

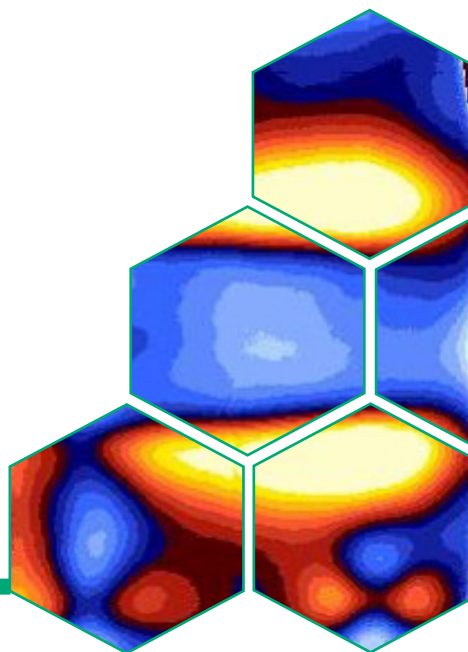
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# The Engineering Integrity Society

## Visualising Strain

Star Hydraulics, Tewkesbury  
5 October 2017



This one day event will look at the techniques for visualising strain using Photo Elastic, Thermo Elastic and Digital Image Processing. Presentations on each technique will be provided by specialists in each discipline and working demonstrations both static and dynamic.

Discussions will look at how to economically introduce these technologies on a range of metallic and non metallic materials.



The day will look at some of the techniques used to visualise strain, both in service and during testing. Knowing strain and load paths is essential to identify with the predicted life and we assume too often the load we apply results in the strain we predicted. Photo elastic and thermo elastic methods differ in their concept technology and visualisation of strain. Digital Image Processing (DIP) is the most recent of these technologies and is three dimensional and more flexible in the range of materials that can be easily covered.

Initial costs of the various systems frequently limits their application but during the day we will demonstrate some more economic and simpler introductory systems that can be used to show the benefit of investing in these technologies under both static and dynamic conditions.

**Programme**

- 9.30am Registration, Tea and Coffee
- 10.00am Introduction to Star Hydraulics & The EIS - Paul Shillam (Star Hydraulics) & Norman Thornton (EIS)
- 10.15am General overview of the need to visualise strain to improve testing and verify models – Norman Thornton (EIS)
- 10.45am Photo elastic strain measurement. – Geoff Calvert (VisEng Ltd)
- 11.15am Tea and Coffee
- 11.30am Digital image processing – Rob Wood (GOM UK)
- 12.00pm Thermo elastic strain measurement. – Matthew Clavey (Thermal Vision Research)
- 12.30pm Lunch and Networking
- 1.30pm Demonstrations of the three techniques
- 2.45pm Discussion - questions/answers
- 3.45pm Closing Comments & Feedback

**Booking Form**

	EIS Member	Non EIS Member
Delegate	£100+VAT	£125+VAT
Student/Apprentice	£25+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:		
Email:		
Any Special Dietary Requirements		

Please return completed forms to the following address:  
 Engineering Integrity Society, 17 Harrier Close, Cottesmore, Rutland, LE15 7BT, UK  
 Telephone: +44(0)1572 811315 Email: info@e-i-s.org.uk

Please tick this box if you do not wish to hear about future events



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.

**Star Hydraulics** design and manufacture high quality electro-hydraulic servo valves and ancillary equipment, which are used in a wide variety of market sectors.

The **Engineering Integrity Society** is pleased to acknowledge the support of the following organisations:

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