



# CERTIFICATE OF ACCREDITATION

*This is to attest that*

## **ALLIANCE TESTING CO.,LTD.**

EM MACAU, RUA DA RIBEIRA DO PATANE, NO.157, INDUSTRIAL YAU KEONG GG6  
MACAU, SAR 999078

### **Testing Laboratory TL-1058**

has met the requirements of AC89, *IAS Accreditation Criteria for Testing Laboratories*, and has demonstrated compliance with ISO/IEC Standard 17025:2017, *General requirements for the competence of testing and calibration laboratories*. This organization is accredited to provide the services specified in the scope of accreditation.

Effective Date August 11, 2023



A handwritten signature in black ink, reading "Raj Nathan".

**President**

IAS is an ILAC MRA Signatory

Visit [www.iasonline.org](http://www.iasonline.org) for current accreditation information.

# SCOPE OF ACCREDITATION

International Accreditation Service, Inc.

3060 Saturn Street, Suite 100, Brea, California 92821, U.S.A. | [www.iasonline.org](http://www.iasonline.org)

## ALLIANCE TESTING CO.,LTD.

[www.alliance-testing.com](http://www.alliance-testing.com)

**Contact Name** Ting Yan Dee Lau

**Contact Phone** +853-62226621

*Accredited to ISO/IEC 17025:2017*

*Effective Date August 11, 2023*

Chemical Testing	
APHA 23e 2540B	Total Solids Dried at 103°C – 105°C
APHA 23e 2540C	Total Dissolved Solids Dried at 180°C
APHA 23e 2540D	Total Suspended Solids Dried at 103°C – 105°C
APHA 23e 4500-Cl- B	Chloride content of water
APHA 23e 4500-H+B	pH value of water
APHA 23e 5220D	Chemical Oxygen Demand
BS 1881: Part 124: 1988 Cl. 10.2	Chloride content of hardened concrete
GB/T 5750.4-2006 Cl 5	pH value of water
GB/T 5750.4-2006 Cl 8.1	Total Dissolved Solids Dried at 180°C
GB/T 11901-89	Total Suspended Solids Dried at 103°C – 105°C
GB/T 18204.2-2014 Cl 5.2	Respirable Suspended Particulates (PM <sub>10</sub> )
GB/T 18204.2-2014 Cl 6	Respirable Suspended Particulates (PM <sub>2.5</sub> )
GB/T 18204.2-2014 Cl 7.4	Formaldehyde (HCHO)
HJ/T 167-2004 C1	Nitrogen Dioxide (NO <sub>2</sub> )
HJ/T 167-2004 D3	Carbon Monoxide (CO)
HJ/T 167-2004 E1	Carbon Dioxide (CO <sub>2</sub> )
HJ/T 167-2004 G2	Ozone (O <sub>3</sub> )
HJ/T 167-2004 K4	Total Volatile Organic Compounds (TVOC)
HJ/T 167-2004 N	Radon (Rn)
In-house method (refer to GB/T 4336-2016)	Determination of carbon steel and low alloy steel (Carbon, Sulphur, Phosphorus, Nitrogen, Vanadium, Copper, Nickel, Manganese, Molybdenum, Chromium, Silicon)

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<b>Physical Testing</b>	
BS 4449-2005+A3:2016 Section 7.4	Bond property of steel reinforcing bars (surface geometry)
BS 4550-3.4:1978	Strength test of cement cubes
CS1:2010 Section 7	Making test cubes from fresh concrete
CS1:2010 Section 12	Determination of compressive strength of concrete cubes (including cement grout, mortar cubes)
CS1:2010 Section 15	Obtaining core samples and determination of the compressive strength of concrete cores
CS2: 2012 Section 6.7	Bond property of steel reinforcing bars (surface geometry)
EN 12504-1:2009	Testing concrete in structures Part 1: Cored specimens-Taking, examining and testing in compression
ISO 1920-3:2005	Testing of concrete — Part 3: Making and curing test specimens
ISO 1920-4:2005	Testing of concrete — Part 4: Strength of hardened concrete
ISO 1920-4:2005	Compressive strength of cement cubes
ISO 1920-6:2005	Testing of concrete — Part 6: Sampling, preparing and testing of concrete cores
JTG/T F50-2011, appendix D	Determination of the mud balance
JTG/T F50-2011, appendix D	Determination of the slurry viscosity
JTG/T F50-2011, appendix D	Determination of the sand content of slurry
JGJ/T 178-2009 + GB50119-2013	Determination of the percentage of restrained expansion of shrinkage-compensating concrete