

Laboratory **Stedrant Technoclinic Pvt. Ltd, Shed No. F-3/A, IDA Nacharam, Street No.10, Hyderabad, Telangana**

Accreditation Standard **ISO/IEC 17025: 2005**

Certificate Number **TC-7523**

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Validity **04.07.2018 to 03.07.2020**

Last Amended on --

Sl.	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing / Limits of Detection
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MECHANICAL TESTING

I. BUILDING MATERIALS				
1.	Aggregate Coarse	Sieve Analysis	IS 2386 (Part 1)	Upto 100 % (2.36 mm to 125 mm)
		Specific gravity	IS 2386 (Part 3)	2.0 to 4.0
		Bulk Density (Loose & Rodded)	IS 2386 (Part 3)	1.0 kg/L to 4.0 kg/L
		Flakiness Index	IS 2386 (Part 1)	Upto 50 %
		Elongation Index	IS 2386 (Part 1)	Upto 50 %
		Water Absorption	IS 2386 (Part 3)	0.1 % to 5 %
		Impact value	IS 2386 (Part 4)	1 % to 60 %
		Los Angeles Abrasion	IS 2386 (Part 4)	1 % to 60 %
		Crushing Value	IS 2386 (Part 4)	1 % to 60 %
		10 % Fines Value	IS 2386 (Part 4)	50 kN to 700 kN
		Material finer than 75 µm	IS 2386 (Part 1)	Upto 10 %
2.	Aggregate Fine	Sieve analysis	IS 2386 (Part 1)	Upto 100 % (75 µm to 6.3 mm)
		Specific gravity	IS 2386 (Part 3)	2.0 to 4.0
		Bulk density (Loose and Rodded)	IS 2386 (Part 3)	1.0 kg/L to 4.0 kg/L
		Bulking	IS 2386 (Part 3)	1 % to 50 %
		Water absorption	IS 2386 (Part 3)	0.1 % to 10 %
		Material finer than 75 µm	IS 2386 (Part 1)	Upto 30 %
3.	Bricks	Water absorption	IS 3495 (Part 2)	1 % to 40 %
		Compressive strength	IS 3495 (Part 1)	1 N/mm ² to 35N/mm ²
		Efflorescence	IS 3495 (Part 3)	Qualitative
4.	Hardened Concrete	Compressive strength	IS 516	5 N/mm ² to 100 N/mm ²
		Flexural strength	IS 516	1 N/mm ² to 15 N/mm ²

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	(Concrete Cubes and Cores)	Splitting Tensile Strength	IS 5816	0.5 N/mm ² to 12 N/mm ²
		Modulus of Elasticity	IS 516	20000 N/mm ² to 70000 N/mm ²
5.	Burnt Clay Hollow Bricks and Blocks	Compressive Strength	IS 3952 (Annexure A)	1 N/mm ² to 35 N/mm ²
		Water Absorption	IS 3952 (Annexure B)	2 % to 30 %
6.	Hydraulic Cement	Consistency	IS 4031 (Part 4)	10 % to 40 %
		Initial setting time	IS 4031 (Part 5)	5 minute to 400 minute
		Final setting time	IS 4031 (Part 5)	35 minute to 800 minute
		Fineness (by Blaine's method)	IS 4031 (Part 2)	100 m ² /kg to 600 m ² /kg
		Compressive strength	IS 4031 (Part 6)	1 N/mm ² to 80 N/mm ²
		Soundness by Le-Chatelier's method	IS 4031 (Part 3)	0.5 mm to 10 mm
		Soundness by Autoclave method	IS 4031 (Part 3)	0.01 % to 2 %
	Density	IS 4031 (Part 11)	2.0 g/cc to 4.0 g/cc	
7.	Bituminous Mix	Binder Content	ASTM D 2172 IRC SP112	1 % to 8 %
		Density	ASTM D2726-17	1.8 g/cc to 3.0 g/cc
8.	Pozzolana-Flyash, Silica Fume	Fineness (by Blaine's Method)	IS 1727	100 m ² /kg to 700 m ² /kg
		Specific gravity	IS 1727	1 to 3
		Residue on 45 µm sieve (Wet)	IS 1727	0.1 % to 50 %
9.	Hollow and Solid Concrete Blocks	Water absorption	IS 2185 (Part 1) Annexure-E	1 % to 20 %
		Dimensional Analysis	IS 2185 (Part 1) Annexure -B	50 mm to 450 mm
		Compressive Strength	IS 2185 (Part 1) Annexure -D	1.0 N/mm ² to 20 N/mm ²
		Block Density	IS 2185 (Part 1) Annexure -E	1000 kg/m ³ to 2800 kg/m ³

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10.	Pavers Block	Water Absorption	IS 15658	0.1 % to 20 %
		Compressive Strength	IS 15658	1 N/mm ² to 75 N/mm ²
11.	Autoclaved Aerated Concrete Blocks	Block Density	IS 6441 (Part 1)	450kg/m ³ to 1000 kg/m ³
		Compressive Strength	IS 6441 (Part 5)	0.5 N/mm ² to 12 N/mm ²
II.	SOIL & ROCK			
1.	Soil, Granular Sub Base, Wet Mix Macadam	Liquid Limit	IS 2720 (Part 5)	20 % to 100 %
		Plastic Limit	IS 2720 (Part 5)	10 % to 70 %
		Moisture content	IS 2720 (Part 2)	1 % to 40 %
		Grain size analysis	IS 2720 (Part 4)	0.1 % to 100 % (0.075 mm to 63 mm)
		Particle Size Analysis by Hydrometer method	IS 2720 (Part 4)	0.1% to 100 % (0.002 mm to 0.075 mm)
		Specific gravity	IS 2720 (Part 3 / Section 1)	2.0 to 3.0
		Proctor Density (Light Compaction)	IS 2720 (Part 7)	OMC= 4 % to 30 % MDD= 1.2 g/cc to 2.5 g/cc
		Proctor Density (Heavy Compaction)	IS 2720 (Part 8)	OMC= 4 % to 25 % MDD= 1.3 g/cc to 2.6 g/cc
	CBR	IS 2720 (Part 16)	1 % to 100 %	
	Free swell index	IS 2720 (Part 40)	0.5 % to 200 %	
2.	Soil, Granular Sub Base, Wet Mix Macadam (at site)	Field Density (by core cutter method)	IS 2720 (Part 29)	1.3 g/cc to 2.4 g/cc
		Field density (by sand replacement method)	IS 2720 (Part 28)	1.3 g/cc to 2.8 g/cc
3.	Natural Building stone	Compressive strength	IS 1121 (Part 1)	100 kg/cm ² to 1200 kg/cm ²
		Water absorption	IS 1124	1 % to 10 %
		True specific gravity	IS 1122	1 to 4
4.	Rock	Unconfined Compressive Strength	IS 9143	1 N/mm ² to 250N/mm ²
		Water Content	IS 13030	0.1 % to 50 %
		Density	IS 13030	1000 kg/m ³ to 5000kg/m ³

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III.	METAL AND METAL ALLOYS			
1.	Steel Tubes	Yield Stress	IS 1608	100 N/mm ² to 700 N/mm ²
		Tensile Strength	IS 1608	100 N/mm ² to 1000 N/mm ²
		Elongation	IS 1608	2 % to 50 %
		Mass per meter run	IS 1161 IS 1239 (Part 1)	0.1 kg to 30 kg
2.	High Strength Deformed Steel Bars And Wires For Concrete Reinforcement	Weight per meter	IS 1786	0.1 kg to 15 kg
		0.2 % Proof Stress	IS 1608	100 N/mm ² to 700 N/mm ²
		Tensile Strength	IS 1608	100 N/mm ² to 900 N/mm ²
		Elongation	IS 1608	1% to 50%
		Bend Test	IS 1599	Qualitative (Mandrel Dia.: 16 mm 20 mm, 24 mm, 30 mm 32 mm, 36 mm, 40 mm 44 mm, 50 mm, 56 mm 60 mm, 64 mm, 70 mm 75 mm, 84 mm, 100 mm 108 mm, 120 mm, 125 mm 140 mm, 150 mm, 160 mm 175 mm, 192 mm, 224 mm and 256 mm)
	Re bend Test	IS 1786	Qualitative (Mandrel Dia.: 32 mm 40 mm, 44 mm, 50 mm 56 mm, 60 mm, 70 mm 84 mm, 100 mm, 108 mm 120 mm, 140 mm, 150 mm 160 mm, 175 mm, 192 mm 224 mm, 256 mm and 288 mm)	
3.	Structural Steel	Weight per meter	IS 808	0.3 kg to 100 kg
		Yield Stress	IS 1608	50 N/mm ² to 500 N/mm ²
		Tensile Strength	IS 1608	100 N/mm ² to 700 N/mm ²

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		Elongation	IS 1608	2% to 50%
		Bend Test	IS 1599	Qualitative (Mandrel Dia.: 10 mm 12 mm, 16 mm, 18 mm 20 mm, 24 mm, 30 mm 32 mm, 36 mm, 40 mm 44 mm, 50 mm, 56 mm 60 mm, 64 mm, 70 mm 75 mm, 84 mm & 100 mm)

Naveen Jangra
Convenor

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<u>NON-DESTRUCTIVE TESTING</u>				
I.	BUILDING MATERIALS			
1.	Reinforced Concrete Structures	Rebound Hammer Test	IS 13311 (Part 2) 1992 (RA 2013)	10 R Number to 60 R Number
		Ultrasonic Pulse Velocity Test	IS 13311 (Part 1) 1992 (RA 2013)	2.0 km/sec to 5.0 km/sec
		Cover Meter Test	BS 1881 (Part 204) -1988	5 mm to 90 mm
		Carbonation Test	EN 14630-2006	1 mm to 40 mm
		Half-cell Potential Measurement Test	ASTM C876-2015	(-)50 mV to (-) 500mV
2.	Reinforced Concrete Structures	Deflection Measurement Test (Load Test)	IS 456-2000 (RA :2016)	0.1 mm to 25 mm