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Overview

VINCI Technology Centre UK Limited combines world leading laboratory testing with expertise in sustainability and a complete understanding of structures. Our multi-disciplinary team provide practical and innovative solutions to the challenges posed by today’s built environment.

Through the services we offer and by addressing key issues including Compliance, Sustainability, and Investigation we enable clients to cut costs, solve problems and ultimately differentiate themselves from the competition.
Trusted Advisor

Our aim is to be the partner of choice for your product testing, research and evaluation. We will achieve this by:

- Continuing performance improvement  
  (2015 customer feedback score 95%)
- Broadening our offer
- Listening to you

Thus becoming your trusted advisor for product development and testing.
Facilities

- Unique Facilities
- 5.5 hectare campus
- 3,600m² indoor workshop
- Team comprises c.80 engineers, scientists and technicians
• ISO 9001 Quality Management
• ISO 14001 Environmental Management
• OHSAS 18001 Occupational Health and Safety Management
• ISO 50001 Energy Management

• ERM CVS Certified
• Nuclear Industry Association
• UKAS Testing 0057
Coatings

Our UKAS accredited laboratories provide a range of tests for coatings. Typically testing will be to confirm performance requirements, we also support our clients R&D programmes.

Tests performed include:

- Carbon dioxide diffusion
- Methane permeability
- Water vapour transmission
- Liquid water transmission
- Water penetration
- Chloride ion diffusion coefficient
- Bulk chloride diffusion
- Adhesion (pull-off) testing
- Crack bridging ability
- Artificial weathering

This list is not exhaustive. One-off or ad-hoc testing also catered for.
Concrete tests performed include, but are not limited to:

- Water penetration
- Water permeability
- Moisture vapour transmission
- Oxygen diffusion
- Water sorption
- Resistance to freeze-thaw
- Microscopical examinations
- Drying shrinkage
- Water expansion
- Concrete dust chloride analysis
- Bulk chloride diffusion
- Chloride ion penetration
- Compressive strength
- Static modulus of elasticity

Our experience extends beyond testing, indeed our origins go back to the 1950s as part of Taylor Woodrow’s R&D laboratories.

We have retained and expanded our expertise in this area, challenging mix design and trials are a speciality of ours.
Façade Testing - Weathertightness

We operate one of the world’s leading cladding and curtain walling test facilities and have decades of experience in this field.

Testing is carried out to European and international standards to validate performance versus design criteria. Testing also presents value engineering opportunities to tackle buildability issues on the ground.

### Curtain Walling - Standard Weathertightness and Impact Tests include

<table>
<thead>
<tr>
<th></th>
<th>CWCT Section</th>
<th>American Standard</th>
<th>European Standard</th>
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<tbody>
<tr>
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<td>ASTM E283</td>
<td>EN12153</td>
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<td>11 &amp; 12</td>
<td>ASTM E330</td>
<td>EN12179</td>
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<td>Impact</td>
<td>TN76</td>
<td>N/A</td>
<td>EN14019</td>
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</tbody>
</table>
Discretionary tests performed at our laboratory include:

- Acoustic (see next page)
- Building movement
- Seismic testing to AAMA standards
- Thermal Cycling to CWCT standards
Façade Testing - Acoustics

Testing is carried out to ensure products meet project specific performance targets or building regulations. In addition testing is a way of validating alternative designs which in some cases can significantly reduce project costs.

- Flanking rig can accommodate samples over 7 metres wide or 7 metres tall
- Testing is to BS EN ISO 10848*

*We are UKAS accredited for testing to standards marked thus.
Why test?
- Value engineering
- Improve performance
- Reduce risk
- Achieve compliance

Impact/Airborne floor test rig

Vertical flanking sample

Noise Source Room

Receiving Room

Control Room

Test Sample
We have over twenty years experience of structural safety (load) testing on construction equipment, typically:

**Rolling Over and Falling Object Protection Systems (ROPS & FOPS)**

Equipment types tested includes:

- Large Earthmoving Equipment (in excess of 100 tonnes)
- Armoured Cabs
- Site Dumpers
- Military Transport
- Ride on Lawnmowers
Renewables

We have been involved in this area for many years, indeed we were one of the first companies to be involved in strength and fatigue testing for wind turbines.

More recently we have been carrying out testing on undersea turbines, this was a world first.

We also perform testing on solar panels to prEN15601.
Roofing and Overhead Glazing

Testing is carried out to ensure safety critical performance criteria is met, in addition weathertightness and structural testing takes place:

CWCT (Centre for Windows & Cladding Technology)
Technical Note 67
Impact Testing

Overhead tests are carried out to simulate the effects of either a hard body (a tool for example) or soft body impacting, for example atrium glazing. Tests are usually performed at elevated temperatures, typically 40°C so as to reflect “real life” conditions.

Standard weathertightness tests are performed to CWCT, European and International standards.
Other Products

We also carry out laboratory and on-site testing on:

- **Adhesives** - Pull-off and tear testing
- **Balustrades** - Load and impact testing
- **Doors** - Acoustic testing
- **Fixings** - Pull-off testing
- **Flooring** - Acoustic, load and slip-resistance testing
- **Structural Panels** - Load and racking tests
We Can Build and Test Anything

Over 50 years’ experience of designing and constructing full-scale construction mock-ups.
Why build a mock-up?

- Health & Safety trials
- Improve buildability and operations
- Stakeholder involvement
- Testing

Sometimes the best computer modelling simply isn’t enough.