VINCI Technology Centre UK Limited
Overview of Services
Russell Matthews – Managing Director
Steve Shanahan – Business Development Director
VINCI Technology Centre UK Limited

- **What we do**
  - Compliance
  - Sustainability
  - Investigation

- **Resources**
  - 75 engineers, scientists and technicians
  - 5.5 Ha campus (~8 football pitches)
A long pedigree

1950s
Taylor Woodrow set up R&D labs

1960s
Design & Construction of HPA, SZA, Wylfa & Dounreay

1970s
Taywood Engineering formed

1980s
First for cladding testing

1990s
Development of Cathodic Protection for steel framed buildings

2000
Renamed Taylor Woodrow Technology

2008
VINCI plc acquire Taylor Woodrow Construction

2014
VINCI Technology Centre UK Ltd formed

2016
Open in West Cumbria

Calder Hall 1st Nuclear Power Station
Replica pressure vessel testing
Rolls Royce engine used in testing
Impact testing
Acoustic Testing

- Airborne
- Flanking
- Flooring
- Rain Noise
- Site Testing
We can build and test anything
Mock-ups - Crossrail

20m long x 6m high full-scale architectural station model
Indoor location
Secure access
In-house fabrication
Buildability and electrical trials
Mock-ups - HSBC Tower
Building Pathology – Tata Steel

- Roof – leakage investigation and loading analysis
- Brickwork – inspection and repair strategy
- Effluent plant – concrete/corrosion surveys

Europe’s largest brick built structure – 700m long
Concrete, Coatings and Membranes Testing includes:

- CO\textsuperscript{2} Diffusion
- Chloride Ion penetration
- Bulk chloride diffusion
- Compressive/Tensile strength
- Water penetration & permeability
- Water vapour transmission
- Radon (Methane) permeability

UKAS accredited
Helping deliver sustainable projects

- BREEAM
- Code for sustainable homes
- CEEQUAL
- Contaminated Land
- Energy assessments
- Sustainability statements
60 years of working in UK Nuclear Sector

Calder Hall  Hinkley Point A  Sizewell A  Wylfa
Hartlepool  Dungeness B  Torness  Dungeness A
Sizewell B  Sellafield  Heysham  Heysham II
Prestressing Tendon Surveillances

- 1981 to present day by specialist teams
- All UK Prestressed Pressure/Containment vessels
- Development of techniques
- Load measurement and removal/replacement for corrosion monitoring
- Ongoing technical support
Main PCPV 
Circumferential Pre Stress Wires

Concrete Pressure Vessel 
(25.9 m dia x 23.3m high)

Steel Liner

Main PCPV 
Vertical Pre Stress Wires

Case Study – Hartlepool & Heysham 1 AGR Design

8 Pod Boilers lowered into Reactor Pressure Vessel penetration and sealed with a BCU
Case Study
Hartlepool & Heysham BCUs £9m
Nuclear Mock ups and Trials

Full-scale pull-down testing
Specialist Surveying & Investigation

- Concrete condition surveys
- Repair/remedial strategies
- Forebay beams Corrosion investigation
- Concrete mix designs and trials
Concrete mix design & trials – Sizewell dry store

- Challenging mix design
- Thermal cracking specification led to use of Limestone
- Restriction on additives
- Product required to work at 100°C
- Laboratory testing
- Site proving trials

We made it work…
Nuclear mock-ups and testing

18 tonne container dropped from 5m

1/10th scale model of the Reactor Containment Vessel at Sizewell B
Contact

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