

Schedule

Ground Instrumentation & Engineering Pte Ltd
No. 8 Kaki Bukit Avenue 4
#04-51
Singapore 415785

Certificate No. : LA-2007-0391-B
Issue No. : 10
Date : 05 December 2016
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FIELD OF TESTING : Civil Engineering Testing

MATERIALS/ PRODUCTS TESTED	TESTS/PROPERTIES	STANDARD METHODS / TECHNIQUES/EQUIPMENT
1. Soil	<ul style="list-style-type: none"> a. In-situ Density (by sand replacement Method) b. Nuclear Moisture Density c. Plate Bearing Test d. Determination of Moisture Content e. Determination of Density (Linear Method) f. Determination of Liquid Limits (Cone Penetrometer Method) g. Determination of Plastic Limits and Plasticity Index h. Determination of Particle Density i. Determination of Particle Size Distribution (Wet & Dry Sieving) j. Determination of Particle Size Distribution (Hydrometer Method) k. Unconsolidated Undrained Triaxial Compression Test l. Unconsolidated Undrained Triaxial Compression Test Loading with Multi Stage 	<ul style="list-style-type: none"> BS 1377 Part 9 : 1990 (Section 2.1) ASTM D6938:10 BS 1377 Part 9 : 1990 (Section 4.1) BS 1377 : 1990 Part 2 # 3.2 BS 1377 : 1990 Part 2 # 7.2 BS 1377 : 1990 Part 2 # 4.3 & 4.4 BS 1377 : 1990 Part 2 # 5 BS 1377 : 1990 Part 2 # 8.3 BS 1377 : 1990 Part 2 # 9.2 / #9.3 BS 1377 : 1990 Part 2 # 9.5 BS 1377 : 1990 Part 7 # 8 BS 1377 : 1990 Part 7 # 9

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	m. Consolidated Undrained Triaxial Compression Test with Pore Pressure Measurement	BS 1377 : 1990 Part 8 # 7
	n. Consolidated Drained Triaxial Compression Test with Volume Change Measurement Consolidated	BS 1377 : 1990 Part 8 # 8
	o. Undrained/Drained Triaxial Compression Test (Multi Stage)	K. H. Head Volume 3 Section 19
	p. Determination of One-dimensional Consolidation Properties	BS 1377 : 1990 Part 5 # 3
	q. Determination of Shear Strength by Direct Shear (small shear box)	BS 1377 :1990 :Part 7 # 4
	r. Determination of Soil Resistivity (Wenner Probe – Laboratory)	BS 1377: 1990: Part 3:#10
	2. Concrete NDT	a. Penetration Resistance Test
b. Rebound Hammer Test		BS EN 12504-2 : 2012
c. Ultrasonic Pulse Velocity		BS EN 12504-4 : 2004
d. Covermeter Survey		BS 1881-204 : 1988
e. Measurement of Carbonation in Hardened Concrete		BS EN 14630:2006
f. In Situ Pull Out Test on Tiles, Plaster, Pre Packed Plaster Skim coat and Screed		BS EN 1015-12:2000, Inhouse Method GIE/CE/NDT/01/TILES
g. Corrosion Potential Measurement of Reinforcing Steel		ASTM C876-09
3 Hardened Concrete	a Compressive Strength of Cylindrical Concrete Specimens	ASTM C39 / C39M – 15a
4 Rock	a Point Load Test	ASTM D5731-08
	b Compressive strength test of intact rock core	ASTM D7012:14 (Method C & D)

The SAC Programme is managed by SPRING Singapore

2 Fusionopolis Way, #15-01 Innovis, Singapore 138634 Tel: +65 6279 1855 / 1856 / 1800 Fax: +65 6659 0640

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5 Pavement	c Preparation of rock core as cylindrical test specimens and verifying conformance to dimensional and shape tolerance	ASTM D4543:08
	a. Macrottexture depth of Paved Surface using Volumetric Technique	ASTM E965-15
	b. Surface Friction property using British Pendulum Tester	ASTM E303-93

Approved signatories

Mohiuddin Ahamad - For all tests
Kevin Quan - For all tests
Ishtiaque Anwar - For item 1a to 1c, 1r and item 2 & 3 & 5.
Mario Castillo - For item 1d to 1r, item 4 & item 5

Note :

This laboratory is accredited in accordance with the recognised International Standard ISO/IEC 17025:2005. A laboratory's fulfilment of the requirements of ISO/IEC 17025:2005 means the laboratory meets both the technical competence requirements and **management system requirements** that are necessary for it to consistently deliver technically valid test results. The **management system requirements** in ISO/IEC 17025:2005 (Section 4) are written in language relevant to laboratory operations and meet the principles of ISO 9001:2008 **Quality Management Systems — Requirements** and are aligned with its pertinent requirements.

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