National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)

CERTIFICATE OF ACCREDITATION

STRUCT GEOTECH RESEARCH LABORATORIES PRIVATE LIMITED

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

 # 588, 2ND MAIN, 6TH BLOCK, HOSAKEREHALLI CROSS, BANASHANKARI 3RD STAGE, 2ND PHASE, BENGALURU, KARNATAKA, INDIA

in the field of

TESTING

Certificate Number: TC-5288

Issue Date: 12/04/2019 **Valid Until:** 11/04/2021

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.

(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Signed for and on behalf of NABL

Anil Relia
Chief Executive Officer

National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)

SCOPE OF ACCREDITATION

Laboratory Name	STRUCT GEOTECH RESEARCH LABORATORIES PRIVATE LIMITED, # 588, 2ND MAIN, 6TH BLOCK, HOSAKEREHALLI CROSS, BANASHANKARI 3RD STAGE, 2ND PHASE, BENGALURU, KARNATAKA, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-5288	Page No. :	1 / 7
Validity	12/04/2019 to 11/04/2021	Last Amended on	-

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
Permanent Facility					
1	MECHANICAL-BUILDINGS MATERIALS	Aggregates Coarse	10% fines value	IS:2386-1963 Part 4-Reaffirmed: 2016	1 kN to 400 kN
2	MECHANICAL-BUILDINGS MATERIALS	Aggregates Coarse	Bulk Density - Loose/ Rodded	IS:2386-1963 Part 3-Reaffirmed: 2016	1.0 kg/l to 2.5 kg/l
3	MECHANICAL-BUILDINGS MATERIALS	Aggregates Coarse	Crushing Value	IS:2386-1963 Part 4-Reaffirmed : 2016	1 % to 60 %
4	MECHANICAL-BUILDINGS MATERIALS	Aggregates Coarse	Elongation Index	IS:2386-1963 Part 1-Reaffirmed: 2016	1 % to 50 %
5	MECHANICAL-BUILDINGS MATERIALS	Aggregates Coarse	Flakiness Index	IS:2386-1963 Part 1-Reaffirmed: 2016	1 % to 50 %
6	MECHANICAL-BUILDINGS MATERIALS	Aggregates Coarse	Impact value	IS: 2386-1963 Part 4-Reaffirmed: 2016	1 % to 50 %
7	MECHANICAL-BUILDINGS MATERIALS	Aggregates Coarse	Sieve Analysis	IS:2386-1963 Part 1-Reaffirmed: 2016	75 micron to 125 mm
8	MECHANICAL-BUILDINGS MATERIALS	Aggregates Coarse	Specific gravity	IS:2386-1963 Part 3-Reaffirmed: 2016	1.5 to 4.0
9	MECHANICAL-BUILDINGS MATERIALS	Aggregates Coarse	Water Absorption	IS:2386-1963 Part 3-reaffirmed: 2016	1 % to 10 %

SCOPE OF ACCREDITATION

Laboratory Name	STRUCT GEOTECH RESEARCH LABORATORIES PRIVATE LIMITED, # 588, 2ND MAIN, 6TH BLOCK, HOSAKEREHALLI CROSS, BANASHANKARI 3RD STAGE, 2ND PHASE, BENGALURU, KARNATAKA, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-5288	Page No. :	2 / 7
Validity	12/04/2019 to 11/04/2021	Last Amended on	-

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
10	MECHANICAL-BUILDINGS MATERIALS	Aggregates Fine	Bulk density (Loose & Rodded)	IS:2386-1963 Part 3-reaffirmed: 2016	1.0 kg/l to 2.5 kg/l
11	MECHANICAL-BUILDINGS MATERIALS	Aggregates Fine	Material finer than 75 - micron	IS:2386-1963 Part 1-Reaffirmed: 2016	0.1 to 20
12	MECHANICAL-BUILDINGS MATERIALS	Aggregates Fine	Sieve analysis	IS:2386-1963 Part 1-Reaffirmed: 2016	150 micron to 10 mm
13	MECHANICAL-BUILDINGS MATERIALS	Aggregates Fine	Specific gravity	IS:2386-1963 Part 3-reaffirmed: 2016	1.0 to 3.0
14	MECHANICAL-BUILDINGS MATERIALS	Bitumen	Ductility	IS 1208-1978 - Reaffirmed: 2013	40 cm to 100 cm
15	MECHANICAL-BUILDINGS MATERIALS	Bitumen	Flash & Fire Point	IS 1209-1978 - Reaffirmed: 2013	100 °C to 300 °C
16	MECHANICAL-BUILDINGS MATERIALS	Bitumen	Penetration	IS 1203-1978 - Reaffirmed: 2013	35 to 100
17	MECHANICAL-BUILDINGS MATERIALS	Bitumen	Softening Point	IS 1205-1978 - Reaffirmed: 2013	25 °C to 80 °C
18	MECHANICAL-BUILDINGS MATERIALS	Bitumen	Specific Gravity	IS 1202-1978 - Reaffirmed: 2013	0.99 to 1.102
19	MECHANICAL-BUILDINGS MATERIALS	Bitumen Mix	Marshal Stability and Flow	ASTM D 6927 –: 2006	5 kN to 50 kN

SCOPE OF ACCREDITATION

Laboratory Name	STRUCT GEOTECH RESEARCH LABORATORIES PRIVATE LIMITED, # 588, 2ND MAIN, 6TH BLOCK, HOSAKEREHALLI CROSS, BANASHANKARI 3RD STAGE, 2ND PHASE, BENGALURU, KARNATAKA, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-5288	Page No. :	3 / 7
Validity	12/04/2019 to 11/04/2021	Last Amended on	-

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
20	MECHANICAL-BUILDINGS MATERIALS	Bitumen Mix	Stripping value of aggregate	IS 6241-1971 - Reaffirmed: 2013	90 % to 100 %
21	MECHANICAL-BUILDINGS MATERIALS	Burnt clay Bricks	Compressive strength	IS 3495-1992, Par-1 Reaffirmed: 2011	1.0 N/mm² to 15.0 N/mm²
22	MECHANICAL-BUILDINGS MATERIALS	Burnt clay Bricks	Dimension (H)	IS 1077:1992 - Reaffirmed: 2011	1200 mm to 1700 mm
23	MECHANICAL-BUILDINGS MATERIALS	Burnt clay bricks	Dimension (W)	IS 1077:1992 - Reaffirmed: 2011	1800 mm to 2100 mm
24	MECHANICAL-BUILDINGS MATERIALS	Burnt clay Bricks	Dimensions(L)	IS 1077:1992 - Reaffirmed: 2011	4000 mm to 5000 mm
25	MECHANICAL-BUILDINGS MATERIALS	Burnt clay Bricks	Efflorescence	IS:3495 -1992, part 3): 2011	Qualitative(Visual)
26	MECHANICAL-BUILDINGS MATERIALS	Burnt clay Bricks	Water Absorption	IS:3495- 1992, Part 2- Reaffirmed: 2011	2 % to 20 %
27	MECHANICAL-BUILDINGS MATERIALS	Cement	Compressive strength	IS:4031 - 1988, Part 6 Reaffirmed: 2014	10 N/mm² to 60 N/mm²
28	MECHANICAL-BUILDINGS MATERIALS	Cement	Consistency	IS:4031- 1988, Part 4- Reaffirmed: 2014	20 % to 40 %
29	MECHANICAL-BUILDINGS MATERIALS	Cement	Final setting time	IS:4031 (Part 5) 1988: 2014	100 minutes to 600 minutes

SCOPE OF ACCREDITATION

Laboratory Name	STRUCT GEOTECH RESEARCH LABORATORIES PRIVATE LIMITED, # 588, 2ND MAIN, 6TH BLOCK, HOSAKEREHALLI CROSS, BANASHANKARI 3RD STAGE, 2ND PHASE, BENGALURU, KARNATAKA, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-5288	Page No. :	4 / 7
Validity	12/04/2019 to 11/04/2021	Last Amended on	-

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
30	MECHANICAL-BUILDINGS MATERIALS	Cement	Fineness - Dry Sieving Method	IS: 4031-1996, Part-1, Clause No.5, Reaffirmed: 2016	0.1 % to 10 %
31	MECHANICAL-BUILDINGS MATERIALS	Cement	Fineness-Blaine's air permeability method	IS: 4031-1999, Part-2 Reaffirmed: 2013	200 m^2/kg to 600 m^2/kg
32	MECHANICAL-BUILDINGS MATERIALS	Cement	Initial setting time	IS: 4031-1988, Part-5 Reaffirmed: 2014	10 minute to 250 minute
33	MECHANICAL-BUILDINGS MATERIALS	Cement	Soundness(Le-Chatelier's method)	IS: 4031 -1988, Part-3 Clause No.-5 Reaffirmed: 2014	0.05 mm to 10 mm
34	MECHANICAL-BUILDINGS MATERIALS	Concrete BlocksHollow / Solid	Block Density	IS:2185 (Part 1) - 2005 Reaffirmed: 2015	1000 kg/m^3 to 2600 kg/m^3
35	MECHANICAL-BUILDINGS MATERIALS	Concrete BlocksHollow / Solid	Compressive Strength	IS:2185 (Part 1) - 2005 – Annexure D - Reaffirmed: 2015	1 N/mm^2 to 20 N/mm^2
36	MECHANICAL-BUILDINGS MATERIALS	Concrete BlocksHollow / Solid	Water absorption	IS:2185 (Part 1) - 2005 – Reaffirmed: 2015	1 % to 10 %
37	MECHANICAL-BUILDINGS MATERIALS	Concrete Cubes and Cores	Compressive Strength	1S:516-1959 Reaffirmed : 2013	10 N/mm^2 to 70 N/mm^2
38	MECHANICAL- SOIL AND ROCK	Rock	Point Load Index	IS 8764 - 1998 (RA 2008) ASTM D 5731 - : 2002	1 MPa to 30 MPa
39	MECHANICAL- SOIL AND ROCK	Rock	Unconfined Compressive strength of rock materials	IS 9143 - 1979 Reaffirmed: 2011	1 MPa to 300 MPa

SCOPE OF ACCREDITATION

Laboratory Name: STRUCT GEOTECH RESEARCH LABORATORIES PRIVATE LIMITED, # 588, 2ND MAIN, 6TH BLOCK, HOSAKEREHALLI CROSS, BANASHANKARI 3RD STAGE, 2ND PHASE, BENGALURU, KARNATAKA, INDIA

Accreditation Standard: ISO/IEC 17025:2017

Certificate Number: TC-5288 | Page No. : 5 / 7

Validity: 12/04/2019 to 11/04/2021 | Last Amended on : -

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
40	MECHANICAL- SOIL AND ROCK	Soil	California Bearing Ratio	IS: 2720- 1987, Part 16 Reaffirmed: 2011	1 % to 60 %
41	MECHANICAL- SOIL AND ROCK	Soil	Consolidation	IS: 2720 (Part 15) - 1986 - RA: 2011	1 % to 100 %
42	MECHANICAL- SOIL AND ROCK	Soil	Direct Shear Test (C)	IS: 2720 - 1986, Part-13, Reaffirmed: 2011	0.02 kg/cm² to 0.40 kg/cm²
43	MECHANICAL- SOIL AND ROCK	Soil	Direct Shear Test (Ø)	IS: 2720 - 1986, Part-13, Reaffirmed: 2011	1 ° to 50 °
44	MECHANICAL- SOIL AND ROCK	Soil	Free Swell Index	IS: 2720 (Part 40)-1987-Reaffirmed: 2011	0 to 100 %
45	MECHANICAL- SOIL AND ROCK	Soil	Grain size analysis by wet sieving analysis	IS:2720-1985, Part 4, Reaffirmed: 2015	75 micron to 4.75 mm
46	MECHANICAL- SOIL AND ROCK	Soil	Heavy Compaction (Maximum Dry Density)	IS:2720 (Part 8) 1988 - Reaffirmed: 2015	1.0 g/cm³ to 3.0 g/cm³
47	MECHANICAL- SOIL AND ROCK	Soil	Heavy Compaction (Optimum Moisture Content)	IS:2720 (Part 8) 1988 - Reaffirmed: 2015	5 % to 35.0 %
48	MECHANICAL- SOIL AND ROCK	Soil	Light Compaction (Maximum Dry Density)	IS:2720 (Part 8) 1980 - Reaffirmed: 2011	1.0 g/cm³ to 3.0 g/cm³
49	MECHANICAL- SOIL AND ROCK	Soil	Light Compaction (Optimum Moisture Content)	IS:2720 (Part 8) 1980 - Reaffirmed: 2011	6 % to 30 %
50	MECHANICAL- SOIL AND ROCK	Soil	Liquid Limit	IS:2720 - 1985, Part-5, Reaffirmed: 2015	20 % to 60 %
51	MECHANICAL- SOIL AND ROCK	Soil	Plastic Limit	IS:2720 - 1985, Part-5, Reaffirmed: 2015	6 % to 40 %
52	MECHANICAL- SOIL AND ROCK	Soil	Triaxial Shear Test (C)	IS: 2720 (Part 11) 1993-Reaffirmed: 2011	0.1 kg/cm² to 5 kg/cm²

SCOPE OF ACCREDITATION

Laboratory Name	STRUCT GEOTECH RESEARCH LABORATORIES PRIVATE LIMITED, # 588, 2ND MAIN, 6TH BLOCK, HOSAKEREHALLI CROSS, BANASHANKARI 3RD STAGE, 2ND PHASE, BENGALURU, KARNATAKA, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-5288	Page No. :	6 / 7
Validity	12/04/2019 to 11/04/2021	Last Amended on	-

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
53	MECHANICAL- SOIL AND ROCK	Soil	Triaxial Shear Test (Ø)	IS: 2720 (Part 11) 1993-Reaffirmed: 2011	1 ° to 40 °
54	MECHANICAL- SOIL AND ROCK	Soil	Unconfined Compressive Strength	IS: 2720 (Part 10) 1991- Reaffirmed: 2015	0 to 5 kg/cm²
55	MECHANICAL- SOIL AND ROCK	Soil	Water Content	IS: 2720 (Part 2) 1973 Reaffirmed: 2015	1 % to 30 %
56	NON-DESTRUCTIVE-BUILDING MATERIALS - REINFORCED CONCRETE STRUCTURES	Concrete	Carbonation Test	BS: 1881 (Part 201) : 1986	0 to 40 mm
57	NON-DESTRUCTIVE-BUILDING MATERIALS - REINFORCED CONCRETE STRUCTURES	Concrete	Cover meter Test	BS: 1881 (Part 204) : 1988	5 mm to 70 mm
58	NON-DESTRUCTIVE-BUILDING MATERIALS - REINFORCED CONCRETE STRUCTURES	Concrete	Deflection Measurement Data (Load Test)	IS-456: 2000	3 mm to 12 mm
59	NON-DESTRUCTIVE-BUILDING MATERIALS - REINFORCED CONCRETE STRUCTURES	Concrete	Half Cell potential Test	ASTMC-876: 2009	-100 mV to -900 mV

National Accreditation Board for Testing and Calibration Laboratories

(A Constituent Board of Quality Council of India)

SCOPE OF ACCREDITATION

Laboratory Name	STRUCT GEOTECH RESEARCH LABORATORIES PRIVATE LIMITED, # 588, 2ND MAIN, 6TH BLOCK, HOSAKEREHALLI CROSS, BANASHANKARI 3RD STAGE, 2ND PHASE, BENGALURU, KARNATAKA, INDIA		
Accreditation Standard	ISO/IEC 17025:2017		
Certificate Number	TC-5288	Page No. :	7 / 7
Validity	12/04/2019 to 11/04/2021	Last Amended on	-

S.No	Discipline / Group	Product / Material of Test	Specific Test Performed	Test Method Specification against which tests are performed	Range of Testing/ Limits of Detection
60	NON-DESTRUCTIVE-BUILDING MATERIALS - REINFORCED CONCRETE STRUCTURES	Concrete	Rebound Hammer Test	IS:13311 (Part II) 1992 Reaffirmed: 2013	1 to 60
61	NON-DESTRUCTIVE-BUILDING MATERIALS - REINFORCED CONCRETE STRUCTURES	Concrete	Ultrasonic Pulse Velocity Test	IS:13311 (Part I) 1992 Reaffirmed: 2013	1.0 km/s to 5.0 km/s
62	NON-DESTRUCTIVE-BUILDING MATERIALS - REINFORCED CONCRETE STRUCTURES	Pile Testing	High Strain Dynamic Pile Testing	ASTM D 4945 : 2017	1000 kN to 17500 kN
63	NON-DESTRUCTIVE-BUILDING MATERIALS - REINFORCED CONCRETE STRUCTURES	Pile Testing	Low Strain Pile Integrity Testing	ASTM D 5882-07, IS 14893 -2001 Reaffirmed: 2015	2000 m/s to 5000 m/s