

Laboratory **Chennai Civil-Tech Research Foundation Pvt. Ltd., 264, Nehru Nagar,
2nd Main Road, Kottivakkam, Chennai, Tamil Nadu**

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

Certificate Number **TC-7232**

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Validity **08.05.2018 to 07.05.2020**

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.	Mechanical Properties of Metals			
1.	Structural Steel	Yield Strength	IS 1608	100 N/mm ² to 1300 N/mm ²
		Tensile strength	IS 1608	100 N/mm ² to 1500 N/mm ²
		Elongation	IS 1608	4 % to 50 %
		Bend Test	IS 1599	Qualitative Mandrel diameter: 12 mm, 16 mm, 18 mm, 24 mm, 30 mm, 36 mm, 40 mm, 44 mm, 48 mm, 50 mm, 60 mm, 66 mm & 75 mm
2.	Spliced Joints	Tensile strength	IS 16172	100 N/mm ² to 1500 N/mm ²
3.	High Strength deformed steel bars	Yield Strength	IS 1608	100 N/mm ² to 1300 N/mm ²
		Tensile strength	IS 1608	100 N/mm ² to 1500 N/mm ²
		Elongation	IS 1608	4 % to 50 %
		Bend Test	IS 1599	Qualitative Mandrel diameter: 24 mm, 30 mm, 32 mm, 35 mm, 36 mm, 40 mm, 45 mm, 48 mm, 60 mm, 64 mm, 80 mm, 100 mm, 125 mm, 128 mm and 160 mm
		Rebend Test	IS 1786	Qualitative Mandrel diameter: 32 mm, 40 mm, 42 mm, 49 mm, 50 mm, 63 mm, 72 mm, 84 mm, 96 mm, 112 mm, 120 mm, 140 mm, 150 mm, 175 mm, 192 mm and 224 mm
		Mass Per Meter	IS 1786	0.1 kg to 20 kg

Naveen Jangra
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4.	Non-Magnetic coatings applied to ferrous metals & non magnetic applied to non-ferrous metals	Coating thickness measurement by Magnetic method	ASTM D 7091	10 µm to 450 µm
5.	Hardened Concrete	Compressive strength	IS 516	5 N/mm ² to 60 N/mm ²
6.	Accelerated Cured Concrete	Compressive strength	IS 9013	5 N/mm ² to 60 N/mm ²
7.	Paver Block	Compressive strength	IS 15658	5 N/mm ² to 80 N/mm ²
		Water absorption	IS 15658	1% to 20%
8.	Hollow and Solid Block	Compressive Strength	IS 2185 (Part 1)	5 N/mm ² to 60 N/mm ²
		Water absorption	IS 2185 (Part 1)	1 % to 20 %
		Block density	IS 2185 (Part 1)	500 kg/m ³ to 2500 kg/m ³
9.	Wood	Moisture Content	IS 11215	0.1 % to 20 %
10.	Bricks & Flyash Bricks	Compressive Strength	IS 3495 (Part 1)	1 N/mm ² to 20 N/mm ²
		Water Absorption	IS 3495 (Part 2)	1 % to 40 %
		Efflorescence	IS 3495 (Part 3)	Qualitative
		Dimension	IS 1077, IS 12894	
		Length		4000 mm to 5000 mm
		Breadth		1000 mm to 3000 mm
		Height		1300 mm to 1800 mm
11.	Cement (OPC/PPC)	Consistency	IS 4031 (Part 4)	20 % to 35 %
		Initial Setting	IS 4031 (Part 5)	30 minutes to 400 minutes
		Final Setting	IS 4031 (Part 5)	30 minutes to 600 minutes
		Fineness by dry sieve method	IS 4031 (Part 1)	0 % to 10 %
		Soundness by Le-Chatlier method	IS 4031 (Part 3)	0.10 mm to 10 mm
		Compressive Strength	IS 4031 (Part 6)	10 N/mm ² to 70 N/mm ²
		Specific Gravity	IS 4031 (Part 11)	2 to 4
12.	Ceramic Tiles	Dimension Length& width	IS 13630 (Part 1)	0.1 % to 5 %
		Thickness	IS 13630 (Part 1)	3 mm to 15 mm

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		Water absorption	IS 13630 (Part 2)	0.01 % to 20 %
		Modulus of Rupture	IS 13630 (Part 6)	5 N/mm ² to 70 N/mm ²
		Straightness of Sides	IS 13630 (Part 1)	0.05 % to 0.5 %
		Rectangularity	IS 13630 (Part 1)	0.05 % to 0.5 %
		Surface Flatness	IS 13630 (Part 1)	0.05 % to 0.5 %
		Scratch Hardness	IS 13630(Part 13)	1 to 10
13.	Granite and Marble	Specific Gravity	IS 1124	2.30 to 3.30
		Moisture Content	IS 13030	0.05 % to 0.20 %
		Water Absorption	IS 1124	0.30 % to 0.60 %
		Dry Density	IS 13030	2500 kg/m ³ to 2700 kg/m ³
14.	Fine aggregate	Sieve Analysis	IS 2386 (Part 1)	150 µm to 4.75mm
		Specific Gravity	IS 2386 (Part 3)	2 to 4
		Bulk density	IS 2386 (Part 3)	500 kg/m ³ to 3000 kg/m ³
		Moisture Content	IS 2386 (Part 3)	1 % to 10 %
		Bulkage	IS 2386 (Part 3)	2 % to 30 %
		Water Absorption	IS 2386 (Part 3)	1 % to 10 %
15.	Coarse Aggregate	Sieve Analysis	IS 2386 (Part 1)	4.75 mm to 80 mm
		Specific Gravity	IS 2386 (Part 3)	2 to 4.0
		Bulk density	IS 2386 (Part 3)	500 kg/m ³ to 4000 kg/m ³
		Water Absorption	IS 2386 (Part 3)	1 % to 4 %
		Flakiness Index	IS 2386 (Part 1)	5 % to 50 %
		Elongation Index	IS 2386 (Part 1)	5 % to 50 %
		Impact Test	IS 2386 (Part 4)	10 % to 40 %
		Stripping Value	IS 6241	1 % to 10 %
16.	Soil	Sieve Analysis	IS 2720 (Part 4)	75 µm to 4.75 mm
		Natural Moisture Content	IS 2720 (Part 2)	2% to 20%
		Light Compaction	IS 2720 (Part 7)	OMC: 5 % to 30 % MDD: 1 gm/cc to 3 gm/cc
		Liquid Limit	IS 2720 (Part 5)	10 % to 40 %
		Plastic Limit	IS 2720 (Part 5)	3 % to 20 %
		Free swell Index	IS 2720 (Part 40)	5% to 50%
17.	Rock	Unconfined Compressive strength	IS 9143	30 N/mm ² to 200 N/mm ²

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NON-DESTRUCTIVE TESTING

I.	Building Materials – Reinforced Concrete			
1.	RCC Structures	Rebound Hammer	IS 13311 (Part 2)	10 R to 70 R
		Ultrasonic Pulse Velocity	IS 13311 (Part 1)	2 km/s to 5 km/s
		Half cell potential difference	ASTM C-876	(-) 600 mV to (+) 200 mV
		Carbonation	BS 1881 (Part 201)	2 mm to 60 mm
		Cover Test	BS 1881 (Part 204)	6 mm to 60 mm

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