



# **TWI AND THE OIL AND GAS INDUSTRY**

**TWI has been providing support for the safe, reliable and economic extraction, production, transportation and refining of hydrocarbons from both onshore and offshore oil and gas fields for over half a century.**

Working with upstream and downstream oil and gas industry businesses, our expertise has benefited operators, contractors and parts of the supply chain within our Industrial Membership. In order to solve the challenges of the industry we have developed considerable expertise in corrosion, non-destructive testing, structural integrity, materials selection and welding engineering.

Including, for example, the assessment and development of new joining and inspection methods as well as innovative new materials such as non-metallics, our work aims to help improve safety, enhance best practice, enable life extension and reduce costs.



## Oil and Gas Industry Expertise

Our expertise in the oil and gas industry includes:

- Structural Integrity and Corrosion / Pipeline Management (inc. complex offshore structures)
- Fitness-for-Service / Life Extension
- Failure Investigation
- Welding
- Component Replacement / Repair
- Procedure and Test Method Development
- Inspection and Condition / Structural Health Monitoring
- Fatigue Performance
- Subsea and Downhole Technologies
- Deep Water Exploration / Production Materials and Technologies
- Enhanced Recovery
- New Metallic and Polymeric Material Evaluation (inc. aggressive environment testing)
- Transmission, Storage and Process
- Surface Engineering
- Additive Manufacturing
- Codes, Standards, Regulations and Compliance
- Training

## Adding Value

Partnering with TWI allows you to benefit from:

- **Reduced Costs** – through improved processes
- **Added Functionality** – through the introduction of materials with dual or improved properties
- **Safety and Best Practice**
- **Industry-Ready Software**
- **Previous Experience and Expertise** – gained over decades of experience working with many of the largest names in the sector
- **Certified Quality** - to ISO 9000 series of standards
- **Responsive Problem Solving** – rigorous lab-based research to meet the challenges of the industry

## TWI Support

TWI research and development is undertaken in strict confidence with both individual experts and multi-disciplinary teams being available to solve all kinds of challenges related to material joining, coatings, surfacing, novel materials, and more. This includes allowing our Members the opportunity to join joint industry projects, where you can pool your resources with others to address industry challenges.

Our work in other industries, such as the marine sector, allows us to migrate technologies and solutions between applications to find the best solutions, while covering the entire scope of development activities, from design concepts through to advanced materials assessment, simulation and modelling, and manufacture. We also offer in-service support using science and technological experience to solve any problems and mitigate against failure, creating bespoke solutions for our clients.

As part of our Core Research Programme, TWI has developed innovative technologies which are either ready for use in the oil and gas sector, or could be further developed for commercial exploitation. Our expertise means that we are actively involved in a number of committees for standards related to the oil and gas sector, while we also offer training services for the industry.

FOR MORE INFORMATION, PLEASE CONTACT US AT [ENQUIRIES@TWI.ME.COM](mailto:ENQUIRIES@TWI.ME.COM)