



TWI Industrial Membership



JOINING
INNOVATION
AND EXPERTISE

Contents

Welcome	2
Why Do Companies Join TWI?	3
Meeting Industry Needs Worldwide	5
What Can I Access as an Industrial Member?	7
Technical Enquiries Support	9
Information and Data Services	11
Core Research Programme	13
Access to Technology and Innovation	15
Consultancy support	17
Events and Networking	19
Pre-Paid Consultancy Allowance and Discounts	21
Overview of TWI Process and Technology	23
Expertise and Capabilities	24
Design and Engineering	27
Manufacture and Production	28
Asset Management	29
Failure Analysis and Repair	30
Other Products and Services	31
Training and Certification	33
Professional Membership of The Welding Institute	35
Innovation Network	37
National Structural Integrity Research Centre (NSIRC)	39
Software Development and Packages	41
The Test House	43

Welcome

Industrial Membership brings together a network of companies spanning every industry sector and sharing a common need to maximise the performance of your products and assets through effective application of materials, joining and allied technologies. We can help you:

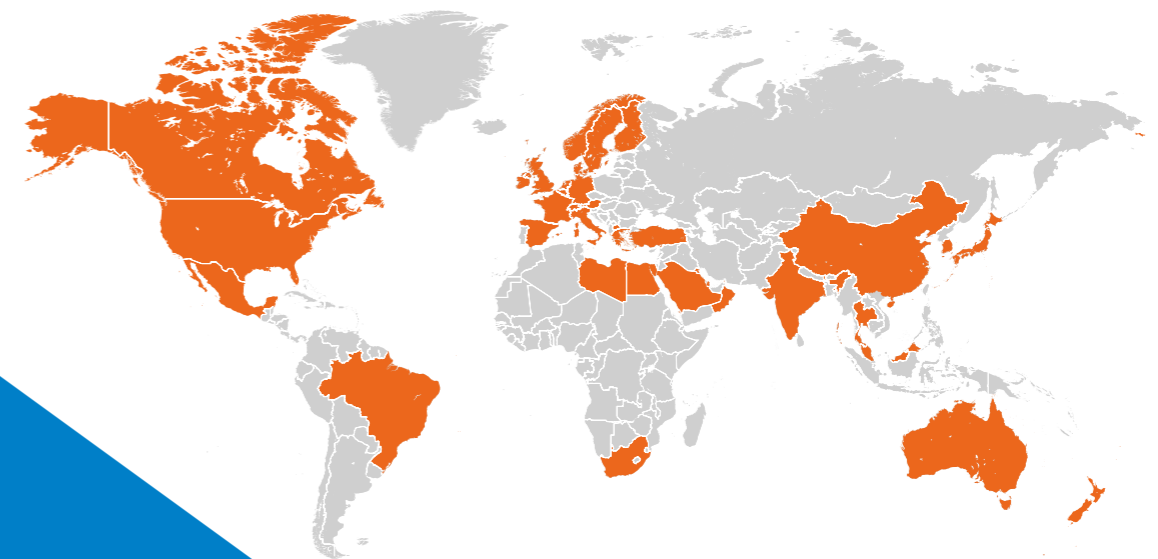
- Effectively apply welding, joining and allied processes
- Demonstrate product integrity and performance
- Establish cause and mitigate the effects of product or asset failures

Your company would become one of over 600 Industrial Members who regularly engage with a variety of TWI engineers and scientists for support in achieving short to long-term technical and economic objectives.

We exist to provide you with authoritative and impartial expert advice, knowhow and safety assurance through engineering, materials and joining technologies. This covers a broad range of technologies and support, which this booklet will help you to understand.

As with any Membership, the more you engage and use us, the more you can benefit. Think of us as an extension of your own resources.

Global TWI Member Company Presence



Why Do Companies Join TWI?

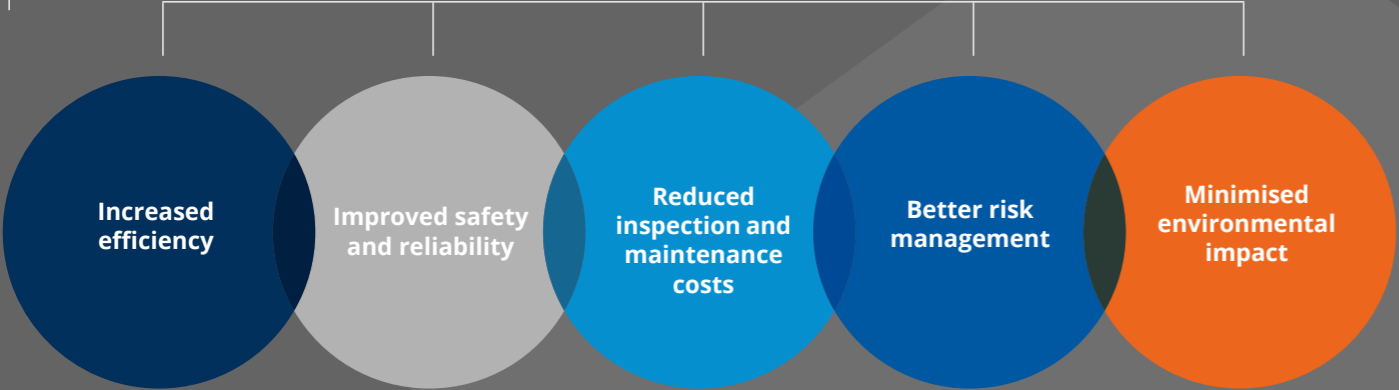
- Acceleration and de-risking of the introduction of materials joining and inspection technology for new or existing products
- Demonstration of fitness-for-service and performance of materials or product in specific operating conditions/environments
- Reduce rework and scrap costs associated with current processes and procedures
- Rapidly identify root cause and rectify failures (during fabrication or in-service)
- Attract and engage with new customers - increasing sales and exploring external funding opportunities
- Understand, adopt and comply with codes and standards as required by customers or government legislation
- Maintain or grow staff competence through relevant, tailored and effective training
- Access world-class expertise to support litigation processes

Whatever your current priority, we can help you in all of the areas outlined above.

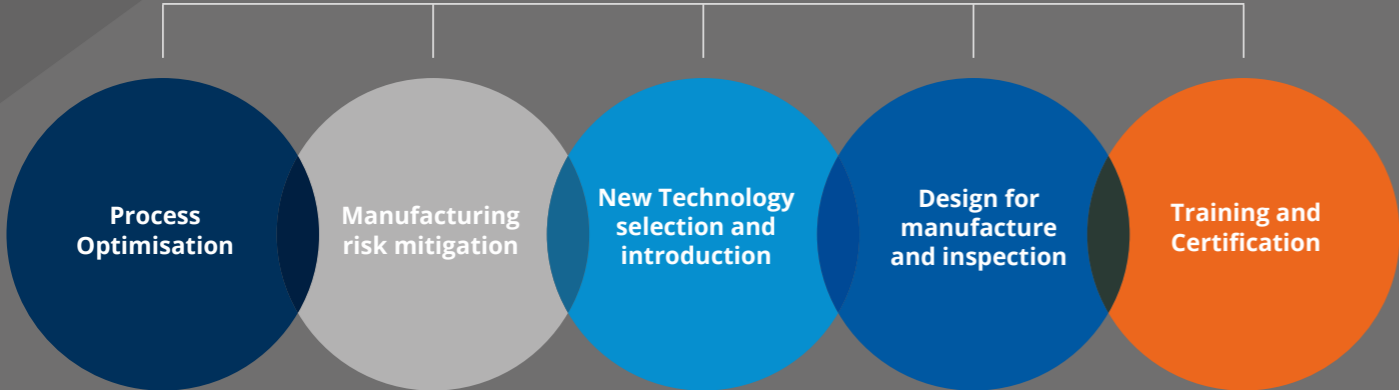


Meeting Industry Needs Worldwide

Creating competitive advantage



Supporting the manufacturing industry



Our track record

70+
YEARS OF KNOWLEDGE AND EXPERIENCE

530+
ENGINEERS, TECHNICIANS AND CONSULTANTS

600
TWI INDUSTRIAL MEMBERS

6,000m²
ENGINEERING LABORATORIES AND WORKSHOPS

In a typical year

650+
SINGLE CLIENT PROJECTS

60
CORE RESEARCH PROJECTS

59
CODE AND STANDARD COMMITTEES WITH TWI REPRESENTATION

55+
LIVE COLLABORATIVE R&D PROJECTS

6
JOINT INDUSTRY PROJECTS

Covering all aspects of welding, joining and allied processes



What Can I Access as an Industrial Member?

All of the support we offer you is designed to help you achieve your business objectives, be it addressing short-term issues or planning for medium-long term goals. The following pages provide details of what you can access, and how to benefit. These include, but are not limited to:

- Technical support – to help address urgent shop-floor issues, and back-up related actions and mitigation plans with the help of our remote or on-site expertise
- Information services – to find specific data and information relevant to your projects and activities; be it reference articles and publications, or specific materials properties data
- Regular bulletins and articles – highlighting recent developments in your industry sector; including industry trends, relevant technologies related to welding, joining, and inspection, and more.
- Events – conferences, technical meetings, workshops and bespoke training activities; all organised and delivered by an experienced events management team and supported by our technical staff

You can engage us via phone, email or face-to-face. In every case, our objective is to help you deliver your business objectives through the sharing of high quality technical knowledge and information with your staff.



What can I access as an Industrial Member?

TWI Industrial Membership provides you with direct technical support, underpinned by a massive selection of available data and information - plus a range of other benefits. Find out more in this section.


What Can I Access as an Industrial Member?

Technical Enquiries Support

Engage with over 500 engineers and scientists who cover a range of disciplines related to welding, joining, surface engineering, additive manufacture, inspection and engineering materials. This extends to knowledge of technologies, their application within industry, common problems and related codes and standards (see Page 23 for a full list of our technical knowledge areas and capabilities).

Common questions we deal with relating to assessing new technologies or existing production/assets include:

- Can you tell me about this – welding/joining/inspection – technology, and do you have it?
- What does this code or standard mean?
- How do I weld/join this material?
- How should I inspect this component?
- What caused this failure?



Direct access to technical support

If you have a question relating to materials joining, testing or inspection, as an Industrial Member, you can speak directly to a technical expert or email us at any time. There is no limit on short (<2hrs staff-time) enquiries.

What Can I Access as an Industrial Member?

Information and Data Services

Built up over six decades, TWI's library and website holds unique collections of information on all aspects of materials, joining and integrity management. From the earliest codes and standards to the latest e-books, the service is used by TWI Members worldwide when they need trustworthy and comprehensive information to support decision-making.

You can access this resource directly via our website. Alternatively, our information services team can help you find and access relevant data and information, compiling results from:

- Our library of more than 30,000 printed books, research reports, conference proceedings and more (also available to borrow)
- Materials property searches
- Literature searches, using Scopus, ProQuest Dialog and our own resource
- Best practice guides and supply of full text articles (subject to copyright restrictions)
- Market and technology intelligence



Technical information and documents

Access the world's largest array of welding and joining information in our archives, library and on our website via our information services support.

What Can I Access as an Industrial Member?

Core Research Programme

Our Core Research Programme (CRP) is a multi-million pound, market-driven schedule of research that investigates areas relevant to a broad range of industry sectors. The results are made available to all TWI Member companies whose interests, in turn, determine the direction the research takes. Its aims are to:

- Build a knowledge base in design integrity, materials engineering and joining technology for the exclusive benefit of Industrial Members
- Develop expertise in the widest possible range of welding, joining and allied processes
- Maintain staff skills and expertise at the leading edge to enable TWI to provide other services to Industrial Members
- Promote technology transfer

The Core Research Programme is reported to Industrial Members in a number of different ways:

- Research reports produced at the conclusion of specific (2-3 year) research projects, accessible via the Industrial Members area of the TWI website
- Technical papers and articles created on the TWI website
- Technology briefings and articles within TWI's bi-monthly 'Connect' e-magazine, or technical articles and papers on the TWI website
- Research seminars and technical meetings held exclusively for Industrial Members to present and discuss specific aspects of the work within the TWI CRP

We encourage Industrial Members to share your technical challenges and perspective on the trends and needs within your sector, so that we can steer our CRP accordingly and develop new technologies and knowledge to support your organisation's objectives.



Access TWI Industrial Member Reports

Access decades of industry-focussed R&D, downloadable as pdf reports via the Industrial Members area of our website.

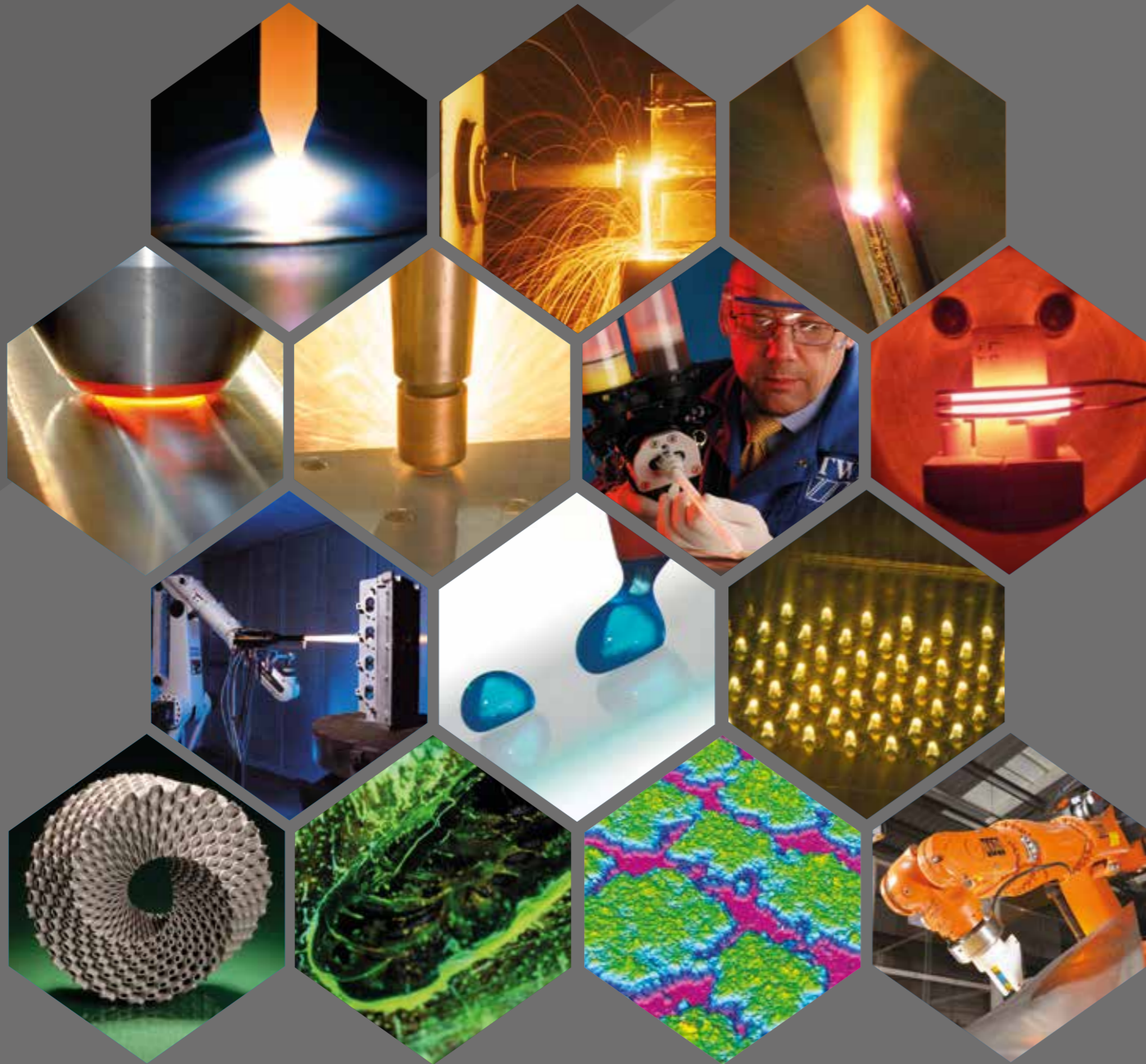
What Can I Access as an Industrial Member?

Access to Technology and Innovation

Industrial Members have access to our cutting-edge facilities and equipment, held across more than 6000m² of workshop and lab space across our four main UK sites. State-of-the-art welding, joining, surface engineering, additive and inspection technologies are supported by an array of testing and analysis techniques (See pages 23-24 for a more detailed list of capabilities).

Our highly experienced staff of over 500 engineers, scientists and technicians, calling on over six decades of built-up knowledge, can work with you to identify, understand and implement the right technology.

Whether through a two-day, desk-based feasibility study or a two-year R&D programme, we can support you in achieving your objectives.



What Can I Access as an Industrial Member?

Consultancy Support

TWI's expert staff epitomise our commitment to the development of world-class technology to solve industrial problems. With leading authority, both nationally and internationally, in their technical field, each of our experts has made significant impact through technical excellence, skill and knowledge transfer.

Industrial Members can have technical discussions and call for consultancy support from a team of engineers, which include TWI Technology Fellows who specialise in a range of disciplines that include:

- Welding engineering
- Ferrous and non-ferrous metallurgy
- Structural integrity and asset management
- Advanced non-destructive testing (NDT)
- Surface engineering and functional coatings
- Polymeric materials and composites

Support can range from a brief telephone conversation with a specialist on topics such as joining process application, design integrity, manufacturing issues or health and safety; through to engaging a multi-disciplinary team to support a failure investigation and repair project.



Experts to help you
achieve your objectives

Rapid access to engineering consultants across every
technical department of TWI, for short-long term support.

What Can I Access as an Industrial Member?

Events and Networking

Our Industrial Member companies comprise thousands of individuals who use TWI to build up knowledge related to our areas of expertise, to support delivery of their objectives and progress their careers. As a Member, you can attend multiple events aimed at sharing updates on new technologies, industry trends and best practice, along with opportunities to meet peers and existing or new customers.

Our events bring together major end-users, supply-chain companies, equipment manufacturers, universities and other research and technology organisations to share knowledge and experience in their particular areas.

The types of event we organise and host, which are either free or heavily discounted for Industrial Members, include:

- Technical seminars and presentations
- Workshops
- Demonstration days

Key annual events include:

- TWI's Welding and Joining Exhibition at TWI Cambridge
- The bi-annual Friction Welding Symposium
- Industry panel meetings, including aerospace and oil and gas sectors, amongst others

TWI also runs events in conjunction with The Welding Institute, the professional engineering institution for those working with welding and joining technology.



Events and networking

TWI hosts multiple technical meetings, industry workshops conferences that can help you develop your knowledge and business.

What Can I Access as an Industrial Member?

Pre-Paid Consultancy Allowance (PCA) and Discounts

From time to time, Industrial Members may need the assistance of TWI for specific design or manufacturing problems. On these occasions, the senior research staff of TWI are available to Members on a consultancy basis.

In these circumstances, the services of TWI staff are charged at cost. Industrial Members are entitled to up to an equivalent of 20% of the Members' Annual Technology Access Fee across a given calendar year. Some or all of the PCA for a given year can be used to offset the cost of project work, if deemed necessary.

In addition to PCA, TWI Industrial Members receive 10% off standard Training School courses (see page 33) and free annual maintenance and updates on TWI software (see page 41).



Increased value to our Members

Annual consultancy time, included within Membership, together with discounts on a variety of support and services.

Overview of TWI Process and Technology Expertise and Capabilities

How TWI Can Help You

TWI helps people and organisations across the world to maximise the performance of welding, joining and allied processes, from design through to implementation, inspection and asset management.

Providing an integrated approach to joining, inspection and material implementation for your products, we can assist with everything from R&D to specification, prototyping, commissioning, installation and training, all in line with standards and procedures. TWI also offers failure analysis, repair procedure application, and expert witness and litigation support.

Overview of TWI Process and Technology Expertise and Capabilities

Additive manufacturing (laser metal deposition, selective laser melting, arc, EB)

Adhesive bonding

Automation

Adaptive control

Arc welding and cladding (MIG/MAG, TIG, MMA, plasma and submerged arc)

Brazing (furnace, induction, torch, vacuum, inert atmosphere)

Ceramics and ceramic joining

Coatings and surface engineering (HVOF, arm, flame, cold spray, sol-gel)

Composites (polymeric) joining

Condition and structural health monitoring (acoustic emission, vibration analysis, digital twin)

Overview of TWI Process and Technology Expertise and Capabilities

Cutting (arc, laser, electron beam, laser, oxyfuel)

Digital radiography

Dissimilar material joining

Diffusion bonding

Eddy current testing

Electron beam (EB) welding and processing (gun design, local vacuum, out of vacuum)

Friction welding (linear or rotary)

Friction stir / spot welding

Guided wave inspection

Laser-arc hybrid welding

Laser welding and cladding

Induction welding

Mechanical fastening

Microjoining

Microwave welding

Phased array ultrasonic NDT

Plastics welding (mechanical, heated, electromagnetic)

Reduced pressure EB welding

Resistance welding (spot, seam, projection, flash, stud)

Robotic welding

Soldering (hot bar, thermode, laser, hot gas, ultrasonic)

Time of flight diffraction NDT

Ultrasonic inspection

Ultrasonic welding

Overview of TWI Materials Testing and Characterisation Capabilities

Mechanical and/or Environmental Testing Systems

Fracture toughness (CT, SENB and SENT specimen) testing machines; including high and low temperature (air and environment)
High-rate servo hydraulic tensile/fracture test machine
Fatigue testing machines – including fatigue endurance, fatigue crack growth rate and whole component testing (air and environment)
NACE level VII enhanced high-pressure, high-temperature sour testing facility
Full-scale sour pipe testing rig
High-pressure hydrogen testing facility for small scale tensile and fracture mechanics specimens
Polymer testing laboratory, mechanical pipe testing
Polymer permeation testing facility (including CO ₂ /CO/H ₂ /H ₂ S mixtures)
Pressure pit: Tensile/compressive axial cyclic loads
Residual stress measurement laboratory, including centre hole and incremental hole (IHD), block removal, splitting and layering (BRSL)
Resonance fatigue testing for pipes/mechanical connectors, including internal pressurisation or mechanically applied tensile axial mean stress
Vibration testing facility
Mechanical testing (fracture, fatigue, tensile) in sour service conditions
Mechanical testing (fracture, fatigue, tensile) in simulated seawater environments under cathodic protection
Creep testing
Charpy testing, including instrumented charpy testing
Drop weight (Pellini) testing
Large scale fracture testing (including wide-plate testing, pipe bead tests, crack arrest testing, whole component tests)
Tensile testing (low and high temperature)

Analysis Systems

3D x-ray microscopy
3D non-contact profilometer – Faro arm laser and contact probe dimensional scanning, Alicona surface contour scanning
3D laser scanning vibrometer
Acoustic emission measurement system
Automated light microscopes and image analysis
Computer radiography digital imaging system
Differential scanning calorimetry (DSC)
Diffusible hydrogen analysis by vacuum hot extraction (VHE)
Field emission gun scanning electron microscope with EDX & EBSD capability
Free N by isothermal extraction (IE) and O, N and H analysis by inert gas fusion
Fourier transform infrared (FTIR) spectrometer
Hardness testing (included automated nano- and micro-hardness testing)
Inductively coupled plasma chemical analysis (ICP-OES)
Laser-ultrasonic interferometer
Micro x-ray computer tomography
Metallography and optical microscopy suite
Scanning electron microscopy, including energy dispersive x-ray, wavelength dispersive x-ray analysis, and electron back-scattered diffraction (SEM with EDX and WDX)
X-ray diffractometer with vertical goniometer and theta/theta geometry configurations

Electrochemical Testing and Monitoring (DC and AC)

Linear polarisation resistance (LPR)
Potentiostatic polarisation (for determination of critical pitting temperature using flushed port Avesta cell)
Potentiodynamic polarisation (e.g. cyclic anodic-cathodic scans to investigate passive film breakdown/localised corrosion)
Electrochemical noise
Electrochemical impedance spectroscopy

Design and Engineering

What is the best combination of design, material and manufacturing process for your products? How will the result perform in service?

A minor change in design, material or process can have a massive impact on the ability to manufacture or inspect the resulting performance of a product or structure. TWI engineers can help you answer key questions so you can maximise quality, performance, service-life and, most importantly, safety.

Your Needs and Challenges:	TWI Support:
Optimal design for manufacture AND inspection	<ul style="list-style-type: none"> Design reviews, including optimisation of the material-joint-process combination, from both a production and inspection standpoint
Understanding product/asset performance under service conditions	<ul style="list-style-type: none"> Standard or bespoke testing, including fracture, fatigue, corrosion, high/low temperature or a combination reflecting operating environment
Optimal material and/or consumable selection	<ul style="list-style-type: none"> Material/coating selection guidance, supported by property/performance data searches or generation (by testing)
Demonstration of fitness-for-service and in-service performance	<ul style="list-style-type: none"> Finite element analysis (FEA), engineering critical assessment (ECA), fatigue modelling and other numerical modelling methods
Understanding the impact of welding, joining or other processes on material or product performance	<ul style="list-style-type: none"> Process modelling and simulation, including minimising residual stress and distortion Material / coating characterisation and analysis following prototype/product manufacture
Prototyping	<ul style="list-style-type: none"> Production and testing of prototypes using a range of process techniques
Heat treatment process selection/development	<ul style="list-style-type: none"> Procedure guidance for selection and development of heat treatment procedure, including process simulation

Manufacture and Production

Adopting new or advanced technology is a key element of staying competitive within industry. TWI engineers have extensive experience in supporting companies to identify and implement welding, joining, inspection and allied technologies into production. In addition to technology acquisition, engineers with manufacturing experience can help you optimise your existing manufacturing or production processes.

Your Needs and Challenges:	TWI Support:
Maximising health and safety	<ul style="list-style-type: none"> Understanding and updates on current legislation Site assessments, including fume, EMF and other "risk factors"
Improving productivity	<ul style="list-style-type: none"> Guidance on selection and implementation of process automation Review and optimisation of existing production processes
Identify new technology and establish production readiness	<ul style="list-style-type: none"> Establish economic and technical feasibility of various process options - considering maturity, associated risks against productivity/quality requirements Procedure development and qualification and review against relevant codes and standards
Successful adoption and implementation of technology	<ul style="list-style-type: none"> Defining facility requirements and system specification Generation of related QA/QC Commissioning, training and qualification of personnel
Manufacturing and production quality issues	<ul style="list-style-type: none"> Production process reviews Recommendations on best-practice in relation to particular processes and technologies Fabrication failure support - root cause analysis / repair procedure development
Upskilling of workforce	<ul style="list-style-type: none"> Accredited training and personnel certification schemes Bespoke classroom/shopfloor support from process specialists

Asset Management

Managing structural integrity is fundamental to ensuring that engineered structures and components remain safe and productive. Effective inspection and risk management minimises the risk of catastrophic failure and the likelihood of having to take components out of service, maximises operational efficiency and promotes asset life extension.

A multidisciplinary team of more than 150 consultants, engineers and technicians can assist you in integrity management strategies to help you avoid engineering failure, ensure regulatory compliance and optimise operating expenditure.

Your Needs and Challenges:	TWI Support:
Demonstrate fitness-for-service of pressure vessels, pipework and other assets	<ul style="list-style-type: none"> Evaluation to BS 7910:2013, API 579/ASME FFS-1, ASME B31G, DNV-OS-F101, FITNET and other standards
Establish defect levels in assets to support fitness-for-service or as part of risk-management	<ul style="list-style-type: none"> Full range of non-destructive testing (NDT) techniques Third party inspection service NDT qualification and validation Risk based inspection (RBI) as part of asset or pipeline integrity management
Ongoing monitoring of structures, assets and systems to optimise maintenance and repair schedules	<ul style="list-style-type: none"> Structural health monitoring Condition monitoring Digital twin technology
Decommissioning of structures and assets	<ul style="list-style-type: none"> Development and application of technology to reduce associated risks

Failure Analysis and Repair

Each year, TWI carries out hundreds of failure investigations and fabrication problem-solving consultancy projects, analysing products across all industry sectors - from precision micro-joints in electronics and medical instruments, to heavy section pipelines and process equipment, with particular expertise in fracture, fatigue, corrosion and hydrogen embrittlement of welds, joints and coatings. In all cases, our goal is a rapid response to help you understand the materials engineering root cause of any failure, and design and implement a solution, with minimal interruption to your operations.

Your Needs and Challenges:	TWI Support:
Understand root cause of fabrication or in-service failure	<ul style="list-style-type: none"> On-site review if required Analysis and testing of components or asset, as required, to determine failure mechanism Remedial advice for the avoidance of further failures, including design and fabrication reviews for replacement components
Mitigation following failure	<ul style="list-style-type: none"> Definition of safe conditions for remaining intact components Establishment of a non-destructive evaluation strategy for remaining components Establish need for repair Repair procedure development and qualification Oversight of repair process
Dispute resolution	<ul style="list-style-type: none"> Impartial, expert evidence to support parties reaching agreement Expert witness support when required

Other Products and Services



Support your workforce,
access other benefits

Extend the performance and capabilities of your company
and staff through a range of additional products and support.

Training and Certification



Training

Training with TWI leads to internationally recognised qualifications which deliver real benefits to industry through the acquisition of new competencies.

TWI's portfolio of courses and certification schemes is regularly updated to maintain TWI's position as the world leader in its field, so you can be sure that your training is internationally recognised by certification award bodies including CSWIP, BGAS-CSWIP, PCN, EWF/IIW, ASNT, IOSH, and NEBOSH.

Our courses are designed to service all key industry sectors, including oil and gas, aerospace, construction, power, automotive, rail, marine, and manufacturing. TWI also offers flexible, fully customised training.

Designed to meet the demands of industry around the world, our training is conducted by certified experts so you can be confident that TWI's courses will deliver the knowledge you or your company needs.

We have flexible options for eLearning or blended learning, allowing you to minimise the impact of being away from the workplace and study at your own pace and convenience.

Choose from our standard training courses or organise training to meet your personal, company or industry needs. We can even provide on-site training at your business or place of work so that you don't have to travel to take advantage of what TWI has to offer.

TWI Industrial Members qualify for a 10% discount.

Certification

Whether you are purchasing welded products or subcontracting welding and associated tasks into your supply chain, TWI Certification Ltd supports confident decision-making. CSWIP certification of personnel supports your selection in recruitment and your confidence in supply chain competence assurance. WFCS certification of compliance with ISO 3834 provides confidence in your suppliers' control of quality of welded production (CAESAS for structural steel and aluminium products, CWRVC for railway vehicles and components and CMSM Certification of Manufacture of Special Materials). The competence of welder training is certified by the CSWTO scheme, which includes CSWIP Welding Instructor and CSWIP Welding Examiner requirements.

TWI Certification Ltd is a UKAS-accredited certification body, a Notified Body for the Construction Products Regulation, a Recognised Third Party Organisation for the Pressure Equipment Regulations, and is the Authorised Body in the UK for EWF and IIW qualifications and certification.

Training and certification

Improve your knowledge and skills, or that of your workforce, with our range of training courses. Meanwhile, our certification schemes ensure proof of your competence.



Professional Membership of The Welding Institute

We offer Professional Membership and Engineering Council Registration

If you are an engineering professional, you can apply through us for Professional Membership and registration as an Engineering Technician (Eng Tech), Incorporated Engineer (IEng) or Chartered Engineer (CEng) through our licence with the Engineering Council.

Registration is open to all engineering professionals who can demonstrate competence to perform professional work to the required standards, as well as a commitment to:

- Maintain that competence
- Work within professional codes
- Participate actively within the profession



The benefits of becoming a Member of the Institute and registering with the Engineering Council also include:

- International recognition of individual qualifications to facilitate the international mobility of professionally registered engineers and technicians across the globe

We are also licenced to accredit university engineering degrees. Accredited Engineering Degrees offer students, their parents and advisors, and employers an important mark of assurance that the programme meets the high standards set by the engineering profession.



Professional Membership of The Welding Institute

Benefit from Professional Membership to gain support in your career, network with your peers and demonstrate your professional expertise.

Innovation Network

TWI's Innovation Network's aim is to drive innovation through collaboration.

The Network consists of:

Private Technology Partnerships (PTIPs) – Long-term relationships with TWI Industrial Members, to develop novel solutions and address industrial challenges for future needs. PTIPs foster home-grown innovation and work closely with customers to address their technology priorities, working towards the commercialisation of technology with sponsors and supply chains. The units are based at TWI, allowing them access to TWI's facilities, along with access to TWI's academic partnerships to take their research forward.

Technology Acceleration Programmes (TAPs) – A source of ideas, knowledge, expertise, skills and research infrastructure for business. TAPs invite collaborations with SMEs, TWI Industrial Members and academia with the aim of developing and introducing new project concepts, and novel ideas with industrial engagement, as well as moving innovation through to commercialisation. Projects are carried out collaboratively at TWI's facilities, including its Innovation Centres, as well as at partner organisations' sites.

Innovation Centres - Underpinning the network are collaborations between a number of universities and TWI, with each Innovation Centre focussed on specific technologies and with the purpose of bridging the gap between academia and industry.

TWI Industrial Members are welcome to join the TWI Innovation Network and collaborate in the research opportunities. For further information, please contact us on info@twi-innovation-network.com



Innovation Network

Advancing research and technologies through collaboration between TWI and universities to bring together academia and industry.

National Structural Integrity Research Centre (NSIRC)

Established in 2012 and managed by TWI, NSIRC is a state-of-the-art postgraduate engineering facility, uniting academia and industry.

Sponsored by BP, Lloyd's Register Foundation and TWI, and in collaboration with more than 35 leading UK and international universities, NSIRC addresses the need for both fundamental research and industry-relevant training for the next generation of structural integrity engineers. The PhD students conduct research across the full range of joining, materials and engineering technologies on topics that are industrially relevant. Students are based at TWI and benefit from the support of both an academic supervisor and a TWI technology expert.

In addition, NSIRC offers two MSc programmes with Brunel University London; Structural Integrity (Asset Reliability Management); and Oil and Gas Engineering, as well one programme with Aston University on Engineering Leadership and Management.

The availability of industrially-led PhD and MSc courses may be of interest to employees of TWI Industrial Members.

For more information, please go to the NSIRC website www.nsirc.com



 National Structural Integrity Research Centre (NSIRC)

Working to develop the next generation of engineering professionals, while delivering cutting-edge research for industry.

Software Development and Packages

TWI has been developing and selling software products to support customers in welding, engineering and training for over 30 years.

TWI's Welding Software, Welding Qualifier and Welding Coordinator combine industry standard welding documentation with built-in code-intelligence from ASME, ISO and AWS, ensuring your fabrication management complies with all major welding and quality codes and standards. Our software packages are designed to integrate seamlessly, allowing you to cover all of your needs with joined-up industry-standard products.

Our Integrity Management Software, Crackwise, Riskwise and Integriwise, comprise a suite of asset integrity management software, including the automation of fracture and fatigue assessment procedures according to BS 7910, the risk-based targeting and scheduling of inspection and maintenance, and level I and II FFS assessments according to API 579 and ASME FFS-1.

TWI's TickIT+ accredited software development team also produces customised and fully bespoke software for TWI Members, so if you have any requirements for software applications, let us know at support@twisoftware.com



Software development and packages

Assisting professionals with code and standard compliance, managing assets and providing bespoke software solutions for industry.

The Test House

The Test House (Cambridge) Ltd is a UKAS accredited independent commercial testing laboratory offering a wide range of testing and inspection services across all industry sectors.

We offer competitively priced, fast response, one-stop accredited welding procedure qualification and routine and special testing services across a range of industries.

We pride ourselves in both the quality of our work and our agility to provide rapid response testing services around the clock, 24 hours a day, seven days a week. Our team of engineers have extensive industry experience and are adept at providing quality inspection services at any location in the UK. The Test House also provides laboratory-based inspection services utilising our state-of-the-art testing laboratory in Cambridge.

In addition, The Test House has an integrated machine shop dedicated to the manufacture of test specimens and subcontract machining.

Our aim is to add value to your business through the quality of our services, providing expertise, flexibility and bespoke inspection solutions when and wherever they are required.

Contact us to find out more and discuss your requirements:

Tel: +44 (0)1223 899012
E-mail: admin@thetesthouse.co.uk
Web: www.thetesthouse.co.uk



The Test House

UKAS accredited independent testing services for industry, alongside sub-contract machining and test specimen manufacture.



TWI Ltd, Granta Park, Great Abington, Cambridge, CB21 6AL, United Kingdom
Tel: +44 (0)1223 899000 Email: contactus@twi.co.uk Web: www.twi-global.com