# National Accreditation Board for Testing and Calibration Laboratories

## SCOPE OF ACCREDITATION

**Laboratory Name :** RELIABLE TESTING SERVICES, 59, BINDAL INDUSTRIAL ESTATE, K-A ROAD, SAKINAKA, MUMBAI, MAHARASHTRA, INDIA

**Accreditation Standard** ISO/IEC 17025:2017

**Certificate Number** TC-5851 **Page No** 1 of 16

**Validity** 19/11/2021 to 18/11/2023 **Last Amended on** 26/01/2022

| S.No | Discipline / Group | Materials or Products tested | Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed | Test Method Specification against which tests are performed and / or the techniques / equipment used |
|---|---|---|---|---|
| LOCATION 1-59, BINDAL INDUSTRIAL ESTATE, K-A ROAD, SAKINAKA, MUMBAI, MAHARASHTRA, INDIA Permanent Facility | | | | |
| 1 | CHEMICAL- METALLIC COATINGS & TREATMENT SOLUTIONS | Metallic Coated Ferrous materials | Mass of Zinc Coating | ASTM A90, IS 6745 |
| 2 | CHEMICAL- METALLIC COATINGS & TREATMENT SOLUTIONS | Metallic Coated Ferrous materials | Uniformity of Zinc Coating/ Preece Test | ASTM A239, IS 2633 |
| 3 | CHEMICAL- METALLIC COATINGS & TREATMENT SOLUTIONS | Metallic Coated Materials | Adhesion test | ASTM B571, IS 2629 |
| 4 | CHEMICAL- METALS & ALLOYS | Aluminium & its alloys | Determination of %Chromium | ASTM E1251 |
| 5 | CHEMICAL- METALS & ALLOYS | Aluminium & its alloys | Determination of %Copper | ASTM E1251 |
| 6 | CHEMICAL- METALS & ALLOYS | Aluminium & its alloys | Determination of %Iron | ASTM E1251 |
| 7 | CHEMICAL- METALS & ALLOYS | Aluminium & its alloys | Determination of %Lead | ASTM E1251 |
| 8 | CHEMICAL- METALS & ALLOYS | Aluminium & its alloys | Determination of %Magnesium | ASTM E1251 |
| 9 | CHEMICAL- METALS & ALLOYS | Aluminium & its alloys | Determination of %Manganese | ASTM E1251 |
| 10 | CHEMICAL- METALS & ALLOYS | Aluminium & its alloys | Determination of %Nickel | ASTM E1251 |
| 11 | CHEMICAL- METALS & ALLOYS | Aluminium & its alloys | Determination of %Silicon | ASTM E1251 |
| 12 | CHEMICAL- METALS & ALLOYS | Aluminium & its alloys | Determination of %Tin | ASTM E1251 |
| 13 | CHEMICAL- METALS & ALLOYS | Aluminium & its alloys | Determination of %Titanium | ASTM E1251 |
| 14 | CHEMICAL- METALS & ALLOYS | Aluminium & its alloys | Determination of %Zinc | ASTM E1251 |
| 15 | CHEMICAL- METALS & ALLOYS | Carbon Steel (low carbon, medium carbon & high carbon steel) | Determination of %Aluminium | ASTM E415 |
| 16 | CHEMICAL- METALS & ALLOYS | Carbon Steel (low carbon, medium carbon & high carbon steel) | Determination of %Boron | ASTM E415 |
| 17 | CHEMICAL- METALS & ALLOYS | Carbon Steel (low carbon, medium carbon & high carbon steel) | Determination of %Carbon | ASTM E415 |

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| 18 | CHEMICAL- METALS & ALLOYS | Carbon Steel (low carbon, medium carbon & high carbon steel) | Determination of %Chromium | ASTM E415 |
| 19 | CHEMICAL- METALS & ALLOYS | Carbon Steel (low carbon, medium carbon & high carbon steel) | Determination of %Copper | ASTM E415 |
| 20 | CHEMICAL- METALS & ALLOYS | Carbon Steel (low carbon, medium carbon & high carbon steel) | Determination of %Lead | ASTM E415 |
| 21 | CHEMICAL- METALS & ALLOYS | Carbon Steel (low carbon, medium carbon & high carbon steel) | Determination of %Manganese | ASTM E415 |
| 22 | CHEMICAL- METALS & ALLOYS | Carbon Steel (low carbon, medium carbon & high carbon steel) | Determination of %Molybdenum | ASTM E415 |
| 23 | CHEMICAL- METALS & ALLOYS | Carbon Steel (low carbon, medium carbon & high carbon steel) | Determination of %Nickel | ASTM E415 |
| 24 | CHEMICAL- METALS & ALLOYS | Carbon Steel (low carbon, medium carbon & high carbon steel) | Determination of %Niobium | ASTM E415 |
| 25 | CHEMICAL- METALS & ALLOYS | Carbon Steel (low carbon, medium carbon & high carbon steel) | Determination of %Nitrogen | ASTM E415 |
| 26 | CHEMICAL- METALS & ALLOYS | Carbon Steel (low carbon, medium carbon & high carbon steel) | Determination of %Phosphorus | ASTM E415 |
| 27 | CHEMICAL- METALS & ALLOYS | Carbon Steel (low carbon, medium carbon & high carbon steel) | Determination of %Silicon | ASTM E415 |
| 28 | CHEMICAL- METALS & ALLOYS | Carbon Steel (low carbon, medium carbon & high carbon steel) | Determination of %Sulphur | ASTM E415 |
| 29 | CHEMICAL- METALS & ALLOYS | Carbon Steel (low carbon, medium carbon & high carbon steel) | Determination of %Tungsten | ASTM E415 |
| 30 | CHEMICAL- METALS & ALLOYS | Carbon Steel (low carbon, medium carbon & high carbon steel) | Determination of %Vanadium | ASTM E415 |
| 31 | CHEMICAL- METALS & ALLOYS | Copper & its alloys | Determination of %Aluminium | BS EN 15079 |
| 32 | CHEMICAL- METALS & ALLOYS | Copper & its alloys | Determination of %Antimony | BS EN 15079 |
| 33 | CHEMICAL- METALS & ALLOYS | Copper & its alloys | Determination of %Arsenic | BS EN 15079 |
| 34 | CHEMICAL- METALS & ALLOYS | Copper & its alloys | Determination of %Bismuth | BS EN 15079 |
| 35 | CHEMICAL- METALS & ALLOYS | Copper & its alloys | Determination of %Chromium | BS EN 15079 |
| 36 | CHEMICAL- METALS & ALLOYS | Copper & its alloys | Determination of %Copper | IS 3685 |

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| 37 | CHEMICAL- METALS & ALLOYS | Copper & its alloys | Determination of %Copper | IS 440 |
| 38 | CHEMICAL- METALS & ALLOYS | Copper & its alloys | Determination of %Iron | BS EN 15079 |
| 39 | CHEMICAL- METALS & ALLOYS | Copper & its alloys | Determination of %Lead | BS EN 15079 |
| 40 | CHEMICAL- METALS & ALLOYS | Copper & its alloys | Determination of %Manganese | BS EN 15079 |
| 41 | CHEMICAL- METALS & ALLOYS | Copper & its alloys | Determination of %Nickel | BS EN 15079 |
| 42 | CHEMICAL- METALS & ALLOYS | Copper & its alloys | Determination of %Phosphorus | BS EN 15079 |
| 43 | CHEMICAL- METALS & ALLOYS | Copper & its alloys | Determination of %Silicon | BS EN 15079 |
| 44 | CHEMICAL- METALS & ALLOYS | Copper & its alloys | Determination of %Sulphur | BS EN 15079 |
| 45 | CHEMICAL- METALS & ALLOYS | Copper & its alloys | Determination of %Tin | BS EN 15079 |
| 46 | CHEMICAL- METALS & ALLOYS | Copper & its alloys | Determination of %Zinc | BS EN 15079 |
| 47 | CHEMICAL- METALS & ALLOYS | Positive Material Identification | X-Ray Fluorescence Analysis of (Iron, Titanium, Chromium, Nickel, Molybdenum, Manganese, Copper, Niobium, Cobalt, Vanadium, Tungsten) | API Practice 578 |
| 48 | CHEMICAL- METALS & ALLOYS | Stainless steel | Determination of %Aluminium | ASTM E1086 |
| 49 | CHEMICAL- METALS & ALLOYS | Stainless steel | Determination of %Carbon | ASTM E1086 |
| 50 | CHEMICAL- METALS & ALLOYS | Stainless steel | Determination of %Chromium | ASTM E1086 |
| 51 | CHEMICAL- METALS & ALLOYS | Stainless steel | Determination of %Copper | ASTM E1086 |
| 52 | CHEMICAL- METALS & ALLOYS | Stainless steel | Determination of %Manganese | ASTM E1086 |
| 53 | CHEMICAL- METALS & ALLOYS | Stainless steel | Determination of %Molybdenum | ASTM E1086 |
| 54 | CHEMICAL- METALS & ALLOYS | Stainless steel | Determination of %Nickel | ASTM E1086 |

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| 55 | CHEMICAL- METALS & ALLOYS | Stainless steel | Determination of %Niobium | ASTM E1086 |
| 56 | CHEMICAL- METALS & ALLOYS | Stainless steel | Determination of %Nitrogen | IS 228 Part 23 |
| 57 | CHEMICAL- METALS & ALLOYS | Stainless steel | Determination of %Phosphorus | ASTM E1086 |
| 58 | CHEMICAL- METALS & ALLOYS | Stainless steel | Determination of %Silicon | ASTM E1086 |
| 59 | CHEMICAL- METALS & ALLOYS | Stainless steel | Determination of %Sulphur | ASTM E1086 |
| 60 | CHEMICAL- METALS & ALLOYS | Stainless steel | Determination of %Titanium | ASTM E1086 |
| 61 | CHEMICAL- METALS & ALLOYS | Stainless steel | Determination of %Tungsten | ASTM E1086 |
| 62 | CHEMICAL- METALS & ALLOYS | Stainless steel | Determination of %Vanadium | ASTM E1086 |
| 63 | MECHANICAL- METALLOGRAPHY TEST | Austenitic Stainless Steel | IGC PRACTICE “A” | ASTM A262 |
| 64 | MECHANICAL- METALLOGRAPHY TEST | Austenitic Stainless Steel | IGC PRACTICE “B” | ASTM A262 |
| 65 | MECHANICAL- METALLOGRAPHY TEST | Austenitic Stainless Steel | IGC PRACTICE “C” | IS 10461 (Pt1), ASTM A262 |
| 66 | MECHANICAL- METALLOGRAPHY TEST | Austenitic Stainless Steel | IGC PRACTICE “E” (24 HRS / 72 HRS) | IS 10461 (Pt 2), ASTM A262 |
| 67 | MECHANICAL- METALLOGRAPHY TEST | Average Grain Size Measurement by Comparison Method | Microstructure & Grain Size at 100X up to 1000X | IS 4748, ISO 643, ASTM E112 |
| 68 | MECHANICAL- METALLOGRAPHY TEST | Duplex (Austenitic-Ferritic) Stainless Steel | Ferric Chloride Corrosion Test For Classification Of Structures Of Duplex Stainless Steels | ASTM A923 (Method C) |
| 69 | MECHANICAL- METALLOGRAPHY TEST | Duplex (Austenitic-Ferritic) Stainless Steel | Sodium Hydroxide Etch Test For Classification Of Etch Structures Of Duplex Stainless Steels | ASTM A923 (Method A) |
| 70 | MECHANICAL- METALLOGRAPHY TEST | Ferrous materials, Alloys & products and welded coupons | Macro Etching Test at 10X to 20X | ASTM E340, IS 13015, ASTM E381 |
| 71 | MECHANICAL- METALLOGRAPHY TEST | Nonferrous Alloys- Copper Based | Mercurous Nitrate Test | ASTM B154 IS 2305 |
| 72 | MECHANICAL- METALLOGRAPHY TEST | Stainless Steels, Duplex Steels & related alloys | Ferric Chloride - Crevice Test Method B & E | ASTM G48 |

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| 73 | MECHANICAL-METALLOGRAPHY TEST | Stainless Steels, Duplex Steels & related alloys | Ferric Chloride - Pitting Test Method A, C & E | ASTM G48 |
| 74 | MECHANICAL-METALLOGRAPHY TEST | Steel and Cast Iron | Microstructure & Grain Size Analysis at 100X up to 1000X | ASM Handbook Vol-9 |

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| LOCATION 2 - 8, BINDAL INDUSTRIAL ESTATE, K-A ROAD, MUMBAI, MAHARASHTRA, INDIA<br>Permanent Facility | | | | |
| 1 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | All Weld Tensile | %Area Reduction | ASME Sec II (Pt C) |
| 2 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | All Weld Tensile | Tensile Strength | ASME Sec II (Pt C) |
| 3 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | All Weld Tensile | Yield Strength, 0.2% Proof Stress, 1% Proof Stress | ASME Sec II (Pt C) |
| 4 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Duplex (Austenitic-Ferritic) Stainless Steel | Charpy Impact Test For Classification Of Structures Of Duplex Stainless Steels | ASTM A923 (Method B) |
| 5 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Fastners: Nuts & Lock Nuts | Proof Load | ASTM A962, IS 15568 |
| 6 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | %Area Reduction | ASTM A370 |
| 7 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | %Area Reduction | ASTM E8/E8M |
| 8 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | %Area Reduction | BS EN ISO 6892-1 |
| 9 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | %Area Reduction | IS 1608-1 |
| 10 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | %Elongation | ASTM A370 |
| 11 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | %Elongation | ASTM E8/E8M |
| 12 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | %Elongation | BS EN ISO 6892-1 |
| 13 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | %Elongation | IS 1608-1 |

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|---|---|---|---|---|
| 14 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | 0.2% & 1% Proof Stress, 0.5% EUL | ASTM A370 |
| 15 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | 0.2% & 1% Proof Stress, 0.5% EUL | ASTM E8/E8M |
| 16 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | 0.2% & 1% Proof Stress, 0.5% EUL | BS EN ISO 6892-1 |
| 17 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | 0.2% & 1% Proof Stress, 0.5% EUL | IS 1608-1 |
| 18 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Bend Test | ASTM A370 |
| 19 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Bend Test | ASTM E290 |
| 20 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Bend Test | Indian Boiler Regulations |
| 21 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Bend Test | IS 1599 |
| 22 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Bend Test | IS 1716 |
| 23 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Brinell Hardness Test | ASTM A370 |
| 24 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Brinell Hardness Test | ASTM E10 |
| 25 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Brinell Hardness Test | BS EN ISO 6506-1 |
| 26 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Brinell Hardness Test | IS 1500-1 |
| 27 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Charpy Impact "V" Notch Test Temp. Range:(-196)°C to 25 °C | ASTM A370 |

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| 28 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Charpy Impact "V" Notch Test Temp. Range:(-196)°C to 25 °C | Indian Boiler Regulations |
| 29 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Charpy Impact "V" Notch Test Temp. Range:(-196)°C to 25 °C | ISO 148-1, ASTM E23 |
| 30 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Flaring Test/Drift Expansion Test | ASTM A1016 |
| 31 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Flaring Test/Drift Expansion Test | ASTM A370 |
| 32 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Flaring Test/Drift Expansion Test | IS 2335 |
| 33 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Flattening Test | ASTM A370 |
| 34 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Flattening Test | ASTM A530/A530M |
| 35 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Flattening Test | Indian Boiler Regulations |
| 36 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Flattening Test | IS 2328 |
| 37 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Macrostructure | ASTM E340 |
| 38 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Rockwell (HRA) Hardness Test | ASTM A370 |
| 39 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Rockwell (HRA) Hardness Test | ASTM E18 |
| 40 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Rockwell (HRA) Hardness Test | IS 1586-1 |
| 41 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Rockwell (HRB) Hardness Test | ASTM A370 |

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| 42 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Rockwell (HRB) Hardness Test | ASTM E18 |
| 43 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Rockwell (HRB) Hardness Test | IS 1586-1 |
| 44 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Rockwell (HRC) Hardness Test | ASTM A370 |
| 45 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Rockwell (HRC) Hardness Test | ASTM E18 |
| 46 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Rockwell (HRC) Hardness Test | IS 1586-1 |
| 47 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Tensile Strength | ASTM A370 |
| 48 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Tensile Strength | ASTM E8/E8M |
| 49 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Tensile Strength | BS EN ISO 6892-1 |
| 50 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Tensile Strength | IS 1608-1 |
| 51 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Tensile Test-Through Thickess (Area Reduction) | ASTM A770/A770M |
| 52 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Tensile Test-Through Thickess (Area Reduction) | BS EN 10164 |
| 53 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Vickers (HV 10) Hardness Test | ASTM A370 |
| 54 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Vickers (HV 10) Hardness Test | ASTM E92 |
| 55 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Vickers (HV 10) Hardness Test | BS EN ISO 6507-1 |

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| 56 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Vickers (HV 10) Hardness Test | IS 1501-1 |
| 57 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Vickers (HV 30) Hardness Test | ASTM A370 |
| 58 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Vickers (HV 30) Hardness Test | ASTM E92 |
| 59 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Vickers (HV 30) Hardness Test | BS EN ISO 6507-1 |
| 60 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Vickers (HV 30) Hardness Test | IS 1501-1 |
| 61 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Yield Strength | ASTM A370 |
| 62 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Yield Strength | ASTM E8/E8M |
| 63 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Yield Strength | BS EN ISO 6892-1 |
| 64 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Ferrous materials, alloys & products | Yield Strength | IS 1608-1 |
| 65 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | %Area Reduction | ASTM B557/B557M |
| 66 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | %Area Reduction | ASTM E8/E8M |
| 67 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | %Area Reduction | BS EN ISO 6892-1 |
| 68 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | %Area Reduction | IS 1608-1 |
| 69 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | %Elongation | ASTM B557/B557M |

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| **Laboratory Name :** | RELIABLE TESTING SERVICES, 59, BINDAL INDUSTRIAL ESTATE, K-A ROAD, SAKINAKA, MUMBAI, MAHARASHTRA, INDIA | | |
| **Accreditation Standard** | ISO/IEC 17025:2017 | | |
| **Certificate Number** | TC-5851 | **Page No** | 11 of 16 |
| **Validity** | 19/11/2021 to 18/11/2023 | **Last Amended on** | 26/01/2022 |

| S.No | Discipline / Group | Materials or Products tested | Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed | Test Method Specification against which tests are performed and / or the techniques / equipment used |
|---|---|---|---|---|
| 70 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | %Elongation | ASTM E8/E8M |
| 71 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | %Elongation | BS EN ISO 6892-1 |
| 72 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | %Elongation | IS 1608-1 |
| 73 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | 0.2% & 1% Proof Stress, 0.5% EUL | ASTM B557/B557M |
| 74 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | 0.2% & 1% Proof Stress, 0.5% EUL | ASTM E8/E8M |
| 75 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | 0.2% & 1% Proof Stress, 0.5% EUL | BS EN ISO 6892-1 |
| 76 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | 0.2% & 1% Proof Stress, 0.5% EUL | IS 1608-1 |
| 77 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Bend Test | ASTM E290 |
| 78 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Bend Test | Indian Boiler Regulations |
| 79 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Bend Test | IS 1599 |
| 80 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Brinell Hardness Test | ASTM E10 |
| 81 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Brinell Hardness Test | BS EN ISO 6506-1 |
| 82 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Brinell Hardness Test | IS 1500-1 |
| 83 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Charpy Impact "V" Notch Test Temp. Range:(-196)°C to 25 °C | Indian Boiler Regulations |

# SCOPE OF ACCREDITATION

**Laboratory Name :** RELIABLE TESTING SERVICES, 59, BINDAL INDUSTRIAL ESTATE, K-A ROAD, SAKINAKA, MUMBAI, MAHARASHTRA, INDIA

**Accreditation Standard** ISO/IEC 17025:2017

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**Validity** 19/11/2021 to 18/11/2023 **Last Amended on** 26/01/2022

| S.No | Discipline / Group | Materials or Products tested | Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed | Test Method Specification against which tests are performed and / or the techniques / equipment used |
|---|---|---|---|---|
| 84 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Charpy Impact "V" Notch Test Temp. Range:(-196)°C to 25 °C | ISO 148-1, ASTM E23 |
| 85 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Flaring Test/Drift Expansion Test | ASTM A1016 |
| 86 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Flaring Test/Drift Expansion Test | ASTM B153 |
| 87 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Flaring Test/Drift Expansion Test | IS 2335 |
| 88 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Flaring Test/Drift Expansion Test | IS 2501 |
| 89 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Flattening Test | ASTM B111 |
| 90 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Flattening Test | Indian Boiler Regulations |
| 91 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Flattening Test | IS 2328 |
| 92 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Rockwell (HRA) Hardness Test | ASTM E18 |
| 93 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Rockwell (HRA) Hardness Test | BS EN ISO 6508-1 |
| 94 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Rockwell (HRA) Hardness Test | IS 1586-1 |
| 95 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Rockwell (HRB) Hardness Test | ASTM E18 |
| 96 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Rockwell (HRB) Hardness Test | BS EN ISO 6508-1 |
| 97 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Rockwell (HRB) Hardness Test | IS 1586-1 |

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**Laboratory Name :** RELIABLE TESTING SERVICES, 59, BINDAL INDUSTRIAL ESTATE, K-A ROAD, SAKINAKA, MUMBAI, MAHARASHTRA, INDIA

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**Validity** 19/11/2021 to 18/11/2023 **Last Amended on** 26/01/2022

| S.No | Discipline / Group | Materials or Products tested | Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed | Test Method Specification against which tests are performed and / or the techniques / equipment used |
|---|---|---|---|---|
| 98 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Rockwell (HRC) Hardness Test | ASTM E18 |
| 99 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Rockwell (HRC) Hardness Test | BS EN ISO 6508-1 |
| 100 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Rockwell (HRC) Hardness Test | IS 1586-1 |
| 101 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Tensile Strength | ASTM B557/B557M |
| 102 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Tensile Strength | ASTM E8/E8M |
| 103 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Tensile Strength | BS EN ISO 6892-1 |
| 104 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Tensile Strength | IS 1608-1 |
| 105 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Tensile Test-Through Thickness (Area Reduction) | ASTM A770/A770M |
| 106 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Tensile Test-Through Thickness (Area Reduction) | BS EN 10164 |
| 107 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Vickers (HV10) Hardness Test | ASTM E92 |
| 108 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Vickers (HV10) Hardness Test | BS EN ISO 6507-1 |
| 109 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Vickers (HV10) Hardness Test | IS 1501-1 |
| 110 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Vickers (HV30) Hardness Test | ASTM E92 |
| 111 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Vickers (HV30) Hardness Test | BS EN ISO 6507-1 |

# SCOPE OF ACCREDITATION

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|---|---|---|---|
| **Laboratory Name :** | RELIABLE TESTING SERVICES, 59, BINDAL INDUSTRIAL ESTATE, K-A ROAD, SAKINAKA, MUMBAI, MAHARASHTRA, INDIA | | |
| **Accreditation Standard** | ISO/IEC 17025:2017 | | |
| **Certificate Number** | TC-5851 | **Page No** | 14 of 16 |
| **Validity** | 19/11/2021 to 18/11/2023 | **Last Amended on** | 26/01/2022 |

| S.No | Discipline / Group | Materials or Products tested | Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed | Test Method Specification against which tests are performed and / or the techniques / equipment used |
|---|---|---|---|---|
| 112 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Vickers (HV30) Hardness Test | IS 1501-1 |
| 113 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Yield Strength | ASTM B557/B557M |
| 114 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Yield Strength | ASTM E8/E8M |
| 115 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Yield Strength | BS EN ISO 6892-1 |
| 116 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Non-Ferrous metals, alloys & products | Yield Strength | IS 1608-1 |
| 117 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Steel Reinforcement Bars | Bend Test | IS 1599 |
| 118 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Steel Reinforcement Bars | Re-Bend Test of Steel Reinforcement Bars | IS 1786 |
| 119 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Steel Reinforcement Bars | Weight per Meter | IS 1786 |
| 120 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Transverse Weld Tensile Test | %Elongation | API 1104 |
| 121 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Transverse Weld Tensile Test | Tensile Strength | API 1104 |
| 122 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Transverse Weld Tensile Test | Yield Strength | API 1104 |
| 123 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Welded Tubes | Flanging Test | ASTM A1016 |
| 124 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Welded Tubes | Flanging Test | ASTM A370 |
| 125 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Welded Tubes | Flanging Test | IS 2335 |

# SCOPE OF ACCREDITATION

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|---|---|---|---|
| **Laboratory Name :** | RELIABLE TESTING SERVICES, 59, BINDAL INDUSTRIAL ESTATE, K-A ROAD, SAKINAKA, MUMBAI, MAHARASHTRA, INDIA | | |
| **Accreditation Standard** | ISO/IEC 17025:2017 | | |
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| S.No | Discipline / Group | Materials or Products tested | Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed | Test Method Specification against which tests are performed and / or the techniques / equipment used |
|---|---|---|---|---|
| 126 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Welds & welded test specimens | Bend Test | API 1104 |
| 127 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Welds & welded test specimens | Bend Test | ASME Sec IX |
| 128 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Welds & welded test specimens | Bend Test | Indian Boiler Regulations |
| 129 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Welds & welded test specimens | Charpy Impact "V" Notch Test Temp. Range:(-196)°C to 25 °C | ASTM E23 |
| 130 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Welds & welded test specimens | Charpy Impact "V" Notch Test Temp. Range:(-196)°C to 25 °C | Indian Boiler Regulations |
| 131 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Welds & welded test specimens | Hardness Test- Vickers (HV 30) | ASTM E92 |
| 132 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Welds & welded test specimens | Nick Break | API 1104 |
| 133 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Welds & welded test specimens | Tear Test on Mock up | ASME SEC IX |
| 134 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Welds & welded test specimens | Tensile Strength | ASME SEC IX |
| 135 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Welds & welded test specimens | Tensile Strength | Indian Boiler Regulations |
| 136 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Welds & welded test specimens | Vickers (HV 30) Hardness Test | IS 1501-1 |
| 137 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Welds & welded test specimens | Vickers (HV10) Hardness Test | ASME SEC IX |
| 138 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Welds & welded test specimens | Vickers (HV10) Hardness Test | ASTM E92 |
| 139 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Welds & welded test specimens | Vickers (HV10) Hardness Test | IS 1501-1 |

# SCOPE OF ACCREDITATION

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|---|---|---|---|
| **Laboratory Name :** | RELIABLE TESTING SERVICES, 59, BINDAL INDUSTRIAL ESTATE, K-A ROAD, SAKINAKA, MUMBAI, MAHARASHTRA, INDIA | | |
| **Accreditation Standard** | ISO/IEC 17025:2017 | | |
| **Certificate Number** | TC-5851 | **Page No** | 16 of 16 |
| **Validity** | 19/11/2021 to 18/11/2023 | **Last Amended on** | 26/01/2022 |

| S.No | Discipline / Group | Materials or Products tested | Component, parameter or characteristic tested / Specific Test Performed / Tests or type of tests performed | Test Method Specification against which tests are performed and / or the techniques / equipment used |
|---|---|---|---|---|
| 140 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Welds & welded test specimens | Vickers (HV30) Hardness Test | ASME SEC IX |
| 141 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Welds & welded test specimens - Mock up | Minimum Leak Path | ASME SEC IX |
| 142 | MECHANICAL-MECHANICAL PROPERTIES OF METALS | Welds & welded test specimens - Mock up | Pull Out Test | ASME Sec IX |