# National Accreditation Board for Testing and Calibration Laboratories

## SCOPE OF ACCREDITATION

**Laboratory Name :** TTL ENGINEERING PVT LTD, GROUND FLOOR & BASEMENT,TC TOWER,MANSAROVAR, JAIPUR, RAJASTHAN, INDIA

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

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|---|---|---|---|---|
| Permanent Facility | | | | |
| 1 | MECHANICAL- BUILDINGS MATERIALS | Aggregate (Coarse) | Stripping Value | IS 6241 |
| 2 | MECHANICAL- BUILDINGS MATERIALS | Aggregate (Coarse) , Ballast | Bulk Density (Compacted) | IS 2386 (Part-3) |
| 3 | MECHANICAL- BUILDINGS MATERIALS | Aggregate (Coarse) , Ballast | Water Absorption | IS 2386 (Part-3) |
| 4 | MECHANICAL- BUILDINGS MATERIALS | Aggregate (Coarse) Ballast | Soft Particle | IS 2386 : Part 2 |
| 5 | MECHANICAL- BUILDINGS MATERIALS | Aggregate (Coarse), Ballast | 10 % Fine Value | IS 2386 (Part-4) |
| 6 | MECHANICAL- BUILDINGS MATERIALS | Aggregate (Coarse), Ballast | Elongation Index | IS 2386 (Part-1) |
| 7 | MECHANICAL- BUILDINGS MATERIALS | Aggregate (Coarse), Ballast | Flakiness Index | IS 2386 (Part-1) |
| 8 | MECHANICAL- BUILDINGS MATERIALS | Aggregate (Coarse), Ballast | Los Angles Abrasion Value | IS 2386 (Part-4) |
| 9 | MECHANICAL- BUILDINGS MATERIALS | Aggregate (Coarse), Ballast | Wet Impact Value | IS 5640 |
| 10 | MECHANICAL- BUILDINGS MATERIALS | Aggregate (Coarse),Ballast | Bulk Density (Loose) | IS 2386 (Part-3) |
| 11 | MECHANICAL- BUILDINGS MATERIALS | Aggregate (Coarse),Ballast | Impact Value | IS 2386 (Part 4) |
| 12 | MECHANICAL- BUILDINGS MATERIALS | Aggregate (Coarse),Ballast | Sieve Analysis (2.36 mm to 75 mm IS Sieve) | IS 2386 (Part-1) |
| 13 | MECHANICAL- BUILDINGS MATERIALS | Aggregate (Coarse/Fine) | Clay Lumps | IS 2386 : Part 2 |
| 14 | MECHANICAL- BUILDINGS MATERIALS | Aggregate (Coarse/Fine) | Material Finer Than 75 micron | IS 2386 (Part-1) |
| 15 | MECHANICAL- BUILDINGS MATERIALS | Aggregate (Fine Aggregate) | Bulking | IS 2386 : Part 3 |
| 16 | MECHANICAL- BUILDINGS MATERIALS | Aggregate (Fine), Crusher Stone Dust, Natural Sand, M-Sand, Mixed Sand | Bulk Density (Compacted) | IS 2386 (Part-3) |
| 17 | MECHANICAL- BUILDINGS MATERIALS | Aggregate (Fine), Crusher Stone Dust, Natural Sand, M-Sand, Mixed Sand | Bulk Density (Loose) | IS 2386 (Part-3) |
| 18 | MECHANICAL- BUILDINGS MATERIALS | Aggregate (Fine), Crusher Stone Dust, Natural Sand, M-Sand, Mixed Sand | Grading (Sieve Analysis) (75 micron to 10 mm IS Sieve) | IS 2386 (Part-1) |

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| 19 | MECHANICAL- BUILDINGS MATERIALS | Aggregate (Fine), Crusher Stone Dust, Natural Sand, M-Sand, Mixed Sand | Soundness by MgSo4 | IS 2386 (Part-5) |
| 20 | MECHANICAL- BUILDINGS MATERIALS | Aggregate (Fine), Crusher Stone Dust, Natural Sand, M-Sand, Mixed Sand | Soundness by Na2So4 | IS 2386 (Part-5) |
| 21 | MECHANICAL- BUILDINGS MATERIALS | Aggregate (Fine), Crusher Stone Dust, Natural Sand, M-Sand, Mixed Sand | Specific Gravity (Apparent) | IS 2386 (Part-3) |
| 22 | MECHANICAL- BUILDINGS MATERIALS | Aggregate (Fine), Crusher Stone Dust, Natural Sand, M-Sand, Mixed Sand | Specific Gravity (Bulk) | IS 2720 (Part-3) |
| 23 | MECHANICAL- BUILDINGS MATERIALS | Aggregate (Fine), Crusher Stone Dust, Natural Sand, M-Sand, Mixed Sand | Water Absorption | IS 2720 (Part-3) |
| 24 | MECHANICAL- BUILDINGS MATERIALS | Aggregate(Coarse), Ballast | Crushing Value | IS 2386 (Part-4) |
| 25 | MECHANICAL- BUILDINGS MATERIALS | Aggregate(Coarse), Ballast | Soundness by MgSo4 | IS 2386 (Part-5) |
| 26 | MECHANICAL- BUILDINGS MATERIALS | Aggregate(Coarse), Ballast | Soundness by Na2So4 | IS 2386 (Part-5) |
| 27 | MECHANICAL- BUILDINGS MATERIALS | Aggregate(Coarse), Ballast | Specific Gravity (Apparent) | IS 2386 (Part-3) |
| 28 | MECHANICAL- BUILDINGS MATERIALS | Aggregate(Coarse), Ballast | Specific Gravity (Bulk) | IS 2386 (Part-3) |
| 29 | MECHANICAL- BUILDINGS MATERIALS | Bituminous Mix/ Core | Bulk Density | ASTM D 2726 |
| 30 | MECHANICAL- BUILDINGS MATERIALS | Bricks (Burnt clay Building Bricks) | Dimension (Height) | IS 1077 |
| 31 | MECHANICAL- BUILDINGS MATERIALS | Bricks (Burnt clay Building Bricks) | Dimension (Length) | IS 1077 |
| 32 | MECHANICAL- BUILDINGS MATERIALS | Bricks (Burnt clay Building Bricks) | Dimension (Width) | IS 1077 |
| 33 | MECHANICAL- BUILDINGS MATERIALS | Bricks (Heavy Duty, Burnt clay Building Bricks/ Pulverized Fuel Ash-Lime bricks) | Compressive Strength | IS 3495 (Part-1) |
| 34 | MECHANICAL- BUILDINGS MATERIALS | Bricks (Heavy Duty, Burnt clay Building Bricks/ Pulverized Fuel Ash-Lime bricks) | Efflorescence | IS 3495 (Part-3) |
| 35 | MECHANICAL- BUILDINGS MATERIALS | Bricks (Heavy Duty, Burnt clay Building Bricks/ Pulverized Fuel Ash-Lime bricks) | Water Absorption | IS 3495 (Part-2) |
| 36 | MECHANICAL- BUILDINGS MATERIALS | Bricks (Pulverized Fuel Ash-Lime bricks) | Dimension (Height) | IS 12894 |
| 37 | MECHANICAL- BUILDINGS MATERIALS | Bricks (Pulverized Fuel Ash-Lime bricks) | Dimension (Length) | IS 12894 |

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| 38 | MECHANICAL- BUILDINGS MATERIALS | Bricks (Pulverized Fuel Ash-Lime bricks) | Dimension (Width) | IS 12894 |
| 39 | MECHANICAL- BUILDINGS MATERIALS | Cement OPC,PPC,PSC,SRC & WPC | Compressive Strength | IS 4031 (Part-6) |
| 40 | MECHANICAL- BUILDINGS MATERIALS | Cement OPC,PPC,PSC,SRC & WPC | Consistency | IS 4031 (Part-4) |
| 41 | MECHANICAL- BUILDINGS MATERIALS | Cement OPC,PPC,PSC,SRC & WPC | Density | IS 4031 (Part-11) |
| 42 | MECHANICAL- BUILDINGS MATERIALS | Cement OPC,PPC,PSC,SRC & WPC | Final Setting Time | IS 4031 (Part-5) |
| 43 | MECHANICAL- BUILDINGS MATERIALS | Cement OPC,PPC,PSC,SRC & WPC | Fineness by Dry Sieving | IS 4031 (Part-1) |
| 44 | MECHANICAL- BUILDINGS MATERIALS | Cement OPC,PPC,PSC,SRC & WPC | Initial Setting Time | IS 4031 (Part-5) |
| 45 | MECHANICAL- BUILDINGS MATERIALS | Cement OPC,PPC,PSC,SRC & WPC | Soundness by Autoclave Method | IS 4031 (Part-3) |
| 46 | MECHANICAL- BUILDINGS MATERIALS | Cement OPC,PPC,PSC,SRC & WPC | Soundness by Le-Chatelier Method | IS 4031 (Part-3) |
| 47 | MECHANICAL- BUILDINGS MATERIALS | Hardened concrete | Core Compressive Strength | IS 516 part-4 |
| 48 | MECHANICAL- BUILDINGS MATERIALS | Hardened Concrete cube | Compressive Strength | IS 516 part-1 Sec-1 |
| 49 | MECHANICAL- SOIL AND ROCK | Bentonite | Dry Fineness (150 Micron / 75 Micron) | IS 6186 |
| 50 | MECHANICAL- SOIL AND ROCK | Bentonite | Free Swell Index (FSI) | IS 2720 (Part-40) |
| 51 | MECHANICAL- SOIL AND ROCK | Bentonite | Liquid Limit | IS 2720 (Part-5) |
| 52 | MECHANICAL- SOIL AND ROCK | Bentonite | Moisture Contant | Is 6186 |
| 53 | MECHANICAL- SOIL AND ROCK | Bentonite | Sand Content | IS 6186 |
| 54 | MECHANICAL- SOIL AND ROCK | Bentonite | Swelling Power | IS 6186 |
| 55 | MECHANICAL- SOIL AND ROCK | Bentonite | Wet Fineness (150 micron/ 45 micron) | IS 6186 |
| 56 | MECHANICAL- SOIL AND ROCK | Bentonite/Slurries | Marsh Funnel Viscosity | ASTM D-6910 |

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| 57 | MECHANICAL- SOIL AND ROCK | Building Stone | Apparent Specific Gravity | IS 1124 |
| 58 | MECHANICAL- SOIL AND ROCK | Building Stone | Compressive Strength | IS 1121 (Part-1) |
| 59 | MECHANICAL- SOIL AND ROCK | Building Stone | Moh's Scratch Hardness | IS 13630 (Part-13) |
| 60 | MECHANICAL- SOIL AND ROCK | Building Stone | Porosity | IS 1124 |
| 61 | MECHANICAL- SOIL AND ROCK | Building Stone | True Specific Gravity | IS 1122 |
| 62 | MECHANICAL- SOIL AND ROCK | Building Stone | Water Absorption/Moisture Content | IS 1124 |
| 63 | MECHANICAL- SOIL AND ROCK | Rock | Bulk Density | IS 13030 |
| 64 | MECHANICAL- SOIL AND ROCK | Rock | Bulk Relative Density (Mass Specific Gravity) | IS 13030 |
| 65 | MECHANICAL- SOIL AND ROCK | Rock | Dry Relative Density (Dry Specific Gravity) | IS 13030 |
| 66 | MECHANICAL- SOIL AND ROCK | Rock | Point Load Index | IS 8764 |
| 67 | MECHANICAL- SOIL AND ROCK | Rock | Poisson's Ratio | IS 9221 |
| 68 | MECHANICAL- SOIL AND ROCK | Rock | Porosity | IS 13030 |
| 69 | MECHANICAL- SOIL AND ROCK | Rock | Saturated Density | IS 13030 |
| 70 | MECHANICAL- SOIL AND ROCK | Rock | Saturated Relative Density (Saturated Specific Gravity) | IS 13030 |
| 71 | MECHANICAL- SOIL AND ROCK | Rock | Solid Density (Density of Rock Material) | IS 13030 |
| 72 | MECHANICAL- SOIL AND ROCK | Rock | Solid Relative Density (Solid Specific Gravity) | IS 13030 |
| 73 | MECHANICAL- SOIL AND ROCK | Rock | Unconfined Compressive Strength Test | IS 9143 |
| 74 | MECHANICAL- SOIL AND ROCK | Rock | Unit Weight | IS 13030 |
| 75 | MECHANICAL- SOIL AND ROCK | Rock | Water Content/ Water Absorption | IS 13030 |

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| 76 | MECHANICAL- SOIL AND ROCK | Rock | Young's Modulus of Elasticity | IS 9221 |
| 77 | MECHANICAL- SOIL AND ROCK | Rock/ Buiding Stone | Dry Density | IS 13030 |
| 78 | MECHANICAL- SOIL AND ROCK | Soil | Atterberg Limit- Liquid Limit | IS 2720 Part-5 |
| 79 | MECHANICAL- SOIL AND ROCK | Soil | Atterberg Limit- Plastic Limit | IS 2720 (Part -5) |
| 80 | MECHANICAL- SOIL AND ROCK | Soil | Atterberg Limit- Plasticity Index | IS 2720 (Part-5) |
| 81 | MECHANICAL- SOIL AND ROCK | Soil | CBR Value - 4 Days Soaked | IS 2720 (Part-16) |
| 82 | MECHANICAL- SOIL AND ROCK | Soil | CBR Value- Unsoaked | IS 2720 (Part-16) |
| 83 | MECHANICAL- SOIL AND ROCK | Soil | Consolidation Test (Av) | IS 2720 (Part-15) |
| 84 | MECHANICAL- SOIL AND ROCK | Soil | Consolidation Test (Cc) | IS 2720 (Part-15) |
| 85 | MECHANICAL- SOIL AND ROCK | Soil | Consolidation Test (Cv) | IS 2720 (Part-15) |
| 86 | MECHANICAL- SOIL AND ROCK | Soil | Consolidation Test (Mv) | IS 2720 (Part-15) |
| 87 | MECHANICAL- SOIL AND ROCK | Soil | Direct Shear Test- Angle of internal Friction (Phi) | IS 2720 (Part-13) |
| 88 | MECHANICAL- SOIL AND ROCK | Soil | Direct Shear Test- Cohesion (C) | IS 2720 (Part-13) |
| 89 | MECHANICAL- SOIL AND ROCK | Soil | Dry Sieve Analysis (Gradation) (75 Micron to 75 mm IS Sieve) | IS 2720 (Part-4) |
| 90 | MECHANICAL- SOIL AND ROCK | Soil | Free Swell Index (FSI) | IS 2720 (Part-40) |
| 91 | MECHANICAL- SOIL AND ROCK | Soil | Hydrometer Analysis - Clay Content | IS 2720 (Part-4) |
| 92 | MECHANICAL- SOIL AND ROCK | Soil | Hydrometer Analysis - Silt Content | IS 2720 (Part-4) |
| 93 | MECHANICAL- SOIL AND ROCK | Soil | IS Classification | IS 1498 |
| 94 | MECHANICAL- SOIL AND ROCK | Soil | MDD light compaction Test | IS 2720 (Part-7) |

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| 95 | MECHANICAL- SOIL AND ROCK | Soil | MDD, heavy compaction Test | IS 2720 (Part-8) |
| 96 | MECHANICAL- SOIL AND ROCK | Soil | Moisture Content / Water Content | IS 2720 (Part-2) |
| 97 | MECHANICAL- SOIL AND ROCK | Soil | OMC, heavy compaction test | IS 2720 (Part-8) |
| 98 | MECHANICAL- SOIL AND ROCK | Soil | OMC, Light compaction Test | IS 2720 (Part-7) |
| 99 | MECHANICAL- SOIL AND ROCK | Soil | Permeability by Constant Head Method | IS 2720 (Part-17) |
| 100 | MECHANICAL- SOIL AND ROCK | Soil | Permeability test by Falling Head Method | IS 2720 (Part-17) |
| 101 | MECHANICAL- SOIL AND ROCK | Soil | Shrinkage Limit | IS 2720 (Part-6) |
| 102 | MECHANICAL- SOIL AND ROCK | Soil | Specific Gravity | IS 2720 P-3 (Section-1) |
| 103 | MECHANICAL- SOIL AND ROCK | Soil | Swelling Pressure | IS 2720 (Part-41), Section-1, clause-3 |
| 104 | MECHANICAL- SOIL AND ROCK | Soil | Triaxial Test Without Pore Water Pressure (angle of Friction) | IS 2720 (Part-11) |
| 105 | MECHANICAL- SOIL AND ROCK | soil | Triaxial Test Without Pore Water Pressure (Cohesion) | IS 2720 (Part-11) |
| 106 | MECHANICAL- SOIL AND ROCK | Soil | Unconfined Compressive Strength Test | IS 2720 (Part-10) |
| 107 | MECHANICAL- SOIL AND ROCK | Soil | Wet Sieve Analysis (Gradation) (75 micron to 19 mm IS Sieve) | IS 2720 (Part-4) |