# UK SHALE GAS 2016: THE ENGINEERS' SUMMIT

Organised by

Institution of MECHANICAL ENGINEERS

23 February 2016 Institution of Mechanical Engineers, London

More details available at

events.imeche.org/ukshalegas

#### **KEY SPEAKERS INCLUDE:**

Ken Cronin Chief Executive **UK Onshore Oil and Gas** 

Donald Dobson Head of Discipline - Well Engineering and Operations

**Health and Safety Executive** 

Mike Stephenson Director of Science and Technology and Chief Scientist **British Geological Survey** 

Process Industries Division Seminar



IN PARTNERSHIP WITH:



EVENT PARTNER:



S6337\_BR\_01\_01.indd 1 03/02/2016 11:06

# UK SHALE GAS 2016: THE ENGINEERS' SUMMIT

23 February 2016
Institution of Mechanical Engineers, London

6677

UK SHALE GAS 2016 IS A UNIQUE OPPORTUNITY FOR ENGINEERS TO UNDERSTAND HOW THEY CAN CONTRIBUTE TO THE UK SHALE GAS INDUSTRY AND SUPPORT THE FUTURE SUPPLY CHAIN.

The UK's energy crisis is slowly but surely getting worse and finding suitable solutions to it are at the forefront of the government's mind. The arguments for and against shale gas have expanded and now feed into the wider energy security and climate change debate.

We know that the UK offers fruitful shale gas potential both in its resources and in its ability to keep the lights on. With The UK Oil & Gas Authority awarding 159 blocks for onshore oil and gas exploration in December 2015 and the government stating "alongside conventional drilling sites, we need to get shale gas moving", investment and support is only going to continue to grow. Given that Amber Rudd is driving it forward, it is clear that shale gas is a suitable solution to ensuring that the UK can sustain its future energy consumption.

UK Shale Gas 2016 is a must-attend event for engineers to discover how they can ensure their organisation is at the forefront of future energy consumption.

#### WHO SHOULD ATTEND?

- Engineering Manager
- Senior Piping Manager
- Managing Director
- Well Services Director
- Chief Engineer
- Director of Operations
- Director of Engineering
- Process Engineer
- Sector Manager Oil and Gas
- Fracking Team Leader
- Piping Engineer
- Project Manager/Engineer
- Pressure Relief Engineer

#### (+) ATTEND THIS SEMINAR TO:

- Identify how the UK shale gas industry is trying to change public perception
- Recognise the continuous role that engineers play in shale gas extraction
- Hear from industry leaders as they share their thoughts on how to progress shale gas development within the UK
- Understand what the next steps are to ensure a wellsupported supply chain is maintained in the UK
- Hear the progress on the IMechE/ IoM3 Onshore Well Integrity Survey
- **Network** with industry peers and share a unique insight into future energy consumption

#### **KEY SPEAKERS INCLUDE:**

- Ken Cronin, Chief Executive,
   UK Onshore Oil and Gas
- Donald Dobson, Head of Discipline - Well Engineering and Operations,
   Health and Safety Executive
- Mike Stephenson, Director of Science and Technology and Chief Scientist,
   British Geological Survey

#### SPONSORSHIP & EXHIBITION OPPORTUNITIES

#### **GET INVOLVED**

Attending this event as either an exhibitor or sponsor will give you the opportunity to display your solutions, services and products to the right people at the right time.

This is an excellent way to enhance your company profile and communicate effectively to your target audience.

#### BENEFITS OF SPONSORING

- Showcase new products
- Raise awareness of your operation
- Improve perception of your brand
- Influence other organisations' spending plans

For more information please call +44(0)20 7973 1249 or email sponsorship@imeche.org

S6337 BR 01 01.indd 2 03/02/2016 11:06

09:00 CHAIR'S OPENING REMARKS JAMES BRIDGE, CHAIR OF PROCESS INDUSTRIES DIVISION, INSTITUTION OF MECHANICAL ENGINEERS  ENERGY SECURITY - WHERE SHALE GAS FITS  SHALE GAS, ENERGY SECURITY, CLIMATE CHANGE AND ECONOMY KEN CRONIN, CHIEF EXECUTIVE, UKOOG • Representing the UK oil and gas onshore industry and supporting the exploration and production of shale gas • Working with the industry to ensure guidelines are established and implemented effectively • UKOOG's main areas of priorities to boost shale gas development between 2015 and 2020 • Energy Security, Economy and Climate Change  O9:40  PUTTING SUB SURFACE ENERGY OPERATIONS UNDER SCRUTINY MIKE STEPHENSON, DIRECTOR OF SCIENCE AND TECHNOLOGY AND CHIEF SCIENTIST, BRITISH GEOLOGICAL SURVEY • Role of the subsurface in low carbon energy in the UK • Science of subsurface operations • The ESIOS project  10:40  REGULATION OF SHALE GAS WELLS DONALD DOBSON, HEAD OF DISCIPLINE - WELL ENGINEERING AND OPERATIONS, HSE • Well integrity - the regulatory approach • What regulations require • Supporting guidance  NETWORKING REFRESHMENT BREAK SHALE GAS PLANNING
JAMES BRIDGE, CHAIR OF PROCESS INDUSTRIES DIVISION, INSTITUTION OF MECHANICAL ENGINEERS  ENERGY SECURITY - WHERE SHALE GAS FITS  99:10  SHALE GAS, ENERGY SECURITY, CLIMATE CHANGE AND ECONOMY KEN CRONIN, CHIEF EXECUTIVE, UKOOG  Representing the UK oil and gas onshore industry and supporting the exploration and production of shale gas  Working with the industry to ensure guidelines are established and implemented effectively  UKOOG's main areas of priorities to boost shale gas development between 2015 and 2020  Energy Security, Economy and Climate Change  PUTTING SUB SURFACE ENERGY OPERATIONS UNDER SCRUTINY MIKE STEPHENSON, DIRECTOR OF SCIENCE AND TECHNOLOGY AND CHIEF SCIENTIST, BRITISH GEOLOGICAL SURVEY  Role of the subsurface in low carbon energy in the UK Science of subsurface operations  The ESIOS project  REGULATION OF SHALE GAS WELLS DONALD DOBSON, HEAD OF DISCIPLINE - WELL ENGINEERING AND OPERATIONS, HSE Well integrity - the regulatory approach What regulations require Supporting guidance  10:40  NETWORKING REFRESHMENT BREAK SHALE GAS PLANNING
SHALE GAS, ENERGY SECURITY, CLIMATE CHANGE AND ECONOMY KEN CRONIN, CHIEF EXECUTIVE, UKOOG  Representing the UK oil and gas onshore industry and supporting the exploration and production of shale gas  Working with the industry to ensure guidelines are established and implemented effectively  UKOOG's main areas of priorities to boost shale gas development between 2015 and 2020  Energy Security, Economy and Climate Change  PUTTING SUB SURFACE ENERGY OPERATIONS UNDER SCRUTINY MIKE STEPHENSON, DIRECTOR OF SCIENCE AND TECHNOLOGY AND CHIEF SCIENTIST, BRITISH GEOLOGICAL SURVEY  Regulatiace in low carbon energy in the UK Science of subsurface operations  The ESIOS project  REGULATION OF SHALE GAS WELLS DONALD DOBSON, HEAD OF DISCIPLINE - WELL ENGINEERING AND OPERATIONS, HSE Well integrity - the regulatory approach What regulations require Supporting guidance  NETWORKING REFRESHMENT BREAK SHALE GAS PLANNING
KEN CRONIN, CHIEF EXECUTIVE, UKOOG  Representing the UK oil and gas onshore industry and supporting the exploration and production of shale gas  Working with the industry to ensure guidelines are established and implemented effectively  UKOOG's main areas of priorities to boost shale gas development between 2015 and 2020  Energy Security, Economy and Climate Change  PUTTING SUB SURFACE ENERGY OPERATIONS UNDER SCRUTINY MIKE STEPHENSON, DIRECTOR OF SCIENCE AND TECHNOLOGY AND CHIEF SCIENTIST, BRITISH GEOLOGICAL SURVEY  Role of the subsurface in low carbon energy in the UK  Science of subsurface operations  The ESIOS project  REGULATION OF SHALE GAS WELLS DONALD DOBSON, HEAD OF DISCIPLINE - WELL ENGINEERING AND OPERATIONS, HSE  Well integrity - the regulatory approach  What regulations require  Supporting guidance  10:40  NETWORKING REFRESHMENT BREAK  SHALE GAS PLANNING
MIKE STEPHENSON, DIRECTOR OF SCIENCE AND TECHNOLOGY AND CHIEF SCIENTIST, BRITISH GEOLOGICAL SURVEY  • Role of the subsurface in low carbon energy in the UK • Science of subsurface operations • The ESIOS project  10.10  REGULATION OF SHALE GAS WELLS DONALD DOBSON, HEAD OF DISCIPLINE - WELL ENGINEERING AND OPERATIONS, HSE • Well integrity – the regulatory approach • What regulations require • Supporting guidance  10:40  NETWORKING REFRESHMENT BREAK  SHALE GAS PLANNING
DONALD DOBSON, HEAD OF DISCIPLINE - WELL ENGINEERING AND OPERATIONS, HSE  • Well integrity – the regulatory approach  • What regulations require  • Supporting guidance  10:40  NETWORKING REFRESHMENT BREAK  SHALE GAS PLANNING
SHALE GAS PLANNING
11.00 ENVIRONMENTAL RISKS AND REGULATION IN ENGLAND TONY GRAYLING, SUSTAINABLE BUSINESS AND DEVELOPMENT, ENVIRONMENT AGENCY  • The role and approach of the Environment Agency in regulating onshore oil and gas  • Working with HSE to ensure that environmental standards are met  • Engaging with local communities on environmental permitting decisions
11:30 CASE STUDY: PLANNING AND PREPARATION JOHN BLAYMIRES, COO, IGAS ENERGY
12.00 BEST PRACTICE IN SHALE GAS EXPLORATION GRAHAM DEAN, MANAGING DIRECTOR, REACH CSG  • How to reduce the geological risk  • Understanding the political risk  • Past shale gas exploration  • Where future shale gas exploration will be in the UK
12.30 SHALE GAS PROCESSING SOLUTIONS ADRIAN FINN, MANAGER OF PROCESS TECHNOLOGY, COSTAIN  Gas processing requirements for shale gas commercialisation  Process technologies and their application  Developments to reduce gas process cost
13:00 NETWORKING LUNCH
UK ONSHORE WELL INTEGRITY
CHAIR JENIFER BAXTER, HEAD OF ENERGY AND THE ENVIRONMENT, INSTITUTION OF MECHANICAL ENGINEERS
14:00 OVERVIEW OF THE WELL INTEGRITY STUDY JAMES BRIDGE, CHAIR OF PROCESS INDUSTRIES DIVISION, INSTITUTION OF MECHANICAL ENGINEERS  • Why the IMechE wanted to get involved with Well Integrity • Objectives for the project • Pulling the team together • Preparing the report • Desired outcome
14:30 OIL AND GAS UK WELL LIFE CYCLE INTEGRITY GUIDELINES NIGEL PARRY, FORMERLY WELL ENGINEERING TEAM LEAD, NEXEN UK LTD  • Scope and Style of the Guidelines  • Oil & Gas UK Well Integrity Workgroup and Interfaces  • Evolution of the UK Well Integrity Guidelines  • The Development of Issue 3
THE ROLE OF INDEPENDENT WELL EXAMINATION PETER ROBINSON, NON EXECUTIVE DIRECTOR, NRG WELL EXAMINATION LTD  • The regulations applicable to well examination • The role and competence of the well examiner • Well standards and well examinations
15:30 NETWORKING REFRESHMENT BREAK

#### For the most up-to-date and detailed programme for the event, please visit events.imeche.org/ukshalegas • This programme is subject to change.

- The Institution is not responsible for the views or opinions expressed by individual speakers.

S6337\_BR\_01\_01.indd 3 03/02/2016 11:06

	TUESDAY 23 FEBRUARY 2016 (CONT.)
	OPERATIONS
15:50	OUANTIFICATION OF THE RISKS ASSOCIATED WITH AQUIFER CONTAMINATION DURING A HVHF  JOHN DEWAR, DIRECTOR, OIL AND GAS, THIRD ENERGY  MARK BOULT, DIRECTOR, DNV.GL  Explanation of possible leak paths during a HVHF and identification of the most likely leak path  Explanation of how well integrity is created and tested with an assessment of failure rates  Ouantification of the risks associated from a failure in well integrity
16:20	APPLYING OFFSHORE WELL DESIGN, CONSTRUCTION AND MONITORING STANDARDS TO AVOID WELL INTEGRITY FAILURES KENNETH MCINTOSH, COMPLETION ENGINEER, INDEPENDENT  • Principles of well design and construction • Lessons from the US, Lessons from the UK • Barriers: Principles, confirmation and monitoring. • Leak detection and repair
16.50	WELL INTEGRITY PANEL DISCUSSION DONALD DOBSON, HEAD OF DISCIPLINE- WELL ENGINEERING AND OPERATIONS, HSE JOHN BLAYMIRES, CEO, IGAS ENERGY PETER ROBINSON, NON EXECUTIVE DIRECTOR, NRG WELL EXAMINATION LTD
17:20	CHAIR'S CLOSING REMARKS
17:30	END OF SEMINAR

#### **ORGANISING COMMITTEE**

Process Industries Division, Institution of Mechanical Engineers

#### **Members Credits:**

James Bridge, Chairman of the Process Industries Division, Institution of Mechanical Engineers

#### SPEAKERS AND CONTRIBUTORS

# CHAIR AND SPEAKER

#### **JAMES BRIDGE**

## CHAIRMAN OF THE PROCESS INDUSTRIES DIVISION, INSTITUTION OF MECHANICAL ENGINEERS

Following a mechanical engineering apprenticeship with Hamworthy Engineering in Poole, he specialised in application engineering, focussing on the oil & gas industries, Moving to SPP Pumps in 1978 he took responsibility for diesel and gas engine packages, rising to be General Manager of SPP Offshore. He moved to Caterpillar Power Systems in 1997, specialising in Internet data centres and hospital UPS systems. Returning to the oil and gas business in 2004, he rose to the rank of Petroleum Business Development Manager. He left Caterpillar in 2013

## CHAIR

#### JENIFER BAXTER

## HEAD OF ENERGY AND THE ENVIRONMENT, INSTITUTION OF MECHANICAL ENGINEERS

Jenifer Baxter CEng, CSci joined The Institution of Mechanical Engineers as Head of Energy and the Environment in May 2015. Jenifer is responsible for providing expert guidance and support on all mechanical engineering aspects of energy and the environment, with particular themes this year on waste, heat, water and hydraulic fracturing for shale gas. Prior to joining IMechE, Jenifer was Head of Enterprise and Innovation at the University of East London, responsible for developing collaborative relationships with businesses, academics and the wider UEL community, delivering social and technological innovation and embedding enterprise into student life at the University. Jenifer has been a Research Project Manager and Lecturer of research methods in the Engineering Department at the University of South Wales specialising in advanced engineering and materials; and before undertaking her PhD in 2009 Jenifer spent six years working for the Welsh Government as a Waste Strategy Advisor.

Jenifer has a PhD from Cardiff University in technological innovation systems examining hydrogen from waste technologies, an MSc in Sustainability, Planning and Environmental Policy and a BEng in Environmental Engineering also from Cardiff University.

Jenifer is a member of both the Institution of Mechanical Engineers and the Energy

S6337\_BR\_01\_01.indd 4 03/02/2016 11:06

#### SPEAKERS AND CONTRIBUTORS

## KEYNOTE SPEAKERS

#### KEN CRONIN CHIEF EXECUTIVE, UKOOG

Ken Cronin is the Chief Executive of the newly re-launched trade body UKOOG (UK Onshore Oil and Gas). UKOOG is the representative body for the UK onshore oil and gas industry including exploration, production and storage across both conventional and unconventional sources. The organisation's objectives are to enhance the profile of the onshore hydrocarbons industry, promote better and more open dialogue with key stakeholders, deliver industry wide initiatives and programmes and to ensure standards in safety, the environment and operations are maintained to the highest possible level. Ken has more than 20 years' global experience in media, investor and government relations and has worked in and with many companies across the nuclear, renewables, oil and gas and power sectors. Prior to his role at UKOOG, Ken spent 10 years at worldwide communication agency Kreab Gavin Anderson as Head of Global Energy.

#### MIKE STEPHENSON DIRECTOR OF SCIENCE AND TECHNOLOGY AND CHIEF SCIENTIST BRITISH GEOLOGICAL SURVEY

Mike Stephenson is Director of Science and Technology/Chief Scientist at the British Geological Survey. He has done research in the Middle East and Asia, including highlights in Oman, Jordan, Pakistan, Iran and Afghanistan. Mike runs the Science Programme at BGS, the UK's national geoscience and data centre, with 520 scientists and technologists. He has professorships at Nottingham and Leicester universities and has published over seventy peer-reviewed papers, while also acting on the editorial boards of several journals, and as Editor-in-Chief of an Elsevier geological journal. His new book 'Shale gas and fracking: the science behind the controversy' was published in February 2015.

# **DONALD DOBSON BSC, MEI, SPE**HEAD OF DISCIPLINE, WELL ENGINEERING, HEALTH AND SAFETY EXECUTIVE

Donald Dobson has 40 years' experience in drilling engineering both in industry and as industry regulator. Working for BP, his roles included designing wells and planning operations for the company's global oil and gas exploration programme and assessing new drilling technology. He was co-author of BP's drilling manual. In his current role in HSE, he acts as technical authority for well engineering and operations. He was a lead member of the team that developed the current regulations on well integrity. He is a member of several industry work groups, including those producing guidance on well integrity and well abandonment.

#### MARK BOULT DIRECTOR, DNV.GL

Mark Boult is highly experienced in providing in risk management and analysis support to organisations in a range of industries including oil and gas. He has held a number of management and consulting positions during a career of over 30 years and has international experience having worked overseas in a number of different countries. He was the Manager of the Technical Investigation for the Longford Royal Commission into the Fire and Explosion that occurred at Esso Facility in Longford, Victoria, Australia. He led, on behalf of the European Commission, the analysis and evaluation of the effects of the practical application of national legislation related to safety and health at work in mineral extraction through drilling (Directive 92/91EC) post the Madcondo accident. Currently Mark is a Director in DNV GL's UK operations with a specific role on continuing the development and growth of the business, building customer relations, leadership of the unconventional O&G network and oversight of DNV GL's ERM services in the region. In this role he is supporting risk management in oil and gas companies including; BP, Tullow, Third Energy and E.ON E&P.

## JOHN BLAYMIRES CHIEF OPERATING OFFICER, IGAS ENERGY

John Blaymires has 29 years of international experience in the oil and gas industry gained at Hess Corporation and Shell International. Before joining IGas, he was Director of Technology Development for Hess based in Houston.

\$6337\_BR\_01\_01.indd 5 03/02/2016 11:06

#### SPEAKERS AND CONTRIBUTORS

### SPEAKERS

#### PETER ROBINSON NON EXECUTIVE DIRECTOR, NRG GROUP

Peter Robinson graduated with an Honours Degree in Geology and following a period working on exploration rigs as a mud logger, unit chief and data engineer in South East Asia he joined the UK Department of Energy as a Senior Well Operations Inspector. Returning to work in the Department of Energy he became a Principal Inspector then Acting Head of Inspection North Sea for the Petroleum Engineering Division. Following transfer to the Health and Safety Executive Offshore Safety Division he was appointed Deputy Director Operations - and was also seconded to the Field Operations Division as the Area Director for North West England.

#### NIGEL PARRY

#### FORMERLY WELL ENGINEERING TEAM LEAD, NEXEN UK LTD

Nigel Parry was Well Engineering Team Lead for Nexen from 2011 until retiring in October 2015. He had been with Nexen since 2006 and was Senior Drilling Engineer and Drilling Superintendent prior to that. The role of Well Engineering Team Lead focused on Well Integrity, Completions Engineering and UK Management System within Drilling and Completions as well as being the Wells Technical Authority for Nexen. Nigel was a member of the Well Life Cycle Integrity Guidelines subteam of Oil & Gas UK from 2011 until 2015. Nigel started working in the North Sea as a Petroleum Engineer with BP. He then worked for several operators in Aberdeen variously as Senior Drilling Engineer, Drilling Superintendent and Well Examiner before joining Nexen.

#### ADRIAN FINN

#### PROCESS TECHNOLOGY MANAGER, COSTAIN

Adrian Finn is Process Technology Manager at Costain, Manchester, UK with responsibility for process technology selection, development and commercialization, proposal management and supervision of feasibility studies, Pre-FEEDs and FEEDs. He has thirty two years with Costain, focused mainly on gas processing. He has authored fifty technical papers and holds nearly twenty granted patents in gas processing. He holds a Bachelor's degree in Chemical Engineering and Fuel Technology and a Master's degree in Integrated Design of Chemical Plant. He is a Fellow of the Institution of Chemical Engineers, a Chartered Engineer in the UK and a Member of both the Management and Programme Committees of Gas Processors Association (GPA) Europe.

#### DR TONY GRAYLING

## DIRECTOR OF SUSTAINABLE BUSINESS AND DEVELOPMENT, ENVIRONMENT AGENCY

Tony Grayling leads the Environment Agency's work on some major cross-cutting issues including climate change, energy, health, sustainable development and environmental incident management. He is currently also leading the agency's work on onshore oil and gas. He was previously a special adviser to David Miliband and Hilary Benn, successive Secretaries of State for Environment, Food and Rural Affairs, helping to design the UK's Climate Change Act 2008. From 2002 to 2006 he was an associate director and head of the sustainability team at the Institute for Public Policy Research, a UK think tank, which he joined in 1999 as a research fellow. He was a special adviser to the Minister for Transport, Gavin Strang, from 1997-98 during the development of the UK governments 1998 transport white paper and before that a researcher successively to Labour MPs Ron Davies and Anne Campbell. Educated at Thorpe St Andrew School, Norwich and Fitzwilliam College, he has a first class degree in natural sciences and a PhD in plant sciences both from Cambridge University.

#### **GRAHAM DEAN**

#### MANAGING DIRECTOR, REACHCSG

Graham Dean is managing Director of ReachCSG. ReachCSG is focused on Cumbrian & Scottish Gas. ReachCSG, together with the Licence operator INEOS, has a large PEDL licence in the Scottish central belt. ReachCSG also has licences onshore and offshore Barrow-in-Furness for gas exploration offshore from onshore. Graham has had a long undistinguished career in the oil and gas business. He is a petrophysicist and a petroleum engineer. Prior to joining Reach, Graham had a Business Development role at Centrica where he gained a wealth of A&D and negotiating experience, always unsuccessful.

#### **KENNETH MCINTOSH**

#### UNITED KINGDOM OIL AND GAS INDUSTRY

Kenneth McIntosh has spent 18 years working in the offshore UK oil & Gas industry for numerous major operators including Marathon Oil, Shell and Statoil. Kenneth has worked in well design and construction, including integrity monitoring and has also led an offshore Frac campaign as Team Leader.

\$6337\_BR\_01\_01.indd 6 03/02/2016 11:06

#### **BOOKING FORM**

**EVENT CODE: S6337** 

#### **EARLY BIRD ENDS 22 JANUARY 2016**

#### **UK SHALE GAS 2016:** THE ENGINEERS' SUMMIT

23 February 2016 Institution of Mechanical Engineers, London events.imeche.org/ukshalegas

PEGIGER ANION PL	20.0				
<b>REGISTRATION</b> Please complete in o	-				
Family Name	Title (Mr, Mrs, Miss)				
First Name	Job Title				
Membership No Institution					
Name of Organisation (for name badg	e)				
Address for correspondence					
Town/City					
Postcode					
Contact Telephone					
Email	0				
Do you have any special requirements	5?				
How did you hear about this event?	☐ Direct mail ☐ Webs	ite 🗆 Colleague 🗆	Other		
We would like to keep you informed o Please tick the boxes below to let us h		,	to you.		
☐ Events and training opportunities					
☐ News and updates from the Institu	ition				
☐ Services and offers from our prefer	red partners				
FEES AND CHARGES Please comple	to the appropriate be	v			
-					
Registration fees include entry to the event proceedings.	sessions, refreshmen	s, lunch and a copy	of the		
	EARLY BIRD RATE Until 22 JANUARY 2016	STANDARD RATE	TOTAL		
Member, Institution of Mechanical Engineers	£290.00 + VAT	£340.00 + VAT	£		
Member, supporting organisation	£290.00 + VAT	£340.00 + VAT	£		
Non-member	£430.00 + VAT	£500.00 + VAT	£		
Student/Retired	£80.00 + VAT	£95.00 + VAT	£		
PAYMENT DETAILS					
Payment must accompany this regis	tration form Pogistr	ation will be confir	mod only or		
receipt of full payment.	tration form. Registro	ation will be confin	inea only or		
PLEASE INDICATE METHOD OF PAY	YMENT:				
□ <b>Cheque</b> Cheques should be made payable may pay only by credit card, BACS or banke the delegate's responsibility to pay any bank	er's draft. A copy of the draf	lease note international of the must accompany this for	lelegates orm. It is		
☐ Credit Card					
Card type: ☐ Visa ☐ MasterCard (ple	ase note we cannot accept Ar	nerican Express. Diners Cl	ıb or Maestro)		
Card No	Valid From	/ Expiry Date			
Name of Cardholder					
Billing Address of Cardholder (if diff	erent from above)				
	Postcode				
Amount to be Deducted					
☐ BACS BACS bank transfers can be m	ade to:				
IMechE Current Account, I Sort Code: 60-40-05 Swift Code: NWBKGB2L	IMechE Current Account, NatWest Charing Cross Branch. Sort Code: 60-40-05 Acc No: 00817767				
Invoice (UK residents only) Delegates wishing to be invoiced must provide an order number. If your company does not use order numbers please include a formal request for invoicing on your company's letterhead. A charge of £10 +VAT will be made to cover additional administration costs. Invoices are payable on receipt and no alterations to these terms will be accepted.					
Order No					
Contact Name					
Name and Address for Invoicing					
	Postcode				
Tel	Fax				

#### **FIVE WAYS TO BOOK**

- 1 Online: events.imeche.org/ ukshalegas
- Email:

eventenquiries@imeche.org

3 Phone:

+44 (0)20 7973 1258

4 Post completed booking form to: **Event Registrations Institution of Mechanical Engineers** 

1 Birdcage Walk London SW1H 9JJ

+44 (0)20 7304 6845

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 14 days prior cancellations must be received at least 14 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 rease note tina white 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 undested on the event; webparge as soon as possible. updated on the event's webpage as soon as possible.

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.

#### Ouote 'IMECHE2016'

The Institution of Mechanical Engineers is a registered charity (no 206882) VAT No GB299930493.

S6337\_BR\_01\_01.indd 7 03/02/2016 11:06

## FORWARD THINKING

We are the market leader among professional engineering bodies. We've been supporting engineers since 1847 and have 111,000 members in over 140 countries, working in the world's most dynamic and important industries. Our comprehensive events programme brings you the latest research and best practice from industry and academia.

#### OTHER EVENTS TO LOOK FOR:



11 March 2016 ICC, Birmingham

## MIDLANDS ENGINEERING DINNER

The Midlands Engineering Dinner is attended by around 500 engineers, graduates, senior management teams and CEOs from all areas of the engineering community.

events.imeche.org/ midlandsengineeringdinner

20-22 April 2016

University of Warwick, Coventry

## ESSENTIAL MANAGEMENT SKILLS 2016

Develop future managers within your teams by sending them on this acclaimed IMechE annual management training course.

www.imeche.org/ems2016

#### **SEMINAR**

01 June 2016

Institution of Mechanical Engineers, London

# HYDROGEN: A FUEL FOR TRANSPORT AND ENERGY STORAGE

From generation and storage to fuel cell vehicles and city-wide emissions reduction strategies, this conference will consider the positions from sceptic to enthusiast to find a realistic way forward in this polarised sector

events.imeche.org/hydrogen

INFORMATION AND BOOKINGS

CALL: +44 (0)20 7973 1258

EMAIL: eventenquiries@imeche.org

VISIT: www.imeche.org/events

## ON DEMAND

Watch it wherever, whenever

Part of IMechE.org, On Demand is the new digital web platform that gives you access to the latest technical industry content including videos, news, reports, interviews, event highlights and more.

So, what are you waiting for? Explore it now at **www.imeche.org/ondemand** 





#### **MEMBERSHIP**

Whether you're a student, apprentice, graduate, qualified engineer or just have an interest in engineering, Institution membership offers the highest professional prestige. Professional registration is a valuable investment for any engineer who is serious about their career.

Find out which level you're best suited for at **www.imeche.org/membership** or email us on **membership@imeche.org** 

#### **GET INVOLVED**

Whether you're new to the profession or well established, volunteering is a great way to gain new skills, knowledge and experience. As an Ambassador you have the chance to represent your profession and give something back to the engineering community as well as inspiring the next generation.

See www.imeche.org/volunteering for more information or go to http://nearyou.imeche.org

# Institution of MECHANICAL ENGINEERS

1 Birdcage Walk Westminster London SW1H 9JJ

T +44 (0)20 7222 7899

www.imeche.org

Keep up

#### Continuing Professional Development (CPD)

Our online Career Developer tool can help you:

Plan Create an Action Plan and identify targets
 Record Download a record of your learning activities
 Review Reflect on your professional development

Register for Career Developer and get more from your career **www.imeche.org/careerdeveloper** 

For tailored advice contact cpd@imeche.org

Improving the world through engineering

S6337 BR 01 01.indd 8 03/02/2016 11:06