

International Conference on Structural Integrity (ICSI2025)

1 – 4 September, 2025. Funchal, Madeira, Portugal

Hydrogen Effects in Materials and Embrittlement in Structural Integrity

The Symposium on Hydrogen Effects and Embrittlement as a part of the 6th International Conference on Structural Integrity (ICSI2025), to be held on in Funchal on Madeira from 1 – 4 September 2025.

In the context of decarbonization, green hydrogen is seen as a key energy source and a key process gas. This poses challenges for materials and structural components. Complex material testing techniques require reliable and reproducible hydrogen charging and testing methods in compliance with strict safety requirements. Furthermore, basic mechanisms of interaction of hydrogen with deformation and damage behavior of materials are well studied but still matter of debate.

Topics of the symposium (not exhaustive)

- Material testing in the presence of hydrogen
- Hydrogen effects on dynamic deformation behavior
- Nondestructive testing in hydrogen applications
- Hydrogen charging techniques
- Hydrogen damage of materials and components
- Hydrogen analysis
- Local hydrogen detection
- Hydrogen technologies

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