

Overview

Building Envelope Test Consulting Solutions (beTcs) Asia-Pacific offers highly specialised, independent and accredited inspection services for the witnessing and supervision of performance testing on curtain wall and facade systems by overseas facilities, delivering assurance verification of a project's facade specification.

This expertise assures confidence in the acceptance process for project stakeholders, relieving them of unrealised risks in the unfamiliar field of performance testing.

PHIVE, Parramatta Square

Core Competencies

beTcs Asia-Pacific helps those project stakeholders responsible for delivering and accepting the facade package by applying technical knowledge and providing our own calibrated technical resources to verify performance testing, including:

- Advise on proposed test schedule and PMU configuration
- Test witnessing & supervision
- Scrutineering of overseas facility's credentials & scope
- Review & confirm facility equipment and instrumentation for operability, range, calibration and accuracy
- Ensure test procedures, parameters and PMU configuration are as agreed to by all parties
- Effective oversight for correct application of test procedures and parameters
- Independent analysis of results, verifying compliance with performance requirements
- Comprehensive documentation and issue of a NATA endorsed report

Metro Martin Place South Tower, Sydney

Accreditation

beTcs Asia-Pacific is an Inspection Body accredited by the National Association of Testing Authorities (NATA), Australia.

- NATA Accreditation No.: 20528
- Compliant to ISO/IEC 17020
- Type A Inspection Body
- Accredited to inspect: Cladding systems; Curtain walling; Door, window & skylight assemblies; Facade assemblies; Sloped glazing systems
- Accredited to conduct inspections of overseas test facilities and testing covered under the relevant Standards and Codes for AS, AS/NZS, SIROWET, AAMA, ASTM, BS EN, CWCT, and NCC BCA



NATA is an Australian government-endorsed peak accreditor of inspection bodies, and a leader in accreditation internationally. NATA is a signatory to the international mutual recognition arrangements of the International Laboratory Accreditation Cooperation (ILAC) and the Asia Pacific Accreditation Cooperation (APAC) for inspection.

Supported Clients



Facade, window & sliding door test witnessing & supervision

Witness and supervise facade testing to the following standards for curtain wall prototypes to - AS/NZS 4284 (SIROWET); ASTM E283, E330, E331 & E547; BS EN 12152, 12153, 12154, 12155, 12179, 12600, 13116 & 14019; AAMA 501.1, 501.4 & 501.5; CWCT TN75 & TN76; and, windows and sliding doors to - AS/NZS 4420.1 for AS 2047; and, BS EN 1026, 1027, 12207, 12210, 12211 and 13049.

Field inspection of installed facade and fenestration systems

AAMA 501.2 is the widely accepted method for quality assurance and water penetration check for installed curtain walls and sloped glazing systems.

AAMA 503 and BS EN 13051 are more exacting means for on-site assessment.

Building envelope compliance guidance

In 2015 the Building Code of Australia (BCA) introduced Verification Methods FV1 (Vol. 1) and V2.2.1 (Vol. 2) to evaluate the weatherproofing performance of direct-fix cladding, cavity and unique wall systems. The methods provide a means to verify compliance with the relevant NCC BCA Performance Requirements of FP1.4 and P2.2.2 for water penetration in an external wall.

Practised Standards & Codes

AS/NZS 4284 Testing of building facades
 SIROWET Testing of building facades
 AS 2047 Windows and external glazed doors in buildings
 AS/NZS 4420.1 Windows, external glazed, timber and composite doors - Methods of test sequence, sampling and test methods
 BS EN 14019 Curtain Walling. Impact resistance. Performance requirements.
 BS EN 13049 Windows. Soft and heavy body impact. Test method, safety requirements and classification
 BS EN 12600 Glass in building. Pendulum test. Impact test method and classification for flat glass
 CWCT TN75 Impact performance of building envelopes: guidance on specification
 CWCT TN76 Impact performance of building envelopes: method for impact testing of cladding panels
 BS EN 12152 Curtain walling. Air permeability. Performance requirements and classification
 BS EN 12153 Curtain walling. Air permeability. Test method
 BS EN 12154 Curtain walling. Watertightness. Performance requirements and classification
 BS EN 12155 Curtain walling. Watertightness. Laboratory test under static pressure
 BS EN 12179 Curtain walling. Resistance to wind load. Test method
 BS EN 13116 Curtain walling. Resistance to wind load. Performance requirements
 BS EN 12210 Windows and doors. Resistance to wind load. Classification
 BS EN 12211 Windows and doors. Resistance to wind load. Test method
 BS EN 13051 Curtain walling. Watertightness. Site test
 BS EN 12207 Windows and doors. Air permeability. Classification
 BS EN 12208 Windows and doors. Watertightness. Classification
 BS EN 1026 Windows and doors. Air permeability. Test method
 BS EN 1027 Windows and doors. Watertightness. Test method
 AAMA 501.1 Standard Test Method for Water Penetration of Windows, Curtain Walls and Doors Using Dynamic Pressure
 AAMA 501.2 Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems
 AAMA 501.4 Recommended Static Test Method for Evaluating Window Wall, Curtain Wall and Storefront Systems Subjected to Seismic and Wind-Induced Inter-Story Drift
 AAMA 501.5 Test Method for Thermal Cycling of Exterior Walls
 AAMA 503 Voluntary Specification for Field Testing of Newly Installed Storefronts, Curtain Walls and Sloped Glazing Systems
 ASTM E283 Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen
 ASTM E330 Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference
 ASTM E331 Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference
 ASTM E547 Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference
 BCA Vol 1: FV1 Weatherproofing Verification Method
 BCA Vol 2: V2.2.1 Weatherproofing Verification Method
 AS 4040.0 Introduction, list of methods and general requirements
 AS 4040.1 Resistance to concentrated loads
 AS 4040.2 Resistance to wind pressures for non-cyclone regions
 AS 4040.3 Resistance to wind pressures for cyclone regions
 AS 4040.4 Resistance to impact (sandbag) - Sheet roof materials
 AS/NZS 4040.5 Resistance to impact (sandbag) for wall boards
 AS 4055 Wind loads for housing

Experience

AURA, 168 Walker Street, North Sydney
 Metro Martin Place South Tower, Sydney
 PHIVE, Parramatta Square
 Parramatta Square Civic Redevelopment
 University of Western Sydney, Bankstown City Campus
 Queen's Wharf Towers 2 & 3, Brisbane
 Metro Martin Place North Tower, Sydney
 308 Exhibition Street, Melbourne
 Queen's Wharf Tower 1, Brisbane
 West Side Place 2 podium, Melbourne
 Jewel, Gold Coast
 Melbourne Square
 Arthur Phillip High School (Tower), Parramatta
 447 Collins Street, Melbourne
 UTS Central, University of Technology Sydney
 60 Martin Place, Sydney
 80 Collins Street, Melbourne
 Crown Sydney Hotel & Resort
 CSR Inclose - system
 Australian National University, New Hall of Residence, Canberra
 International Convention Centre Hotel, Darling Harbour, Sydney
 International Convention Centre, Darling Harbour, Sydney
 AFP Forensic Facility, Canberra
 888 Collins Street, Melbourne
 Crown Towers, Perth
 727 Collins Street, Melbourne
 CSR Cemintel - system
 CSR Hebel - system
 333 George Street, Sydney
 Abercrombie Precinct, University of Sydney
 One William Street, Brisbane
 480 Queen Street, Brisbane
 Brookfield Place Tower 2, Perth
 New Children's Hospital, Perth
 720 Bourke Street, Melbourne
 New Royal Adelaide Hospital
 Barangaroo - Towers C4 & C5, Sydney
 Chris O'Brien Lifehouse - Royal Prince Alfred Hospital, Sydney
 SAHMRI, Adelaide
 171 Collins Street, Melbourne
 700 Bourke Street, Melbourne
 University of Adelaide Illumin8 project
 Metro Residences, Chatswood
 Queensland Children's Hospital, Brisbane
 The Residence Hyde Park, Sydney
 Fusionopolis, Singapore
 Museum of Contemporary Art, Sydney
 Fiona Stanley Hospital, Perth
 Brisbane Airport Domestic Terminal
 Star Casino, Sydney
 Westfield Tower, Sydney
 ALDI Head Office, Minchinbury
 City Square project, Perth
 Central Plaza 3 Tower, Brisbane
 National Portrait Gallery, Old Parliament House, Canberra - for 3M

AURA, 168 Walker Street, North Sydney