National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : AMRUTHA ENGINEERING LABORATORIES PRIVATE LIMITED, B BLOCK, PLOT NO. 63, 64, AUTO NAGAR, VISAKHAPATNAM, ANDHRA PRADESH, 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
Permanent Facility				
1	CHEMICAL- BUILDING MATERIAL	Coarse and Fine Aggregates	Chlorides as cl	IS 14959 (Part 2)
2	CHEMICAL- BUILDING MATERIAL	Coarse and Fine Aggregates	Sulphate as SO3	IS 4032
3	CHEMICAL- BUILDING MATERIAL	Concrete Admixtures	Ash Content	IS 9103
4	CHEMICAL- BUILDING MATERIAL	Concrete Admixtures	Chloride Content	IS 6925
5	CHEMICAL- BUILDING MATERIAL	Concrete Admixtures	Dry Material Content	IS 9103
6	CHEMICAL- BUILDING MATERIAL	Concrete Admixtures	pH	IS 9103
7	CHEMICAL- BUILDING MATERIAL	Concrete Admixtures	Relative Density	IS 9103
8	CHEMICAL- METALS & ALLOYS	MS/CS/LAS	Aluminium	IS 8811
9	CHEMICAL- METALS & ALLOYS	MS/CS/LAS	Carbon	IS 8811
10	CHEMICAL- METALS & ALLOYS	MS/CS/LAS	Chromium	IS 8811
11	CHEMICAL- METALS & ALLOYS	MS/CS/LAS	Copper	IS 8811
12	CHEMICAL- METALS & ALLOYS	MS/CS/LAS	Manganese	IS 8811
13	CHEMICAL- METALS & ALLOYS	MS/CS/LAS	molybdenum	IS 8811
14	CHEMICAL- METALS & ALLOYS	MS/CS/LAS	Nickel	IS 8811
15	CHEMICAL- METALS & ALLOYS	MS/CS/LAS	Phosphorus	IS 8811
16	CHEMICAL- METALS & ALLOYS	MS/CS/LAS	Silicon	IS 8811
17	CHEMICAL- METALS & ALLOYS	MS/CS/LAS	Sulphur	IS 8811
18	CHEMICAL- METALS & ALLOYS	MS/CS/LAS	Tin	IS 8811

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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
19	CHEMICAL- METALS & ALLOYS	MS/CS/LAS	Titanium	IS 8811
20	CHEMICAL- METALS & ALLOYS	MS/CS/LAS	Vanadium	IS 8811
21	CHEMICAL- METALS & ALLOYS	Stainless Steel	Carbon	IS 9879
22	CHEMICAL- METALS & ALLOYS	Stainless Steel	Chromium	IS 9879
23	CHEMICAL- METALS & ALLOYS	Stainless Steel	Manganese	IS 9879
24	CHEMICAL- METALS & ALLOYS	Stainless Steel	Molybdenum	IS 9879
25	CHEMICAL- METALS & ALLOYS	Stainless Steel	Nickel	IS 9879
26	CHEMICAL- METALS & ALLOYS	Stainless Steel	Phosphorous	IS 9879
27	CHEMICAL- METALS & ALLOYS	Stainless Steel	Silicon	IS 9879
28	CHEMICAL- METALS & ALLOYS	Stainless Steel	Sulphur	IS 9879
29	CHEMICAL- WATER	Water for construction purpose	Acidity (Volume in ml of 0.02N NaoH required to neutralize 100 ml sample using Phenolphthalein Indicator)	IS 3025 (Part 22)
30	CHEMICAL- WATER	Water for construction purpose	Alkalinity (Volume in ml of 0.02N H2SO4 required to neutralize 100 ml sample using indicator)	IS 3025 (Part 23)
31	CHEMICAL- WATER	Water for construction purpose	Chloride as cl	IS 3025 (Part 32)
32	CHEMICAL- WATER	Water for construction purpose	Inorganic Solids (Fixed Solids)	IS 3025 (Part 18)
33	CHEMICAL- WATER	Water for construction purpose	Organic Solids (Volatile Solids)	IS 3025 (Part 18)
34	CHEMICAL- WATER	Water for construction purpose	pH	IS 3025 (Part 11)
35	CHEMICAL- WATER	Water for construction purpose	Sulphates as SO4	IS 3025 (Part 24)
36	CHEMICAL- WATER	Water for construction purpose	Total Suspended Solids	IS 3025 (Part 17)
37	MECHANICAL- BUILDINGS MATERIALS	Autoclaved Aerated Concrete Blocks	Block Density	IS 6441 (Part 1)
38	MECHANICAL- BUILDINGS MATERIALS	Autoclaved Aerated Concrete Blocks	Compressive Strength	IS 6441 (Part 5)

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39	MECHANICAL- BUILDINGS MATERIALS	Bitumen	Ductility	IS 1208
40	MECHANICAL- BUILDINGS MATERIALS	Bitumen	Flash Point	IS 1209
41	MECHANICAL- BUILDINGS MATERIALS	Bitumen	Penetration (1/10 mm)	IS 1203
42	MECHANICAL- BUILDINGS MATERIALS	Bitumen	Softening Point	IS 1205
43	MECHANICAL- BUILDINGS MATERIALS	Bitumen	Specific Gravity	IS 1202
44	MECHANICAL- BUILDINGS MATERIALS	Bituminous Mix	Binder Content	ASTM D2172
45	MECHANICAL- BUILDINGS MATERIALS	Burnt Clay Bricks	Compressive Strength	IS 3495 (Part 1)
46	MECHANICAL- BUILDINGS MATERIALS	Burnt Clay Bricks	Dimensions	IS 1077
47	MECHANICAL- BUILDINGS MATERIALS	Burnt Clay Bricks	Water Absorption	IS 3495 (Part 2)
48	MECHANICAL- BUILDINGS MATERIALS	Burnt Clay Hollow Bricks	Compression Strength	IS 3952
49	MECHANICAL- BUILDINGS MATERIALS	Burnt Clay Hollow Bricks	Water Absorption	IS 3952
50	MECHANICAL- BUILDINGS MATERIALS	Coarse Aggregate	Abrasion Value (Los Angeles Abrasion Value)	IS 2386 (Part 4)
51	MECHANICAL- BUILDINGS MATERIALS	Coarse Aggregate	Bulk Density (Loose and Rodded)	IS 2386 (Part 3)
52	MECHANICAL- BUILDINGS MATERIALS	Coarse Aggregate	Crushing value	IS 2386 (Part 4)
53	MECHANICAL- BUILDINGS MATERIALS	Coarse Aggregate	Elongation Index	IS 2386 (Part 1)
54	MECHANICAL- BUILDINGS MATERIALS	Coarse Aggregate	Flakiness Index	IS 2386 (Part 1)
55	MECHANICAL- BUILDINGS MATERIALS	Coarse Aggregate	Impact Value	IS 2386 (Part 4)
56	MECHANICAL- BUILDINGS MATERIALS	Coarse Aggregate	Material Finer than 75 microns	IS 2386 (Part 1)
57	MECHANICAL- BUILDINGS MATERIALS	Coarse Aggregate	Sieve Analysis	IS 2386 (PART 1)

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58	MECHANICAL- BUILDINGS MATERIALS	Coarse Aggregate	Soundness	IS 2386 (Part 5)
59	MECHANICAL- BUILDINGS MATERIALS	Coarse Aggregate	Specific Gravity	IS 2386 (Part 3)
60	MECHANICAL- BUILDINGS MATERIALS	Coarse Aggregate	Ten Percent Fines value	IS 2386 (Part 4)
61	MECHANICAL- BUILDINGS MATERIALS	Coarse Aggregate	Water Absorption	IS 2386 (Part 3)
62	MECHANICAL- BUILDINGS MATERIALS	Fine Aggregate	Bulk Density (Loose and Rodded)	IS 2386 (Part 3)
63	MECHANICAL- BUILDINGS MATERIALS	Fine Aggregate	Bulking	IS 2386 (Part 3)
64	MECHANICAL- BUILDINGS MATERIALS	Fine Aggregate	Material Finer than 75 microns	IS 2386 (Part 1)
65	MECHANICAL- BUILDINGS MATERIALS	Fine Aggregate	Sieve Analysis	IS 2386 (Part 1)
66	MECHANICAL- BUILDINGS MATERIALS	Fine Aggregate	Soundness	IS 2386 (Part 5)
67	MECHANICAL- BUILDINGS MATERIALS	Fine Aggregate	Specific gravity	IS 2386 (Part 3)
68	MECHANICAL- BUILDINGS MATERIALS	Fine Aggregate	Water Absorption	IS 2386 (Part 3)
69	MECHANICAL- BUILDINGS MATERIALS	Fly ash	Residue on 45 micron sieve (wet)	IS 1727
70	MECHANICAL- BUILDINGS MATERIALS	Fly ASh/Fly Ash Lime Bricks	Compressive Strength	IS 3495 (Part 1)
71	MECHANICAL- BUILDINGS MATERIALS	Fly Ash/Fly Ash Lime Bricks	Dimensions	IS 1077
72	MECHANICAL- BUILDINGS MATERIALS	Fly Ash/Fly Ash Lime Bricks	Water Absorption	IS 3495 (Part 2)
73	MECHANICAL- BUILDINGS MATERIALS	Fly Ash/Granulated Blast Furnace Slag	Fineness	IS 1727
74	MECHANICAL- BUILDINGS MATERIALS	Fly ash/Granulated Blast Furnace Slag	Specific gravity	IS 1727
75	MECHANICAL- BUILDINGS MATERIALS	Hardened Concrete	Accelerated Cured Compressive Strength	IS 9013
76	MECHANICAL- BUILDINGS MATERIALS	Hardened Concrete	Compressive Strength	IS 516

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77	MECHANICAL- BUILDINGS MATERIALS	Hardened Concrete	Depth of Water penetration Under pressure	IS 516 (Part 2 Sec 1)
78	MECHANICAL- BUILDINGS MATERIALS	Hardened Concrete	Flexural Strength	IS 516
79	MECHANICAL- BUILDINGS MATERIALS	Hardened Concrete	Rapid Chloride penetration test	ASTM C1202
80	MECHANICAL- BUILDINGS MATERIALS	Hollow/Solid Concrete Blocks	Block Density	IS 2185 (Part1)
81	MECHANICAL- BUILDINGS MATERIALS	Hollow/Solid Concrete Blocks	Compressive Strength	IS 2185 (Part 1)
82	MECHANICAL- BUILDINGS MATERIALS	Hollow/Solid Concrete Blocks	Dimensional Analysis	IS 2185 (Part 1)
83	MECHANICAL- BUILDINGS MATERIALS	Hollow/Solid Concrete Blocks	Water Absorption	IS 2185 (Part 1)
84	MECHANICAL- BUILDINGS MATERIALS	Hydraulic Cement (OPC/PPC/PSC)	Compressive Strength	IS 4031 (Part 6)
85	MECHANICAL- BUILDINGS MATERIALS	Hydraulic Cement (OPC/PPC/PSC)	Consisitency	IS 4031 (Part 4)
86	MECHANICAL- BUILDINGS MATERIALS	Hydraulic Cement (OPC/PPC/PSC)	Density	IS 4031 (Part 11)
87	MECHANICAL- BUILDINGS MATERIALS	Hydraulic Cement (OPC/PPC/PSC)	Final Setting time	IS 4031 (Part 5)
88	MECHANICAL- BUILDINGS MATERIALS	Hydraulic Cement (OPC/PPC/PSC)	Fineness	IS 4031 (Part 2)
89	MECHANICAL- BUILDINGS MATERIALS	Hydraulic Cement (OPC/PPC/PSC)	Initial Setting time	IS 4031 (Part 5)
90	MECHANICAL- BUILDINGS MATERIALS	Hydraulic Cement (OPC/PPC/PSC)	Soundness (Le-Chatliers Method)	IS 4031 (Part 3)
91	MECHANICAL- BUILDINGS MATERIALS	Paver Block	Compressive Strength	IS 15658
92	MECHANICAL- BUILDINGS MATERIALS	Paver Block	Water Absorption	IS 15658
93	MECHANICAL- MECHANICAL PROPERTIES OF METALS	High strength deformed steel bars for concrete reinforcement	0.2% proof stress/Yield Stress	IS 1608 (Part 1)
94	MECHANICAL- MECHANICAL PROPERTIES OF METALS	High strength deformed steel bars for concrete reinforcement	Bend Test	IS 1599

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95	MECHANICAL-MECHANICAL PROPERTIES OF METALS	High strength deformed steel bars for concrete reinforcement	Elongation	IS 1608 (Part 1)
96	MECHANICAL-MECHANICAL PROPERTIES OF METALS	High Strength deformed steel bars for concrete reinforcement	Re Bend Test	IS 1786
97	MECHANICAL-MECHANICAL PROPERTIES OF METALS	High strength deformed steel bars for concrete reinforcement	Tensile strength	IS 1608 (Part 1)
98	MECHANICAL-MECHANICAL PROPERTIES OF METALS	High Strength deformed steel bars for concrete reinforcement	Weight/meter	IS 1786
99	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel Tubes	Elongation	IS 1608 (Part 1)
100	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel Tubes	Mass per meter run	IS 1161
101	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel tubes	Tensile strength	IS 1608 (Part 1)
102	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Steel Tubes	Yield Stress	IS 1608 (Part 1)
103	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Structural Steel	Bend Test	IS 1599
104	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Structural Steel	Elongation	IS 1608 (Part 1)
105	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Structural Steel	Tensile Strength	IS 1608 (Part 1)
106	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Structural Steel	Weight/meter	IS 1161
107	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Structural Steel	Yield stress	IS 1608 (Part 1)
108	MECHANICAL- SOIL AND ROCK	Natural Building Stone	Apparent Specific Gravity	IS 1124

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109	MECHANICAL- SOIL AND ROCK	Natural Building Stone	Compressive Strength	IS 1121 (Part 1)
110	MECHANICAL- SOIL AND ROCK	Natural Building Stone	True Porosity	IS 1124
111	MECHANICAL- SOIL AND ROCK	Natural Building Stone	True Specific Gravity	IS 1122
112	MECHANICAL- SOIL AND ROCK	Natural Building Stone	Water Absorption	IS 1124
113	MECHANICAL- SOIL AND ROCK	Rock	Unconfined Compressive Strength	IS 9143
114	MECHANICAL- SOIL AND ROCK	Rock	Water Content	IS 13030
115	MECHANICAL- SOIL AND ROCK	Soil/Granular Sub Base/ Wet Mix Maccadam	California Bearing Ratio (CBR)	IS 2720 (Part 16)
116	MECHANICAL- SOIL AND ROCK	Soil/Granular Sub Base/ Wet Mix Maccadam	Direct Shear Test (Angle of Friction)	IS 2720 (Part 13)
117	MECHANICAL- SOIL AND ROCK	Soil/Granular Sub Base/ Wet Mix Maccadam	Direct Shear Test (Cohesion)	IS 2720 (Part 13)
118	MECHANICAL- SOIL AND ROCK	Soil/Granular Sub Base/ Wet Mix Maccadam	Free Swell Index	IS 2720 (Part 40)
119	MECHANICAL- SOIL AND ROCK	Soil/Granular Sub Base/ Wet Mix Maccadam	Heavy Compaction (OMC)	IS 2720 (Part 8)
120	MECHANICAL- SOIL AND ROCK	Soil/Granular Sub Base/ Wet Mix Maccadam	Heavy Compaction(MDD)	IS 2720 (Part 8)
121	MECHANICAL- SOIL AND ROCK	Soil/Granular Sub Base/ Wet Mix Maccadam	Light Compaction (OMC)	IS 2720 (Part 7)
122	MECHANICAL- SOIL AND ROCK	Soil/Granular Sub Base/ Wet Mix Maccadam	Light Compaction(MDD)	IS 2720 (Part 7)
123	MECHANICAL- SOIL AND ROCK	Soil/Granular Sub Base/ Wet Mix Maccadam	Liquid Limit	IS 2720 (Part 5)
124	MECHANICAL- SOIL AND ROCK	Soil/Granular Sub Base/ Wet Mix Maccadam	Moisture Content	IS 2720 (Part 2)
125	MECHANICAL- SOIL AND ROCK	Soil/Granular Sub Base/ Wet Mix Maccadam	Particle Size Analysis (By Hydrometer Method)	IS 2720 (Part 4)
126	MECHANICAL- SOIL AND ROCK	Soil/Granular Sub Base/ Wet Mix Maccadam	Plastic Limit	IS 2720 (Part 5)
127	MECHANICAL- SOIL AND ROCK	Soil/Granular Sub Base/Wet Mix Macadam	Grain Size Analysis (by IS Sieve Method)	IS 2720 (Part 4)

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128	MECHANICAL- SOIL AND ROCK	Soil/Granular Sub Base/Wet Mix Macadam	Specific gravity	IS 2720 (Part 3 Sec 1)
129	MECHANICAL- SOIL AND ROCK	Soil/Granular Sub Base/Wet Mix Macadam	Unconfined Compression Strength	IS 2720 (Part 10)

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Site Facility				
1	MECHANICAL- SOIL AND ROCK	Soil/Granular Sub Base/Wet Mix Macadam	Field density (By Core Cutter method)	IS 2720 (Part 29)
2	MECHANICAL- SOIL AND ROCK	Soil/Granular Sub Base/Wet Mix Macadam	Field Density (By Sand Replacement method)	IS 2720 (Part 28)
3	NON-DESTRUCTIVE-BUILDING MATERIALS - REINFORCED CONCRETE STRUCTURES	Reinforced Concrete Structures	Rebound Hammer Test	IS 516 (Part 5/Sec 4)
4	NON-DESTRUCTIVE-BUILDING MATERIALS - REINFORCED CONCRETE STRUCTURES	Reinforced Concrete Structures	Ultrasonic pulse velocity	IS 516 (Part 5/Sec 1)