

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.

Queen's Wharf Towers 2 & 3, Brisbane

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

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 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

Metro Martin Place South Tower, Sydney
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

University of Western Sydney, Bankstown City Campus