National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : MANANDA TEST HOUSE, DHANAUNI ROAD, DERA BASSI, S.A.S NAGAR, PUNJAB, 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	Bitumen Emulsion	Coagulation of emulsion	IS: 8887
2	CHEMICAL- BUILDING MATERIAL	Bitumen Emulsion	Miscibility with water	IS: 8887
3	CHEMICAL- BUILDING MATERIAL	Bitumen Emulsion	Residue on 600 micron	IS: 8887
4	CHEMICAL- BUILDING MATERIAL	Bitumen Emulsion	Stability to mixing with cement	IS: 8887
5	CHEMICAL- BUILDING MATERIAL	Bitumen Emulsion	Storage stability after 24h	IS: 8887
6	CHEMICAL- BUILDING MATERIAL	Bitumen Emulsion	Tests on residue-Depth of Penetration	IS: 1203
7	CHEMICAL- BUILDING MATERIAL	Bitumen Emulsion	Tests on residue-Ductility	IS: 1208
8	CHEMICAL- BUILDING MATERIAL	Bitumen Emulsion	Tests on residue-Residue by evaporation	IS: 8887
9	CHEMICAL- BUILDING MATERIAL	Bitumen Emulsion	Tests on residue-Solubility in trichloroethylene	IS: 1216
10	CHEMICAL- BUILDING MATERIAL	Bitumen Emulsion	Viscosity by saybolt furol viscometer	IS: 3117
11	CHEMICAL- BUILDING MATERIAL	Coarse, Fine aggregate & Boulders	Alkali aggregate reactivity (Chemical method) Dissolved silica	IS; 2386 (Part 7)
12	CHEMICAL- BUILDING MATERIAL	Coarse, Fine aggregate & Boulders	Alkali aggregate reactivity (Chemical method) Reduction in alkalinity	IS: 2386 (Part 7)
13	CHEMICAL- BUILDING MATERIAL	Coarse, Fine aggregate & Boulders	Alkali content as Na2O	IS: 4032
14	CHEMICAL- BUILDING MATERIAL	Coarse, Fine aggregate & Boulders	Calcium oxide as CaO	IS: 4032
15	CHEMICAL- BUILDING MATERIAL	Coarse, Fine aggregate & Boulders	Chlorine as NaCl	IS: 4032
16	CHEMICAL- BUILDING MATERIAL	Coarse, Fine aggregate & Boulders	Magnesium oxide as MgO	IS: 4032
17	CHEMICAL- BUILDING MATERIAL	Coarse, Fine aggregate & Boulders	pH value	IS: 2720 (Part 26)

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18	CHEMICAL- BUILDING MATERIAL	Coarse, Fine aggregate & Boulders	Silica as SiO2	IS: 4032
19	CHEMICAL- BUILDING MATERIAL	Coarse, Fine aggregate & Boulders	Total iron as FeO	IS: 4032
20	CHEMICAL- BUILDING MATERIAL	Coarse, Fine aggregate & Boulders	Total Sulphate content (as SO3)	IS: 4032
21	CHEMICAL- BUILDING MATERIAL	Coarse, Fine aggregate & Boulders	Total sulphur as S	IS: 4032
22	CHEMICAL- BUILDING MATERIAL	Coarse, Fine aggregate & Boulders	Water Soluble Chloride content	IS: 14959 (Part 2)
23	CHEMICAL- BUILDING MATERIAL	Concrete Admixtures	Ash content	IS: 9103
24	CHEMICAL- BUILDING MATERIAL	Concrete Admixtures	Chloride content	IS: 6925
25	CHEMICAL- BUILDING MATERIAL	Concrete Admixtures	Dry material content	IS: 9103
26	CHEMICAL- BUILDING MATERIAL	Concrete Admixtures	pH value	IS: 9103
27	CHEMICAL- BUILDING MATERIAL	Concrete Admixtures	Relative density	IS: 9103
28	CHEMICAL- BUILDING MATERIAL	Flyash/Pulverized fuel ash	Available Alkalie as Sodium oxide as Na2O	IS: 3812 (Part 1)
29	CHEMICAL- BUILDING MATERIAL	Flyash/Pulverized fuel ash	Calcium oxide as CaO	IS: 1727
30	CHEMICAL- BUILDING MATERIAL	Flyash/Pulverized fuel ash	Combined Ferric oxide & Alumina	IS: 1727
31	CHEMICAL- BUILDING MATERIAL	Flyash/Pulverized fuel ash	Loss on ignition	IS: 1727
32	CHEMICAL- BUILDING MATERIAL	Flyash/Pulverized fuel ash	Magnesia (MgO)	IS: 1727
33	CHEMICAL- BUILDING MATERIAL	Flyash/Pulverized fuel ash	Silica (as SiO2)	IS: 1727
34	CHEMICAL- BUILDING MATERIAL	Flyash/Pulverized fuel ash	Sulphuric Anhydride (SO3)	IS: 1727
35	CHEMICAL- BUILDING MATERIAL	Flyash/Pulverized fuel ash	Total chloride (Cl)	IS: 4032
36	CHEMICAL- BUILDING MATERIAL	Ordinary Portland Cement	Insoluble residue (OPC)	IS: 4032

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37	CHEMICAL- BUILDING MATERIAL	Ordinary Portland/Portland Pozzolana Cement	Chloride	IS: 4032
38	CHEMICAL- BUILDING MATERIAL	Ordinary Portland/Portland Pozzolana Cement	Al2O3	IS: 4032
39	CHEMICAL- BUILDING MATERIAL	Ordinary Portland/Portland Pozzolana Cement	CaO	IS: 4032
40	CHEMICAL- BUILDING MATERIAL	Ordinary Portland/Portland Pozzolana Cement	Fe2O3	IS: 4032
41	CHEMICAL- BUILDING MATERIAL	Ordinary Portland/Portland Pozzolana Cement	Loss on ignition	IS: 4032
42	CHEMICAL- BUILDING MATERIAL	Ordinary Portland/Portland Pozzolana Cement	Magnesia	IS: 4032
43	CHEMICAL- BUILDING MATERIAL	Ordinary Portland/Portland Pozzolana Cement	SiO2	IS: 4032
44	CHEMICAL- BUILDING MATERIAL	Ordinary Portland/Portland Pozzolana Cement	Sulphuric anhydride	IS: 4032
45	CHEMICAL- BUILDING MATERIAL	Paving/Modified/Industrial Bitumen	Test on residue from thin film oven tests/RTFOT-Loss in weight	IS: 9382
46	CHEMICAL- BUILDING MATERIAL	Paving/Modified/Industrial Bitumen	Absolute viscosity	IS: 1206 (Part II)
47	CHEMICAL- BUILDING MATERIAL	Paving/Modified/Industrial Bitumen	Bitumen binder content	IRC: SP: 11
48	CHEMICAL- BUILDING MATERIAL	Paving/Modified/Industrial Bitumen	Depth of Penetration	IS 1203
49	CHEMICAL- BUILDING MATERIAL	Paving/Modified/Industrial Bitumen	Elastic recovery of half thread in ductilometer	IRC: SP: 53
50	CHEMICAL- BUILDING MATERIAL	Paving/Modified/Industrial Bitumen	Flash & fire point	IS: 1448 (Part 69)
51	CHEMICAL- BUILDING MATERIAL	Paving/Modified/Industrial Bitumen	Kinematic viscosity	IS: 1206 (Part III)
52	CHEMICAL- BUILDING MATERIAL	Paving/Modified/Industrial Bitumen	Separation, Difference in softening point R&B	IRC: SP: 53
53	CHEMICAL- BUILDING MATERIAL	Paving/Modified/Industrial Bitumen	Softening point	IS: 1205
54	CHEMICAL- BUILDING MATERIAL	Paving/Modified/Industrial Bitumen	Solubility in trichloroethylene	IS: 1216

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55	CHEMICAL- BUILDING MATERIAL	Paving/Modified/Industrial Bitumen	Specific gravity	IS: 1202
56	CHEMICAL- BUILDING MATERIAL	Paving/Modified/Industrial Bitumen	Test on residue from thin film oven tests/RTFOT-Ductility	IS: 1208
57	CHEMICAL- BUILDING MATERIAL	Paving/Modified/Industrial Bitumen	Test on residue from thin film oven tests/RTFOT-Increase in softening point	IS: 1205
58	CHEMICAL- BUILDING MATERIAL	Paving/Modified/Industrial Bitumen	Test on residue from thin film oven tests/RTFOT-Reduction in penetration of residue	IS: 1203
59	CHEMICAL- BUILDING MATERIAL	Portland Pozzolana Cement	Insoluble residue (PPC)	IS: 4032
60	CHEMICAL- METALLIC COATINGS & TREATMENT SOLUTIONS	Aluminium and its alloys	Anodic coating (Stripping method)	IS: 5523
61	CHEMICAL- METALLIC COATINGS & TREATMENT SOLUTIONS	Zinc Coated Iron and Steel articles	Mass of zinc coating	IS: 6745
62	CHEMICAL- METALS & ALLOYS	High strength deformed steel bars and wires/Hot rolled medium and high tensile structural steel/hollow steel/steel tubes	Carbon	IS: 228 (Part 1)
63	CHEMICAL- METALS & ALLOYS	High strength deformed steel bars and wires/Hot rolled medium and high tensile structural steel/hollow steel/steel tubes	Manganese	IS: 228 (Part 2)
64	CHEMICAL- METALS & ALLOYS	High strength deformed steel bars and wires/Hot rolled medium and high tensile structural steel/hollow steel/steel tubes	Phosphorus	IS: 228 (Part 3)
65	CHEMICAL- METALS & ALLOYS	High strength deformed steel bars and wires/Hot rolled medium and high tensile structural steel/hollow steel/steel tubes	Silicon	IS: 228 (Part 8)
66	CHEMICAL- METALS & ALLOYS	High strength deformed steel bars and wires/Hot rolled medium and high tensile structural steel/hollow steel/steel tubes	Sulphur	IS: 228 (Part 9)
67	CHEMICAL- SOIL AND ROCK	Clays & soils	Chloride content	IS: 4032
68	CHEMICAL- SOIL AND ROCK	Clays & soils	pH value	IS: 2720 (Part 26)
69	CHEMICAL- SOIL AND ROCK	Clays & soils	Total Soluble Sulphate	IS: 2720 (Part 27)

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70	CHEMICAL- WATER	Construction water	Acidity (Volume of 0.02 N NaOH to neutralize 100ml of water)	IS: 456
71	CHEMICAL- WATER	Construction water	Alkalinity (Volume of 0.02 N H2SO4 to neutralize 100ml of water)	IS: 456
72	CHEMICAL- WATER	Construction water	Chloride	IS: 3025 (Part 32)
73	CHEMICAL- WATER	Construction water	Inorganic	IS: 3025 (Part 18)
74	CHEMICAL- WATER	Construction water	Organic	IS: 3025 (Part 18)
75	CHEMICAL- WATER	Construction water	pH	IS: 3025 (Part 11)
76	CHEMICAL- WATER	Construction water	Sulphate	IS: 3025 (Part 24)
77	CHEMICAL- WATER	Construction water	Suspended solids	IS: 3025 (Part 17)
78	MECHANICAL- BUILDINGS MATERIALS	Burnt clay/Fly ash building bricks	Compressive strength	IS: 3495 (Part 1)
79	MECHANICAL- BUILDINGS MATERIALS	Burnt clay/Fly ash building bricks	Dimensions	IS; 1077
80	MECHANICAL- BUILDINGS MATERIALS	Burnt clay/Fly ash building bricks	Efflorescence	IS: 3495 (Part 3)
81	MECHANICAL- BUILDINGS MATERIALS	Burnt clay/Fly ash building bricks	Warpage	IS: 3495 (Part 4)
82	MECHANICAL- BUILDINGS MATERIALS	Burnt clay/Fly ash building bricks	Water absorption	IS: 3495 (Part 2)
83	MECHANICAL- BUILDINGS MATERIALS	Coarse aggregate/Boulders	10% fine value	IS: 2386 (Part 4)
84	MECHANICAL- BUILDINGS MATERIALS	Coarse aggregate/Boulders	Abrasion value	IS: 2386 (Part 4)
85	MECHANICAL- BUILDINGS MATERIALS	Coarse aggregate/Boulders	Bulk density	IS: 2386 (Part 3)
86	MECHANICAL- BUILDINGS MATERIALS	Coarse aggregate/Boulders	Combined flakiness & elongation index	IS: 2386 (Part 1)
87	MECHANICAL- BUILDINGS MATERIALS	Coarse aggregate/Boulders	Crushing value	IS: 2386 (Part 4)
88	MECHANICAL- BUILDINGS MATERIALS	Coarse aggregate/Boulders	Deleterious material	IS: 2386 (Part 1 & 2)
89	MECHANICAL- BUILDINGS MATERIALS	Coarse aggregate/Boulders	Elongation index	IS: 2386 (Part 1)

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90	MECHANICAL- BUILDINGS MATERIALS	Coarse aggregate/Boulders	Flakiness index	IS: 2386 (Part 1)
91	MECHANICAL- BUILDINGS MATERIALS	Coarse aggregate/Boulders	Impact value	IS: 2386 (Part 4)
92	MECHANICAL- BUILDINGS MATERIALS	Coarse aggregate/Boulders	Sieve analysis (Sieve size 4.75 to 80mm)	IS: 2386 (Part 1)
93	MECHANICAL- BUILDINGS MATERIALS	Coarse aggregate/Boulders	Soundness	IS: 2386 (Part 5)
94	MECHANICAL- BUILDINGS MATERIALS	Coarse aggregate/Boulders	Specific gravity	IS: 2386 (Part 3)
95	MECHANICAL- BUILDINGS MATERIALS	Coarse aggregate/Boulders	Stripping value	IS: 6241
96	MECHANICAL- BUILDINGS MATERIALS	Coarse aggregate/Boulders	Water absorption	IS: 2386 (Part 3)
97	MECHANICAL- BUILDINGS MATERIALS	Concrete core	Compressive strength of core	IS: 516 (Part-4)
98	MECHANICAL- BUILDINGS MATERIALS	Concrete cubes	Compressive strength	IS: 516 (Part 1/ Sec 1)
99	MECHANICAL- BUILDINGS MATERIALS	Concrete mix	Slump	IS: 1199
100	MECHANICAL- BUILDINGS MATERIALS	Fine aggregate/Boulders	Bulk density	IS: 2386 (part 3)
101	MECHANICAL- BUILDINGS MATERIALS	Fine aggregate/Boulders	Deleterious material	IS: 2386 (Part 1 & 2)
102	MECHANICAL- BUILDINGS MATERIALS	Fine aggregate/Boulders	Measuring mortar making properties of fine aggregate	IS: 2386 (Part 6)
103	MECHANICAL- BUILDINGS MATERIALS	Fine aggregate/Boulders	Organic impurities	IS: 2386 (Part 2)
104	MECHANICAL- BUILDINGS MATERIALS	Fine aggregate/Boulders	Sieve analysis (Sieve size 10mm to 0.075mm)	IS: 2386 (Part 1)
105	MECHANICAL- BUILDINGS MATERIALS	Fine aggregate/Boulders	Soundness	IS: 2386 (Part 5)
106	MECHANICAL- BUILDINGS MATERIALS	Fine aggregate/Boulders	Specific gravity	IS; 2386 (Part 3)
107	MECHANICAL- BUILDINGS MATERIALS	Fine aggregate/Boulders	Water absorption	IS: 2386 (Part 3)
108	MECHANICAL- BUILDINGS MATERIALS	Flyash/Pulverized fuel ash	Compressive strength at 28 days	IS: 1727

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109	MECHANICAL- BUILDINGS MATERIALS	Flyash/Pulverized fuel ash	Density	IS: 4031 (Part 11)
110	MECHANICAL- BUILDINGS MATERIALS	Flyash/Pulverized fuel ash	Fineness (by Blaine air permeability)	IS: 1727
111	MECHANICAL- BUILDINGS MATERIALS	Flyash/Pulverized fuel ash	Lime reactivity-Av. compressive strength	IS: 1727
112	MECHANICAL- BUILDINGS MATERIALS	Flyash/Pulverized fuel ash	Particle retained on 45 micron	IS: 1727
113	MECHANICAL- BUILDINGS MATERIALS	Flyash/Pulverized fuel ash	Soundness by autoclave	IS: 4031 (Part 3)
114	MECHANICAL- BUILDINGS MATERIALS	Ordinary Portland/Portland Pozzolana Cement	Compressive strength	IS: 4031 (Part 6)
115	MECHANICAL- BUILDINGS MATERIALS	Ordinary Portland/Portland Pozzolana Cement	Consistency	IS: 4031 (Part 4)
116	MECHANICAL- BUILDINGS MATERIALS	Ordinary Portland/Portland Pozzolana Cement	Density	IS: 4031 (Part 11)
117	MECHANICAL- BUILDINGS MATERIALS	Ordinary Portland/Portland Pozzolana Cement	Drying shrinkage	IS: 4031 (Part-10)
118	MECHANICAL- BUILDINGS MATERIALS	Ordinary Portland/Portland Pozzolana Cement	Final setting time	IS: 4031 (Part 5)
119	MECHANICAL- BUILDINGS MATERIALS	Ordinary Portland/Portland Pozzolana Cement	Fineness-Blaine air permeability	IS: 4031 (Part 2)
120	MECHANICAL- BUILDINGS MATERIALS	Ordinary Portland/Portland Pozzolana Cement	Fineness-Dry Sieving	IS: 4031 (Part 1)
121	MECHANICAL- BUILDINGS MATERIALS	Ordinary Portland/Portland Pozzolana Cement	Initial Setting time	IS: 4031 (Part 5)
122	MECHANICAL- BUILDINGS MATERIALS	Ordinary Portland/Portland Pozzolana Cement	Soundness-Auto clave	IS: 4031 (Part 3)
123	MECHANICAL- BUILDINGS MATERIALS	Ordinary Portland/Portland Pozzolana Cement	Soundness-Le-chatelier	IS: 4031 (Part 3)
124	MECHANICAL- BUILDINGS MATERIALS	Pre-Casted Blocks (Paver block)	Abrasion resistance	IS: 15658
125	MECHANICAL- BUILDINGS MATERIALS	Pre-Casted Blocks (Paver block)	Colour and Texture	IS: 15658
126	MECHANICAL- BUILDINGS MATERIALS	Pre-Casted Blocks (Paver block)	Compressive strength	IS: 15658
127	MECHANICAL- BUILDINGS MATERIALS	Pre-Casted Blocks (Paver block)	Dimensions-Arris/Chamfer	IS: 15658

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128	MECHANICAL- BUILDINGS MATERIALS	Pre-Casted Blocks (Paver block)	Dimensions-Aspect Ratio	IS: 15658
129	MECHANICAL- BUILDINGS MATERIALS	Pre-Casted Blocks (Paver block)	Dimensions-Length	IS: 15658
130	MECHANICAL- BUILDINGS MATERIALS	Pre-Casted Blocks (Paver block)	Dimensions-Plan area	IS: 15658
131	MECHANICAL- BUILDINGS MATERIALS	Pre-Casted Blocks (Paver block)	Dimensions-Squareness	IS: 15658
132	MECHANICAL- BUILDINGS MATERIALS	Pre-Casted Blocks (Paver block)	Dimensions-Thickness	IS: 15658
133	MECHANICAL- BUILDINGS MATERIALS	Pre-Casted Blocks (Paver block)	Dimensions-Thickness of wearing layer	IS: 15658
134	MECHANICAL- BUILDINGS MATERIALS	Pre-Casted Blocks (Paver block)	Dimensions-Wearing Face Area	IS: 15658
135	MECHANICAL- BUILDINGS MATERIALS	Pre-Casted Blocks (Paver block)	Dimensions-Width	IS: 15658
136	MECHANICAL- BUILDINGS MATERIALS	Pre-Casted Blocks (Paver block)	Flexural strength	IS: 15658
137	MECHANICAL- BUILDINGS MATERIALS	Pre-Casted Blocks (Paver block)	Flexural strength-Breaking load	IS: 15658
138	MECHANICAL- BUILDINGS MATERIALS	Pre-Casted Blocks (Paver block)	Freeze-Thaw Durability	IS: 15658
139	MECHANICAL- BUILDINGS MATERIALS	Pre-Casted Blocks (Paver block)	Tensile Splitting Strength	IS: 15658
140	MECHANICAL- BUILDINGS MATERIALS	Pre-Casted Blocks (Paver block)	Tensile splitting strength-Failure load per unit length	IS: 15658
141	MECHANICAL- BUILDINGS MATERIALS	Pre-Casted Blocks (Paver block)	Visual Inspection	IS: 15658
142	MECHANICAL- BUILDINGS MATERIALS	Pre-Casted Blocks (Paver block)	Water absorption	IS: 15658
143	MECHANICAL- BUILDINGS MATERIALS	Tiles Cement concrete flooring tiles (Plain cement/Plain coloured/Terrazzo)	Dimension (Length)	IS: 1237
144	MECHANICAL- BUILDINGS MATERIALS	Tiles Cement concrete flooring tiles (Plain cement/Plain coloured/Terrazzo)	Flatness of the tile surface	IS: 1237
145	MECHANICAL- BUILDINGS MATERIALS	Tiles Cement concrete flooring tiles (Plain cement/Plain coloured/Terrazzo)	Perpendicularity	IS: 1237
146	MECHANICAL- BUILDINGS MATERIALS	Tiles Cement concrete flooring tiles (Plain cement/Plain coloured/Terrazzo)	Resistance to wear	IS: 1237

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147	MECHANICAL- BUILDINGS MATERIALS	Tiles Cement concrete flooring tiles (Plain cement/Plain coloured/Terrazzo)	Straightness	IS: 1237
148	MECHANICAL- BUILDINGS MATERIALS	Tiles Cement concrete flooring tiles (Plain cement/Plain coloured/Terrazzo)	Thickness of wearing layer	IS: 1237
149	MECHANICAL- BUILDINGS MATERIALS	Tiles Cement concrete flooring tiles (Plain cement/Plain coloured/Terrazzo)	Water absorption	IS: 1237
150	MECHANICAL- BUILDINGS MATERIALS	Tiles Cement concrete flooring tiles (Plain cement/Plain coloured/Terrazzo)	Wet Transverse Strength	IS: 1237
151	MECHANICAL- BUILDINGS MATERIALS	Tiles Cement concrete flooring tiles (Plain cement/Plain coloured/Terrazzo)	Dimension (Thickness)	IS 1237
152	MECHANICAL- BUILDINGS MATERIALS	Tiles Cement concrete flooring tiles (Plain cement/Plain coloured/Terrazzo)	Dimension (Width)	IS 1237
153	MECHANICAL- BUILDINGS MATERIALS	Tiles Chequered cement concrete tiles	Dimension (Length)	IS: 13801
154	MECHANICAL- BUILDINGS MATERIALS	Tiles Chequered cement concrete tiles	Flatness of the tile surface	IS: 13801
155	MECHANICAL- BUILDINGS MATERIALS	Tiles Chequered cement concrete tiles	Perpendicularity	IS: 13801
156	MECHANICAL- BUILDINGS MATERIALS	Tiles Chequered cement concrete tiles	Resistance to wear	IS: 13801
157	MECHANICAL- BUILDINGS MATERIALS	Tiles Chequered cement concrete tiles	Straightness	IS: 13801
158	MECHANICAL- BUILDINGS MATERIALS	Tiles Chequered cement concrete tiles	Thickness of wearing layer	IS: 13801
159	MECHANICAL- BUILDINGS MATERIALS	Tiles Chequered cement concrete tiles	Water absorption	IS: 13801
160	MECHANICAL- BUILDINGS MATERIALS	Tiles Chequered cement concrete tiles	Wet Transverse Strength	IS: 13801
161	MECHANICAL- BUILDINGS MATERIALS	Tiles Chequered cement concrete tiles	Dimension (Thickness)	IS 13801
162	MECHANICAL- BUILDINGS MATERIALS	Tiles Chequered cement concrete tiles	Dimension (Width)	IS 13801
163	MECHANICAL- MECHANICAL PROPERTIES OF METALS	High strength deformed steel bars and wires/Hot rolled medium and high tensile structural steel/hollow steel/steel tubes	Bend test	IS: 1599
164	MECHANICAL- MECHANICAL PROPERTIES OF METALS	High strength deformed steel bars and wires/Hot rolled medium and high tensile structural steel/hollow steel/steel tubes	Elongation	IS: 1608 (Part-1)

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165	MECHANICAL-MECHANICAL PROPERTIES OF METALS	High strength deformed steel bars and wires/Hot rolled medium and high tensile structural steel/hollow steel/steel tubes	Rebend test	IS: 1786
166	MECHANICAL-MECHANICAL PROPERTIES OF METALS	High strength deformed steel bars and wires/Hot rolled medium and high tensile structural steel/hollow steel/steel tubes	Tensile strength	IS: 1608 (Part-1)
167	MECHANICAL-MECHANICAL PROPERTIES OF METALS	High strength deformed steel bars and wires/Hot rolled medium and high tensile structural steel/hollow steel/steel tubes	Weight per meter	IS: 1786
168	MECHANICAL-MECHANICAL PROPERTIES OF METALS	High strength deformed steel bars and wires/Hot rolled medium and high tensile structural steel/hollow steel/steel tubes	Weight per meter	IS: 2062
169	MECHANICAL-MECHANICAL PROPERTIES OF METALS	High strength deformed steel bars and wires/Hot rolled medium and high tensile structural steel/hollow steel/steel tubes	Yield stress	IS: 1608 (Part-1)
170	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Weld & welded test specimens	Bend tests	ASME Sec-IX & IS: 7307 (Part-1)
171	MECHANICAL-MECHANICAL PROPERTIES OF METALS	Weld & welded test specimens	Tensile strength	ASME-Sec-IX & IS: 7307 (Part-1)
172	MECHANICAL- SOIL AND ROCK	Bentonite	Density	IS: 2911 (Part 1/Sec 2)
173	MECHANICAL- SOIL AND ROCK	Bentonite	Marsh Viscosity	ASTM D 6910
174	MECHANICAL- SOIL AND ROCK	Clays & Soils (Soil, Granular material & Bentonite clay)	CBR (Soaked)	IS: 2720 (Part 16)
175	MECHANICAL- SOIL AND ROCK	Clays & Soils (Soil, Granular material & Bentonite clay)	Direct shear test-Angle of internal friction	IS: 2720 (Part 13)
176	MECHANICAL- SOIL AND ROCK	Clays & Soils (Soil, Granular material & Bentonite clay)	Direct shear test-Cohesion (C)	IS: 2720 (Part 13)
177	MECHANICAL- SOIL AND ROCK	Clays & Soils (Soil, Granular material & Bentonite clay)	Free swell index	IS: 2720 (Part 40)
178	MECHANICAL- SOIL AND ROCK	Clays & Soils (Soil, Granular material & Bentonite clay)	Grain size distribution	IS: 2720 (Part 4)
179	MECHANICAL- SOIL AND ROCK	Clays & Soils (Soil, Granular material & Bentonite clay)	Heavy compaction test (MDD)	IS: 2720 (Part 8)
180	MECHANICAL- SOIL AND ROCK	Clays & Soils (Soil, Granular material & Bentonite clay)	Heavy compaction test (OMC)	IS: 2720 (Part 8)

National Accreditation Board for Testing and Calibration Laboratories

SCOPE OF ACCREDITATION

Laboratory Name : MANANDA TEST HOUSE, DHANAUNI ROAD, DERA BASSI, S.A.S NAGAR, PUNJAB, INDIA
Accreditation Standard ISO/IEC 17025:2017
Certificate Number TC-7637 **Page No** 11 of 11
Validity 05/09/2021 to 04/09/2023 **Last Amended on** 22/09/2021

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
181	MECHANICAL- SOIL AND ROCK	Clays & Soils (Soil, Granular material & Bentonite clay)	Light Compaction test (MDD)	IS: 2720 (Part 7)
182	MECHANICAL- SOIL AND ROCK	Clays & Soils (Soil, Granular material & Bentonite clay)	Light Compaction test (OMC)	IS: 2720 (Part 7)
183	MECHANICAL- SOIL AND ROCK	Clays & Soils (Soil, Granular material & Bentonite clay)	Liquid limit	IS: 2720 (Part 5)
184	MECHANICAL- SOIL AND ROCK	Clays & Soils (Soil, Granular material & Bentonite clay)	Permeability	IS: 2720 (Part-17)
185	MECHANICAL- SOIL AND ROCK	Clays & Soils (Soil, Granular material & Bentonite clay)	Plastic limit	Is: 2720 (Part 5)
186	MECHANICAL- SOIL AND ROCK	Clays & Soils (Soil, Granular material & Bentonite clay)	Plasticity index	IS: 2720 (Part 5)
187	MECHANICAL- SOIL AND ROCK	Clays & Soils (Soil, Granular material & Bentonite clay)	Shrinkage factors	IS: 2720 (Part 6)
188	MECHANICAL- SOIL AND ROCK	Clays & Soils (Soil, Granular material & Bentonite clay)	Specific gravity (fine grained)	IS: 2720 (Part 3/Sec-1)
189	MECHANICAL- SOIL AND ROCK	Clays & Soils (Soil, Granular material & Bentonite clay)	Unconfined compressive strength	IS: 2720 (Part 10)
190	MECHANICAL- SOIL AND ROCK	Clays & Soils (Soil, Granular material & Bentonite clay)	Water content	IS: 2720 (Part 2)