

RELIABILITY OF SYSTEMS AND EQUIPMENT OPERATED IN HARSH ENVIRONMENTS

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Institution of
**MECHANICAL
ENGINEERS**

Safety and Reliability Group
Seminar

6 March 2018
One Birdcage Walk, London

SEMINAR SPEAKERS INCLUDE:

Andy Harrison, Engineering Associate
Fellow - Life Cycle Engineering
Rolls-Royce

Bruce Henry, Mechanical Systems
Engineer
SSE Engineering Centre

Robert McMillan, Product Safety Officer
and Head of Engineering Wind Power UK
Siemens Gamesa Renewable Energy Ltd.

Nigel Holliday, Head of Standards &
Capability – Maintenance
Sellafield Ltd.

Nigel Marshall, Engineering Manager -
New Business, Typhoon General Systems
BAE Systems Plc

James Neophytou, Executive Partner,
Watson Internet of Things
IBM



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SUPPORTING ORGANISATION:



EVENT PARTNERS:



RELIABILITY OF SYSTEMS AND EQUIPMENT OPERATED IN HARSH ENVIRONMENTS

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SYSTEMS AND EQUIPMENT OPERATING IN HARSH ENVIRONMENTS ARE SUBJECT TO PARTICULARLY SEVERE CONDITIONS, INCLUDING: DUST, RADIOACTIVITY, EXTREME TEMPERATURES, PRESSURES AND HIGH WINDS. SUCH CONDITIONS NEED TO BE TAKEN INTO ACCOUNT TO ENSURE ASSET RELIABILITY AND TO ASSIST IN SAVING COSTS AND MAN-HOURS, REDUCE MAINTENANCE NEEDS AND GUARANTEE SAFETY.

Gain key insights into how a range of industries including wind power, nuclear power, aerospace, defence and oil and gas address challenges and avoid failures. Take advantage of unique lessons learnt on how to design, operate, manage and maintain your assets in extreme conditions for efficiency and effective service. Address key areas of concern around reliability in harsh conditions with your peers and industry thought leaders.

KEY PROGRAMME HIGHLIGHTS:

- **Bechtel** share case studies on rotating equipment in harsh environments within the oil and gas sector
- **Rolls-Royce** discuss design for service in relation to gas turbine engines
- Find out about onshore wind turbines in harsh environments from **SSE Engineering Centre**
- Gain key insights about in-service reliability for combat aircraft systems from **BAE Systems Plc**
- Hear from **IBM** about the rise of the machines and reliable self-healing assets
- Learn from **Sellafield Ltd.** about how they engineer reliability at their site

ATTEND THIS SEMINAR TO:

- Understand how to appropriately design and manage to avoid failures
- Improve anticipation of problems that can occur when trying to maintain reliability in harsh environments
- Improve your reliability strategies for extreme conditions and other relevant scenarios
- Discover technological advances aimed at increasing safety and reliability in your business
- Benefit from cross-industry learning opportunities with presentations from **BAE Systems Plc, Siemens Gamesa Renewable Energy Ltd., SSE Engineering Centre, Bechtel and Rolls-Royce**
- Join the debate during roundtable discussions, question and answer sessions and networking breaks to further discuss the latest issues

ORGANISING COMMITTEE:

Safety and Reliability Group
Institution of Mechanical Engineers

MEMBERS CREDITS:

Bob Wilson, Member, Safety and Reliability Group
Institution of Mechanical Engineers

Mark Norris, Managing Consultant
Sweco UK Ltd.

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**TERMS AND
CONDITIONS
APPLY**

PROGRAMME

TUESDAY 6 MARCH 2018	
08:30	REGISTRATION AND REFRESHMENTS
09:00	CHAIR'S OPENING REMARKS Bob Wilson, Member, Safety and Reliability Group, Institution of Mechanical Engineers
09:10	KEYNOTE: AN INTRODUCTION TO ASSET RELIABILITY IN HARSH ENVIRONMENTS Mark Norris, Managing Consultant, Sweco UK Ltd.
	DESIGNING FOR RELIABILITY
09:35	ROTATING EQUIPMENT IN HARSH ENVIRONMENTS IN THE OIL AND GAS SECTOR: RELIABILITY IN DESIGN AND EQUIPMENT SPECIFICATIONS Renzo Tostini, Senior Rotating Equipment Mechanical Engineer, Bechtel
10:00	DESIGNED FOR SERVICE: ROLLS-ROYCE GAS TURBINE ENGINES Andy Harrison, Engineering Associate Fellow - Life Cycle Engineering, Rolls-Royce
10:25	QUESTION AND ANSWER SESSION
10:40	NETWORKING REFRESHMENT BREAK
	DEALING WITH HARSH ENVIRONMENTAL CONDITIONS
11:10	ONSHORE WIND TURBINES IN HARSH ENVIRONMENTS Bruce Henry, Mechanical Systems Engineer, SSE Engineering Centre
11:35	HARSH ENVIRONMENT IMPACT ON THE RELIABILITY AND OPERATIONS OF DYNAMIC POSITIONING SYSTEMS Richard Purser, Principal DP Specialist, DNV GL Noble Denton Marine Services
	MAINTENANCE AND IN-SERVICE RELIABILITY
12:00	THE RISE OF THE MACHINES: RELIABLE SELF-HEALING ASSETS James Neophytou, Executive Partner, Watson Internet of Things, IBM
12:25	QUESTION AND ANSWER SESSION
12:40	NETWORKING LUNCH
13:40	OFFSHORE WIND TURBINES: MTBV (MEAN TIME BETWEEN VISITS) AND INCREASING TRAVEL TO WORK SAFETY Robert McMillan, Product Safety Officer and Head of Engineering Wind Power UK, Siemens Gamesa Renewable Energy Ltd. Mark Jenkins, EHS Project and Stakeholder Manager for Global Centre of Competence (Offshore), Siemens Gamesa Renewable Energy Ltd.
14:05	IN-SERVICE RELIABILITY FOR COMBAT AIRCRAFT SYSTEMS Nigel Marshall, Engineering Manager - New Business, Typhoon General Systems, BAE Systems Plc
14:30	ENGINEERING RELIABILITY AT SELLAFIELD Nigel Holliday, Head of Standards & Capability – Maintenance, Sellafield Ltd. Christopher Pickford, Equipment Reliability Engineer, Sellafield Ltd.
14:55	QUESTION AND ANSWER SESSION
15:05	NETWORKING REFRESHMENT BREAK
15:35	ROUNDTABLE DISCUSSIONS Delegates select a table to join and help identify interesting areas to further investigate the roundtable topic. This provides a unique opportunity to share problems, opinions and concerns with other seminar attendees. Key points from each roundtable discussion will be shared with the rest of the audience during a final feedback session. <ul style="list-style-type: none"> Managing Systems and Equipment: Late Life and Life Extension Facilitated by James Charles Palmer, Senior Systems Engineer - Small Modular Reactors, Rolls-Royce Assessing and Dealing with Environmental Factors Facilitated by Bruce Henry, Mechanical Systems Engineer, SSE Engineering Centre Design vs Operation: Unexpected Problems and Learning from In-Service Equipment Facilitated by Daren Payne, Principal Systems Engineer, Landing Gear, Airbus Costs vs Benefits: How to Keep Costs Down and Equipment Reliable? Facilitated by Renzo Tostini, Senior Rotating Equipment Mechanical Engineer, Bechtel
16:35	ROUNDTABLE DISCUSSION SUMMARY
17:00	CHAIR'S CLOSING REMARKS
17:10	END OF SEMINAR

For the most up-to-date and detailed programme for the event, please visit www.imeche.org/reliabilityharshenvironments

- This programme is subject to change.
- The Institution is not responsible for the views or opinions expressed by individual speakers.

HOW TO BOOK YOUR PLACE

FEES AND CHARGES

Registration fees include entry to the sessions, refreshments and a copy of the conference proceedings.

Seminar and Workshop	Early Bird Rate Until 2 February 2018	Standard Rate
Member, Institution of Mechanical Engineers / Supporting Organisation	£280 + VAT = £336	£320 + VAT = £384
Non-member	£340 + VAT = £408	£380 + VAT = £456
Student/Retired	£100 + VAT = £120	£120 + VAT = £144

Group booking discounts are available. Contact us for more information.

THREE WAYS TO BOOK

- 1 Online:
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reliabilityharshenvironments](http://www.imeche.org/reliabilityharshenvironments)
- 2 Email:
eventenquiries@imeche.org
- 3 Phone:
+44 (0)20 7973 1251

Please read the information listed below as each booking is subject to the Institution's standard terms and conditions.

CONDITIONS OF BOOKING

Completed application forms should be returned to the address above, along with the correct payment. Attendance at the event will be confirmed on receipt of the full balance. All participants are advised to bring a copy of their confirmation with them on the day, to ensure the fastest possible entry.

SPECIAL REQUIREMENTS

Please inform us of any special requirements, ie dietary or access, on the relevant section of this form.

CANCELLATION

For a refund (minus £25+VAT admin charge), cancellations must be received at least 30 days prior to the event. Replacement delegates are welcome at any time. The Institution reserves the right to cancel any event. In this case, the full fee will be refunded unless a mutually convenient transfer can be arranged. In the event that the Institution postpones an event for any reason and the delegate is unable or unwilling to attend

on the rescheduled date, they will receive a full refund of the fee paid. The Institution is not responsible for any loss or damage as a result of a substitution, alteration or cancellation/postponement of an event. The Institution shall assume no liability whatsoever if this event is cancelled, rescheduled or postponed due to a fortuitous event, Act of God, unforeseen occurrence or any other event that renders performance of this conference impracticable, illegal or impossible. For the purposes of this clause, a fortuitous event shall include, but not be limited to: war, fire, labour strike, extreme weather or other emergency.

Please note that while speakers and topics were confirmed at the time of publishing, circumstances beyond the control of the organisers may necessitate substitutions, alterations or cancellations of the speakers and/or topics. The Institution reserves the right to alter or modify the advertised speakers and/or topics if necessary without any liability to you whatsoever. Any substitutions or alterations will be updated on the event's webpage as soon as possible.

LIABILITY

The organisers do not accept liability for any injuries or losses of any nature incurred by delegates and/or accompanying persons, nor for loss or damage to their luggage and/or personal belongings.

CONFERENCE VENUE

Institution of Mechanical Engineers
One Birdcage Walk
Westminster
London
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OTHER EVENTS TO LOOK FOR



WHEELSETS: MORE FOR LESS

20 March 2018, London

Hear from pioneers of new inspection technologies to ensure you are using the most efficient equipment for maintenance of your assets. Take the opportunity to network and share best practice with wheelsets experts including researchers, maintenance engineers from rail operators, rolling stock operators and technology suppliers.

www.imeche.org/wheelsets

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POWER PLANT OPERATIONS, MAINTENANCE AND FLEXIBILITY

18 April 2018, Birmingham

This seminar will bring together power professionals who are directly involved in, or affected by, operational requirements (and related maintenance aspects) with a programme from industry leading operators and technology providers focusing on operations best practice and operations related maintenance.

www.imeche.org/powerplant2018

The Institution of Mechanical Engineers organises over 120 events a year, including free-to-attend lectures as well as conferences, seminars, annual luncheons and dinners. Please visit www.imeche.org/events for the complete list of events.

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