

Laboratory PNT Designs (Pvt.) Ltd., Plot No. 229 (A), Road No. 5, Indraprastha Industrial Area, Kota, Rajasthan

Accreditation Standard ISO/IEC 17025: 2005

Certificate Number TC-7585

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Validity 12.07.2018 to 11.07.2020

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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CHEMICAL TESTING

I.	METAL & ALLOYS			
1.	Low Carbon Steel	Carbon	IS 228 (Part 1)-1987, RA 2012	0.1 % to 1.0 %
		Sulphur	IS 228 (Part 9)-1989, RA 2014	0.01 % to 0.25 %
		Phosphorus	IS 228 (Part 3)-1987, RA 2012	0.01 % to 0.5 %

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Convenor

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Program Manager

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<u>MECHANICAL TESTING</u>				
I.	BUILDING MATERIAL			
1.	Aggregate - Coarse	Sieve Analysis of Aggregates Coarse Aggregates	IS 2386-1963 (Part- 1) RA 2011 IS 383-2016	0.1 % to 99.9 % (10mm to 65mm)
		Flakiness Index	IS 2386-1963 (Part- 1) RA 2016	10 % to 50%
		Elongation Index	IS 2386-1963 (Part- 1) RA 2016	10 % to 50%
		Water Absorption	IS 2386-1963 (Part -3) RA 2016	0.1 % to 5%
		Specific Gravity	IS 2386-1963 (Part -3) RA 2016	2 to 4
		Impact Value	IS 2386-1963 (Part -4) RA 2016	5 % to 50 %
		Bulk Density	IS 2386 (Part-3)-1963 RA 2016	1 g/cc to 3.5 g/cc
		Los Angles Abrasion Value	IS 2386 (Part-4)-1963 RA 2011	10 % to 60%
		Crushing Value	IS 2386 (Part-4)-1963 RA 2011	1 % to 50 %
		Materials Finer Than 75 Micron	IS 2386 (Part-1)-1963 RA 2011	0.1 % to 5%
2.	Aggregate – Fine	Sieve Analysis of Fine Aggregates	IS 2386-1963 (Part- 1) RA 2011 IS 383-2016	0.1 % to 99.9 % (10 mm to 0.150 mm)
		Water Absorption	IS 2386-1963 (Part -3) RA 2016	0.1 % to 5%
		Specific Gravity	IS 2386-1963 (Part -3) RA 2016	2 to 4
		Bulk Density	IS 2386 (Part-3)-1963 RA 2016	1 g/cc to 3.5 g/cc

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		Materials Finer Than 75 Micron	IS 2386 (Part-1)-1963 RA 2011	0.1 % to 5
3.	Cement Mortar cube	Compressive Strength	IS 2250-1981 RA 2010	0.5 N/mm ² to 60 N/mm ²
4.	Cement Concrete Cube	Compressive Strength	IS 516-1959 RA 2013	5 N/mm ² to 80 N/mm ²
5.	Paver Blocks	Compressive Strength	IS 15658: 2011	1 N/mm ² to 65 N/mm ²
		Water Absorption	IS 15658: 2011	2 % to 20%
6.	Burnt Clay Building Bricks	Compressive Strength	IS 3495 (Part 1)-1992 RA 2011	1 N/mm ² to 50 N/mm ²
		Water Absorption	IS 3495 (Part 2)-1992 RA 2011	0.1 % to 50 %
		Efflorescence	IS 3495 (Part 3)-1992 RA 2011	Qualitative
		Dimension	IS 1077-1992 RA 2011, IS 2180-1988 RA 2011	L- 50 mm to 5000 mm B - 50 mm to 3000 mm H - 50 mm to 1500 mm
II.	SOIL & ROCK			
1.	Soil	Moisture Content	IS 2720 (Part 2)-1973 (RA-2015)	0.1 % to 75.0%
		Grain Size distribution (Wet Sieving)	IS 2720 (Part 4)-1985 (RA-2015)	0.1 % to 99.9%
		Specific Gravity	IS 2720 (Part 3/Sec 1)-1980 (RA-2011)	2.0 to 2.75
		Liquid Limit	IS 2720 (Part 5)-1985 (RA-2015)	15 % to 85%
		Plastic Limit	IS 2720 (Part 5)-1985 (RA-2015)	7 % to 45%
		Light Compaction Test MDD OMC	IS 2720 (Part 7)-1980 (RA-2011)	MDD:1.45 g/cc to 2.25 g/cc OMC : 5 % to 28 v
		Free Swell Index	IS 2720 (Part XL)-1977 (RA-2011)	5.0 % to 100 %

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		Grain Size Analysis by Hydrometer Test	IS 2720-1985 (Part- 4 RA 2015 (Clause 5.2)	2 μ m to 75 μ m (0.1 % to 100%)
		Direct Shear Test	IS 2720-1986 (Part-13) RA 2011	C = 0 to 0.2 kg/cm ² Φ = 15 ⁰ to 40 ⁰
		CBR Test	IS 2720-1987 (Part -16) RA 2011	Upto 100 %
		Proctor test-Heavy compaction MDD OMC	IS 2720-1983 (Part-8) RA 2015	MDD:1.50 g/cc to 2.30 g/cc OMC : 5 % to 30 %
2.	Rock	Compressive Strength	IS 9143-1979 RA 2010	10 N/mm ² to 150 N/mm ²
		Water Absorption	IS 13030-1991 RA 2010	0.01 % to 10 %
		Density	IS 13030-1991 RA 2010	0.4 g/cm ³ to 4.0 g/cm ³
		Specific Gravity	IS 13030-1991 RA 2010	2 to 4
		Point Load Index	IS 8764-1998 RA 2008	1 N/mm ² to 30 N/mm ²
III.	MECHANICAL PROPERTIES OF METAL			
1.	Steel Reinforcement	Yield Stress	IS 1608-2005 RA 2011	100 N/mm ² to 700 N/mm ²
		Ultimate Tensile Strength	IS 1608-2005 RA 2011	100 N/mm ² to 800 N/mm ²
		Percentage Elongation	IS 1608-2005 RA 2011	1 to 40%
		Bend Test (Upto 36 mm Dia)	IS 1599-2012 RA 2015	Mandrel Dia: (24mm, 30mm, 32mm, 36mm, 40mm, 48mm, 50mm, 60mm, 80mm, 100mm, 112mm, 125mm, 128mm, 135mm, 160mm, 175mm, 224mm) Qualitative
		Rebend Test (Upto 36 mm Dia)	IS 1786-2008 RA 2013	Mandrel Dia: (24mm, 30mm, 32mm, 36mm, 40mm, 48mm, 50mm, 60mm, 80mm, 100mm, 112mm, 125mm, 128mm, 135mm, 160mm, 175mm,

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				224mm) Qualitative
		Mass per Meter	IS 1786-2008 RA 2013	0.1 kg/m to 15 kg/m

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