

Product Testing



# Contents

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Overview	2
Facilities	4
Products Tested	
<ul> <li>Coatings</li> </ul>	6
<ul> <li>Concrete</li> </ul>	7
Façade Testing - Weathertightness	8
Façade Testing - Acoustics	10
Construction Equipment - Safety Testing	12
<ul> <li>Renewables</li> </ul>	13
<ul> <li>Roofing and Overhead Glazing</li> </ul>	14
<ul> <li>Other Products</li> </ul>	15
We Can Build and Test Anything!	16



#### Overview

Initivo (formerly 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.

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Through the services we offer and by addressing key issues 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 (our average feedback score over a 10 year period is 96%)
- Broadening our offer
- Listening to you

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

## Unique Facilities

- 5.5 hectare campus
- 3,600m² indoor workshop
- Team comprises c.90 engineers, scientists and technicians
- In-house steel working team
- Craneage and plant on-hand









- ISO 9001:2015 Quality Management System
- ISO 14001:2015 Environmental Management System
- BS OHSAS 45001: 2018
   Occupational Health and Safety Management System





**APPROVED BODY 1766** 



- Nuclear Industry Association
- UKAS Testing 0057

## Coatings

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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
- 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

# 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.







Any shape or size



Curtain Walling - Standard Weathertightness and Impact Tests include			
	CWCT Section	American Standard	European Standard
Air Permeability	5	ASTM E283	EN12153
Static Water	6	ASTM E331	EN12155
Dynamic Water	7	AAMA 501.1	EN13050
Wind Load	11 & 12	ASTM E330	EN12179
Impact	TN76	N/A	EN14019

#### oratory





World's greenest building - testing for sustainability





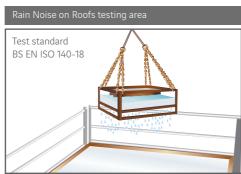
Discretionary tests performed at our laboratory include:

- 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.



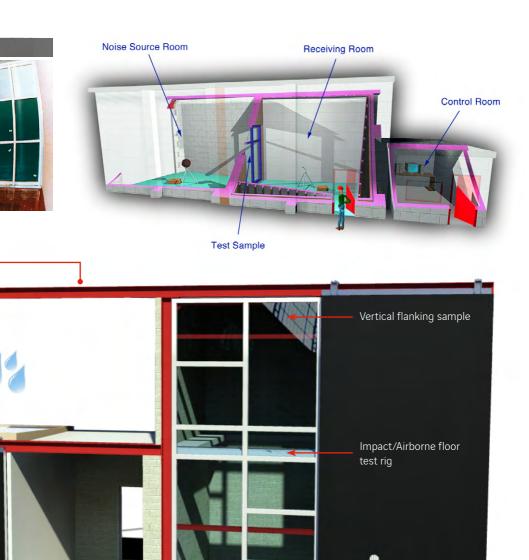








- Flanking rig can accommodate samples over 7 metres wide or 7 metres tall
- Testing is to BS EN ISO 10848\*



Reduce risk

Achieve compliance

Why test?

Value engineering

Improve performance

# Construction Equipment - Safety Testing



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.







Standard roofing weathertightness test set up



On-site simulated intensive rain test for overseas project



### 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

Decades of experience in 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.



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