



Introduction to TWI

Alec Gunner

Materials Joining and Engineering Technologies

To provide Industry with authoritative and impartial expert advice, knowhow and safety assurance through engineering, materials and joining technologies

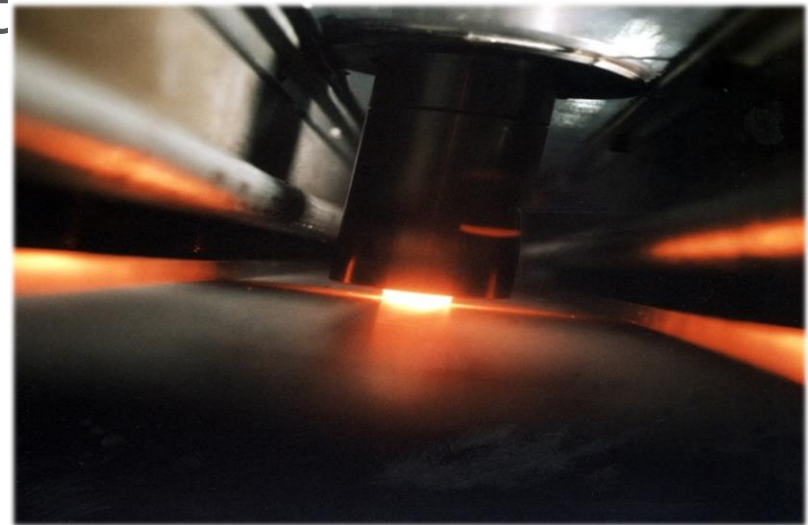


Helping industry achieve

- improved efficiency
- reduced costs
- better reliability & safety
- innovative products and processes

TWI Adds Value Through...

- Access to World renowned expertise
- Technical support & consultancy
- Technology transfer
- Training and assessment
- World class innovation

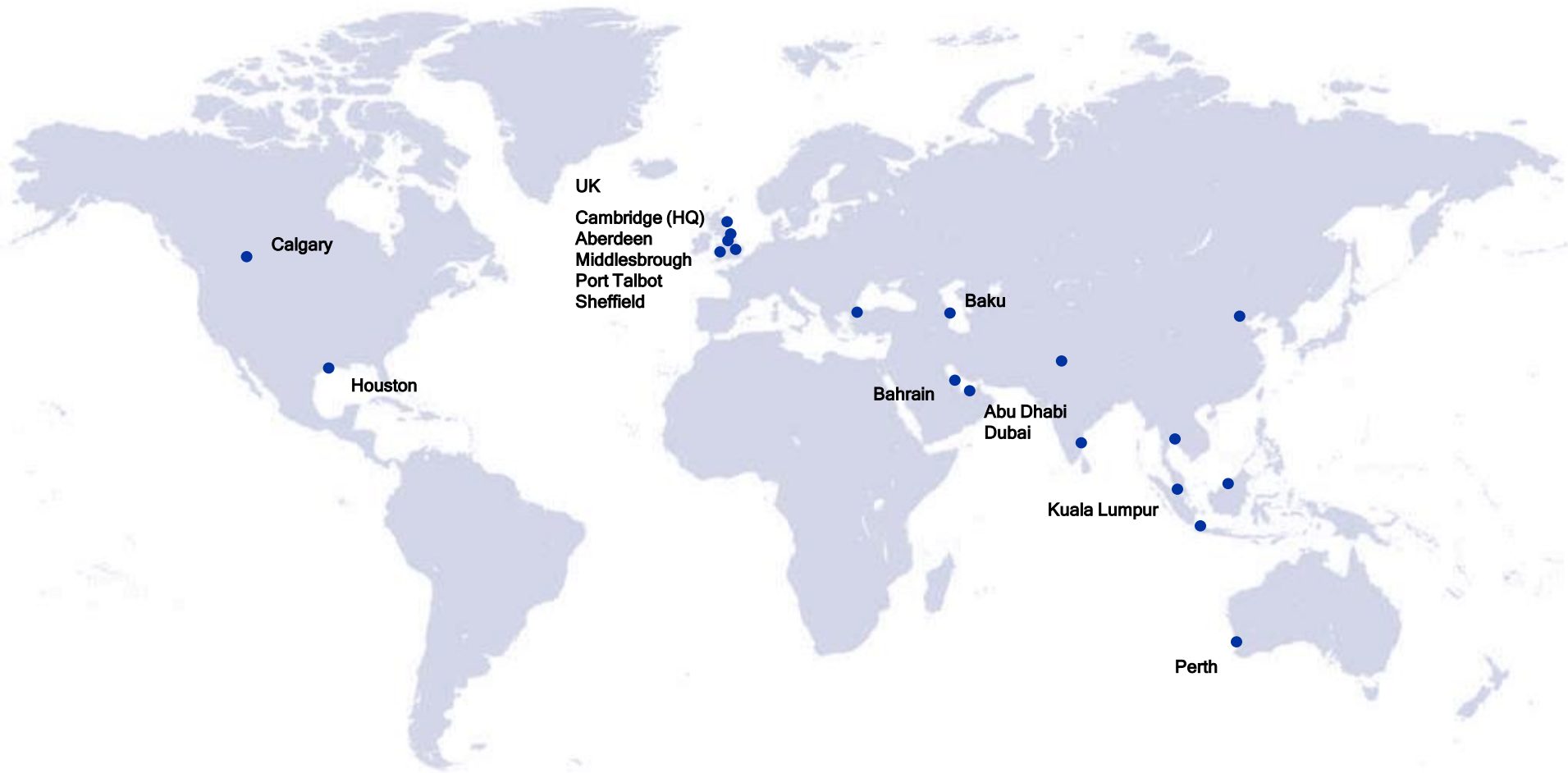


Friction Stir Welding of Steel

- Five UK technology centres
- 14 international training centres
- £80m of R&D in materials joining, structural integrity and NDT
- 700 Industrial Members in 4500 locations worldwide
- Over 900 staff

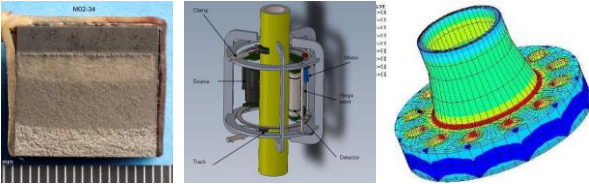


Global Network Training and Technology Centres



- 800 confidential projects per year
- 150 ongoing industry-led research projects
- 18,000 training and examinations students per annum
- 5000 new technical abstracts per annum
- Representation on over 100 standards committees

Key Technologies and Expertise



ENGINEERING

- Fatigue testing & assessment
- Fracture mechanics testing & assessment
- Fitness-for-service assessment (FFS)
- Risk-based inspection (RBI)
- Advanced & specialist NDT/inspection
- Software tools

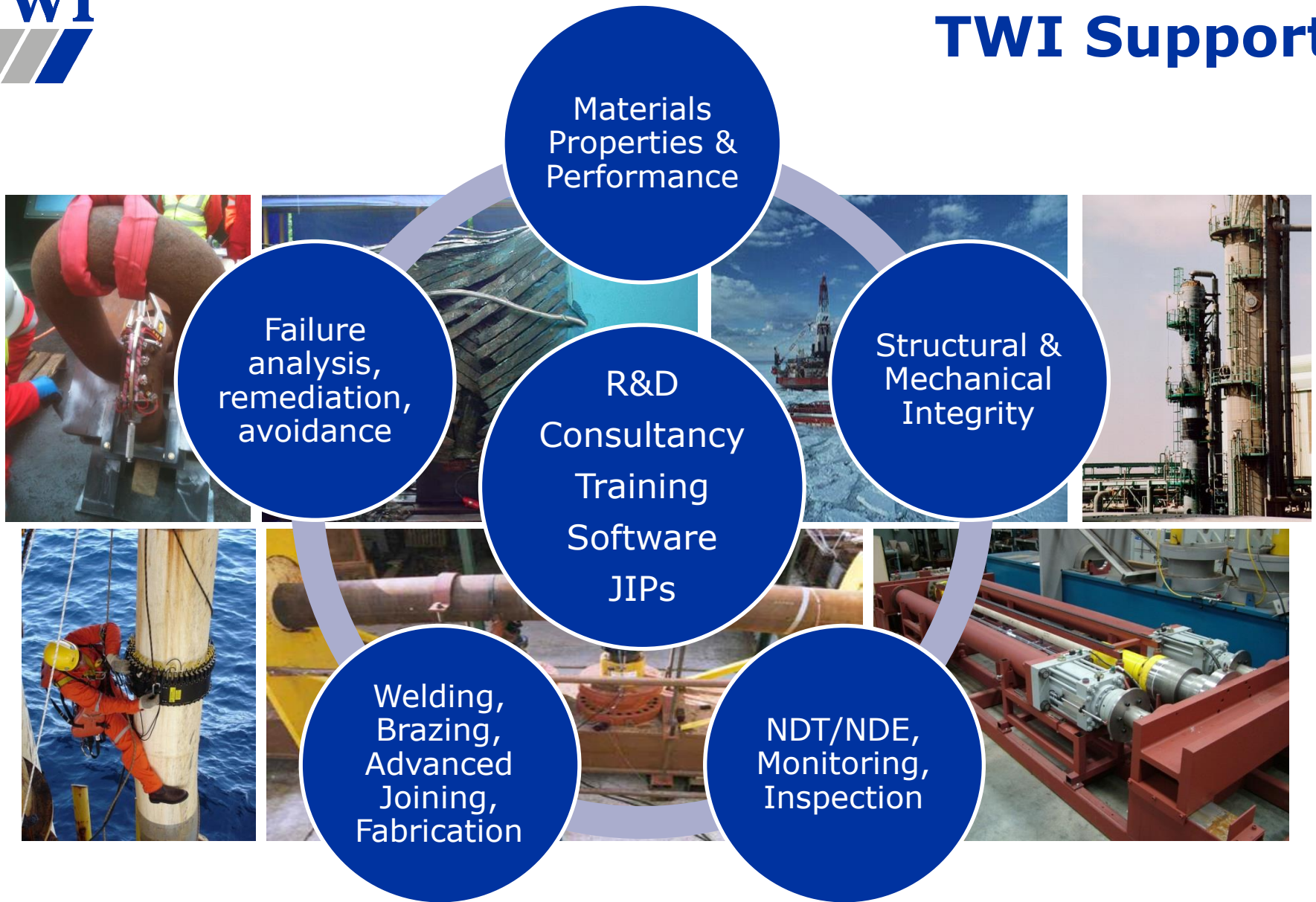
MATERIALS

- Materials and failure mode characterisation
- Materials/joints performance and degradation testing
- Materials performance improvement for demanding service
- Surface engineering
- Welding engineering and fabrication

JOINING

- Laser and sheet processes, incl. laser welding and cutting
- Friction and forge processes, incl. linear friction and friction stir welding
- Electron beam welding
- Adhesives and composites
- Ceramics
- Brazing
- R&D developing new technologies





- Process Development
 - Fitness for purpose
 - Bespoke support (key items or turnkey solutions)
- In service
 - Inspection and condition monitoring
 - Failure analysis
 - Damage assessment & repair technologies
- Support for key staff
 - Training & Certification
 - Engineering Support
 - Technical Helpdesk



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