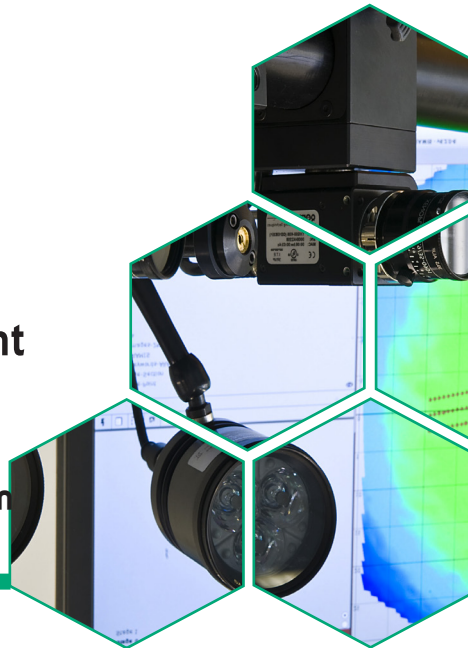


The Engineering Integrity Society

**Product Integrity Testing: An
Integral Part of the Development
Process**

**Tata Steel Research & Development,
Swinden Technology Centre, Rotherham
Wednesday 20 May 2015**



This one day event will be held at Tata Steel's Swinden Laboratory in Rotherham. The presentations will address issues relating to establishing repeatable material characteristics, controlling and integrating them into the predictive and manufacturing of steel products.

Product Integrity Testing : An Integral Part of the Development Process

Tata Steel Research and Development, Swinden Technology Centre, Rotherham

Wednesday 20 May 2015

Programme

9.00am **Registration, Tea and Coffee**

9.20am **Introduction and Site Induction**

9.40am **Measuring Total Strain - John McCarthy, MAPS**

Use of MAPS to measure material condition and total strain with examples of welded coiled tubing etc. Total strain including residuals are frequently not allowed for in prediction and testing and vary in manufacture.

10.40am **Tea and Coffee**

11.00am **Welded Joints - Simon Smith, TWI**

Performance testing of thick-walled welded pipes for demanding applications in the offshore oil and gas sector, including: Toughness issues of welds, predictions and effect of residual stresses and implications to overall pipe integrity; Characterising the effect of welding, forming and in-service strains on pipe performance; Simulating test conditions for strain-based design of pipelines.

12.00pm **Lunch**

12.45pm **Tour of Tata Steel facilities with discussion of technology in each area.**

1.45pm **Material Properties at High Strain Rates - David Norman, Tata Steel**

Establishing real material characteristics for high strain rate loading of steel components. Impact and collision performance requires accurate material data at these strain rates and must include the manufactured condition.

2.45pm **Tea and Coffee**

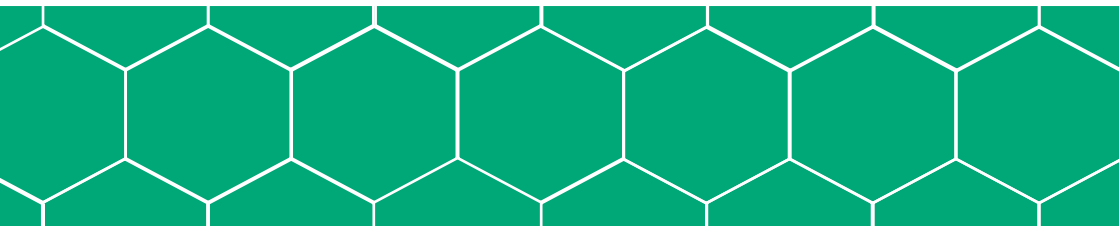
3.00pm **Structural validation of off-highway vehicles using field data - Dr Colin J Dodds, Dodds and Associates**

In the development of specialized off-highway vehicles, only a limited number of prototype vehicles and components are available for structural validation. The service loading is variable and uncertain and often the weld quality leaves a lot to be desired. A validation program, designed to achieve a given reliability and based on limited field measurements with 3-4 prototypes and the use of "Gassner" SN curves has been developed and implemented. The results are compared with warranty data and subsequent customer usage.

4.00pm **Q&A Session**

Open forum debate on issues raised and possible creation of projects to establish needed information.

4.30pm **Closing Comments**





Booking Form

	EIS Member	Non EIS Member
Delegate	£50+VAT	£60+VAT
Student/Apprentice	£15+VAT	
	UK	Rest of the World
Personal Membership of the EIS	£25 per year	£30 per year

I enclose a cheque for £_____ made payable to the Engineering Integrity Society. Payment can also be made by BACS.

Name:

Company:

Address:

Telephone:

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Please return completed forms to the following address:

Engineering Integrity Society, 17 Harrier Close, Cottesmore, Rutland, LE15 7BT, UK

Telephone: +44(O)1572 811315

Email: info@e-i-s.org.uk

The Engineering Integrity Society is an independent not-for-profit organisation which aims to inspire all engineers, both experienced and newly qualified, across a broad spectrum of technologies. The Society is committed to promoting events and publications, providing a forum for engineers to discuss present industrial needs, new technologies and to stimulate both company and personal development.

The annual subscription rates are £25 for UK residents and £30 for non-UK residents. Upon joining the Society you will also have the additional advantages of preferential attendance rates at EIS events, together with selected events held by some of the associated organisations. In addition you will have access to CDs containing archived copies of EIS presentations.

About Tata Steel Europe

Tata Steel Europe is one of the largest steel producers in Europe. Annually we produce and distribute 18 million tons of high-quality steel products in sectors like construction, automotive, packaging and the aerospace industry. Our vision is to be the global steel industry benchmark. To achieve this, we actively work together with our customers, suppliers and research institutes.

Swinden Technology Centre is one of two R&D sites within Tata Steel Europe. Home to approx 150 researchers and technicians, a varied programme of product and process development is carried out to support our manufacturing sites. Activities such as steel grade developments, coating and product engineering are supported by a wide range of pilot manufacturing equipment and product testing and characterisation facilities.

The **ENGINEERING INTEGRITY SOCIETY** is pleased to acknowledge the support of the following organisations:

AC Soft	M&P International	Sensors UK
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Datron Technology	Moog	Systems Services
Gantner Instrumentation	MTS	Techni Measure
GOM	Muller-BBM	THP Systems
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