

**HEmS Early Career Researcher group**

**Hydrogen embrittlement: Industrial problems and the HEmS grant research**

Wednesday 30 September, 2015

**AGENDA**

**2pm            Arrival - coffee/tea            [St Anne's College]**

Session 1 – Steels            Chair – Dr Olga Barrera (HEmS grant, University of Oxford)

2.00 – 2.25    Welcome and HEmS overview

*Dr Olga Barrera (HEmS grant researcher, University of Oxford)*

2.25 – 2.50    Characterisation of the hydrogen transport and the hydrogen induced damage of (ultra) high strength steel concepts

*Tobias Schaffner (Ruhr-University Bochum/ ThyssenKrupp Steel Europe)*

2.50 – 3.15    Atomistic simulations of Hydrogen in bearing steels

*Dr Sebastián Echeverri Restrepo (Researcher, SKF Engineering & Research Centre)*

3.15 – 3.40    Hydrogen embrittlement of subsea welded joints: failure mechanisms and opportunities for mitigation

*Dr Michael Dodge (Senior Project Leader, The Welding Institute Ltd)*

**3.40 – 4.00    Tea break**

**HEmS – Hydrogen in Metals**

HEmS (Hydrogen in metals - from fundamentals to the design of new steels) is a major initiative to investigate the process of embrittlement of metals from hydrogen. The research is funded by the EPSRC and is a joint collaboration between the Universities of Oxford, Cambridge, Sheffield and Imperial and King's Colleges London.

<http://www.hems.ox.ac.uk/>

Session 2 - Other Metals

Chair – Dr James Kermode

*(University of Warwick, HEmS grant Associate)*

- 4.00 – 4.25 The Role of Hydrogen and Hydrides in Zirconium Alloy Performance  
*Dr Peter Honniball (Metallurgist, Core Design and Performance, NNPI, Rolls-Royce)*
- 4.25 – 4.50 Multiscale Modelling of Delayed Hydride Cracking  
*Mitesh Patel (PhD Student, Dept. Physics, Imperial College London)*
- 4.50 – 5.15 Hydrogen in titanium – the role of stress, temperature, time and microstructure  
*Professor David Rugg (Rolls-Royce Senior Fellow)*

Discussion

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