

Poster 1



Ehsan Akbari Kharaji

Coating network and barrier property design strategies for protection against hydrogen embrittlement

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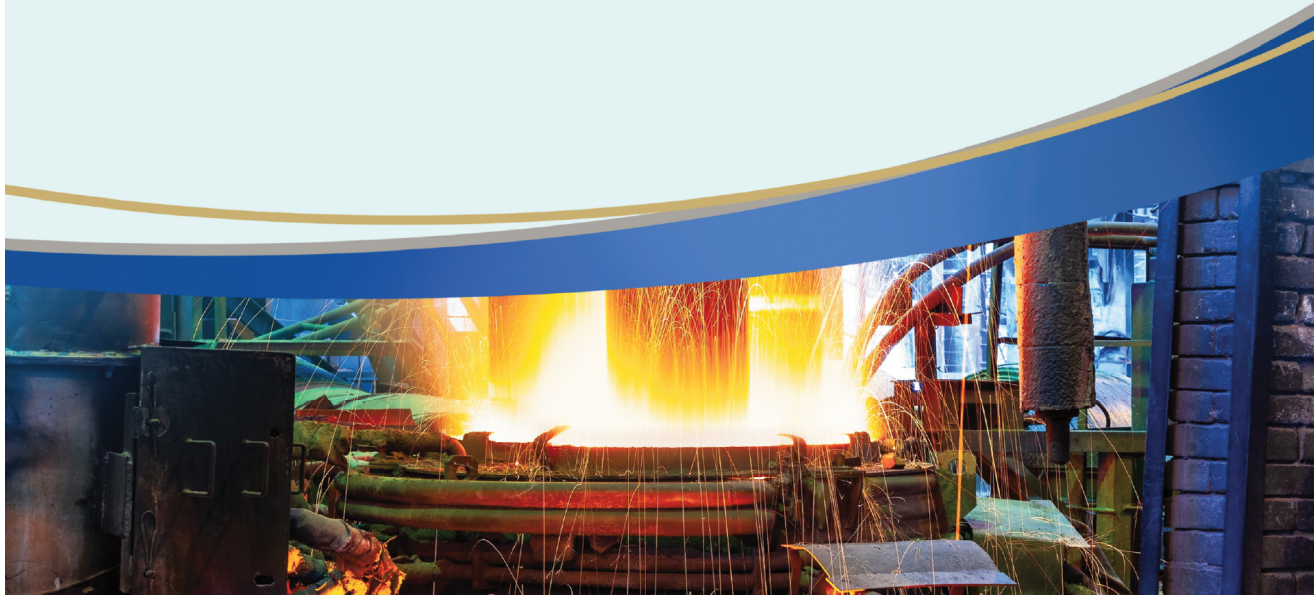
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ABSTRACT:

As society moves towards net zero, hydrogen offers an alternative approach to heating, transport, and industrial processes. The 'hydrogen economy' to succeed being dependent upon current and new infrastructure for storage and supply. Hydrogen is of course known to cause embrittlement in some metals. Careful materials selection and the application of appropriate surface coatings may be the key to safe and economical solutions.

This project aims to develop design criteria for polymeric and / or inorganic coating linings, to offer protection against hydrogen embrittlement. Additionally, methods to measure hydrogen permeation, and the impact of such permeation on tensile properties of the substrate material, will be considered..



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