - | - | - | - | - | | |
| Achieved | | - | - | - | - | - | - | - | - | 134/148 | |

Metallographic Properties

| Parameters | | Inclusion Rating (IS : 4163 / ASTM : E45A / JK Chart) WORST FIELD RATING | | | | | | | | Grain Size IS 4748 / ASTM E112 (No.) | Micro Structure |
|------------|-----|---|------|-------|------|-------|------|------|-------|---|------------------|
| | | Type | A | B | C | D | DS | Thin | Thick | | |
| | | Series | Thin | Thick | Thin | Thick | Thin | Thin | Thick | | |
| Spec. | Min | - | - | - | - | - | - | - | - | | |
| | Max | - | - | - | - | - | - | - | - | | |
| Achieved | | 2.0 | 0.5 | 1.5 | 0.5 | 1.0 | 0.5 | 1.5 | 1.0 | 6.5 to 7.0 | Pearlite+Ferrite |

Physical Properties, Non Destructive Test & Other Test

| Parameters | Internal Soundness ASTM E381 | | Surface Inspection IS 13352 | | | | Magnetic Particle Inspection | Ultrasonic Test ASTM A388 | Spark Test | X-RF |
|------------|---------------------------------|--|--------------------------------|--|--------------|--|------------------------------|------------------------------|------------|------|
| Spec. | - | | | | | | | | 100% | 100% |
| Achieved | Better than C2,R2,S2 | | | | Satisfactory | | | | | |

Remarks :

Induction Route material being not homogeneous. So, we can not guarantee repeatability of Inclusion Rating/ Hardenability or any other mechanical properties in test samples. We stand guarantee of material up to black bar stage only.

Prepared By:
GURPREET

Approved By:

Pre Dispatch Inspection:

In case of any Test certificate Issue, please inform Dinesh Singla at quality04@aroriron.com, Mobile No. +919914538700

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|---------------------------|
| Date : <u>7/1/25</u> |
| Batch No. : <u>558L</u> |
| Material : <u>ST52-3</u> |
| Section : <u>120mmØ</u> |
| Qty : <u>2165kg</u> |
| Supplier : <u>Shivom</u> |
| Steel Mill : <u>AS089</u> |

[Signature]