

Joining forces: How TWI safeguarded their sector with standards

Overview

TWI is an independent, industry-funded research and technology organization, specialising in materials joining and engineering processes. TWI plays an integral role in the development of industry standards, in order to assure quality and safety in welded structures.

The challenge

TWI's origins lie in investigating the causes of brittle fracture and other structural failures during the 1940s and fracture mechanics. The organization provides impartial, expert support in welding, materials performance and structural integrity across all industries, such as energy, power generation, aerospace and medical devices.

From early work in TWI's laboratories in the 1960s, the following decades saw TWI's knowledge grow to widespread use as guidance for predicting if, how and when a structure would fail. Sharing and standardizing this knowledge would begin TWI's long relationship with BSI and standards.

Solved with standards

As a result of TWI's contribution to the development of [BS 7910](#), accidents and fatalities have been avoided and resilience, productivity and efficiencies have increased across the industry. TWI's involvement in creating and defining industry standards strengthens and enhances the business' expertise, reputation and competitive advantage.

Involvement in the standardization process also allows for a sharing of knowledge that has benefits for the company complying with the standards as well as the clients utilising TWI's services. These include greater assurance of safety, more efficiency within the sector, and reputational advantages.

TWI uses standards to:



Assure the safe operation of critical components and structures



Ensure compliance and build resilience



Uphold reputation as a centre of world class expertise



Standards implemented for clients by TWI

BS 7910: This standard relates to fracture mechanics. It ensures consistency and diligence across the industry by standardizing the approach to the assessment and repairs of cracks in the weld of a structure. Complying with BS 7910 means that engineers can thoroughly evaluate and accurately determine the urgency of the repair needed, mitigating the risk to life from a structural failure.



Setting the standard for success

Standards enable you to:



Access quality information in any particular area or on a specific subject – especially valuable for SMEs which don't always have the resources of larger organizations.



Ensure you're following the best practice for your industry. It's faster and more cost-effective to demonstrate compliance with recognized standards.



Give consumers and other stakeholders confidence in your products and services by setting the benchmark for quality, safety and many other areas.

Paul Jones TWI

“Companies faced with critical engineering problems need trustworthy independent expert support in order to make the best decision possible. TWI's experts have to base their advice on trustworthy information of which standards, as an expression of current know-how on a topic, are foremost.”



See what BSI standards can do for your business

For more information on how standards can help your business, [contact us](#).
Find out how we've helped other organizations with their business challenges [here](#).