

Hazards from Ageing Infrastructure

Tuesday 15 January 2019



Across many industrial sectors and public services there is infrastructure that is showing the signs of ageing related deterioration or where after many years of service the true current condition is not fully known. Where such ageing infrastructure is part of a high hazard installation, such as a nuclear plant or an offshore platform, or where there is the capacity for a major public accident such as a bridge collapse, the management of ageing becomes a high priority for the duty holders. These Hazards Forum events will address the hazards from ageing infrastructure. There will be an afternoon Research Workshop in addition to the Evening Forum, and you are invited to attend one or both.

The **afternoon Research Workshop** will help identify research projects that can make a real impact in improving the safety of ageing infrastructure. This session will be run by the Thomas Ashton Institute, a partnership of the University of Manchester and the Health and Safety Executive. Following a short introduction from UoM /HSE, break-out groups with a UoM/HSE lead will discuss different topics for research. These will include the treatment of old materials in fitness for service assessments, new methods and technologies for the simulation of hazards/incidents resulting from ageing, how new materials (e.g. composite wraps etc) can aid life extension, and the uses of data mining to support life extension or end of life decisions.

The **Evening Forum** will then provide perspectives on how the challenges of ageing infrastructure can be managed from three speakers. **David Glass from the Health and Safety Executive** will present his view on the importance of leadership in managing ageing and asset integrity, particularly in preventing hazards from loss of primary containment, and the campaigns that regulators are using to ensure duty holders are managing ageing appropriately. **Professor Philip Irvine from Cranfield University** will look forward to how ageing infrastructure could be better managed through increased surveillance and real-time monitoring with big data analysis, drawing on his knowledge of how the civil aerospace sector manages ageing aircraft and estimates remaining service life. **Bruce Wilson from Sellafield Sites** will discuss how the need to reduce the risk from an ageing redundant stack at Sellafield necessitated its demolition and the challenges that ageing brings for decommissioning in the nuclear sector.

The **Hazards Forum** is a Membership-based Charity for the public benefit to mitigate and reduce hazards and disasters, both natural and man-made, and thereby reduce injury or loss of

life and property and minimise distress and damage. Its events tend to attract senior engineering personnel and practitioners concerned with hazard and risk management in a range of disciplines. The aim is to foster sharing of knowledge, experience and networking between engineers across industry sectors.

Booking link

Please visit the below link to register: <https://www.ice.org.uk/events/hazards-forum-ageing-infrastructure-manchester>

Both events to be held at Thomas Ashton Institute

University of Manchester, Samuel Alexander Building, Lime Grove, Manchester M13 9PP

Registration for the Research Workshop will open 13:30pm for a 14.00 start.

Registration for the Evening Forum will open at 17.30 with the presentations at 18h00 followed by a short Q&A session. The evening will conclude with a drinks reception from around 19h30.

Speakers

- Dr. David Glass, Principal Inspector, Health and Safety Executive,
- Professor Philip Irvine, CAA Professor of Damage Tolerance, Cranfield University
- Bruce Wilson, Head of Projects - Remediation Value Stream, Sellafield Sites.

Dr. David Glass (HSE).

Principal Specialist Inspector with HSE, and head of a team of professional Mechanical Engineers within the Chemical, Explosives and Microbiological Hazards Division responsible for managing research, informing policy and pursuing the strategic topic of Ageing Plant. David and the team visit various hazardous installations throughout the UK, inspecting arrangements for initial and ongoing integrity, maintenance and other mechanical engineering issues. Prior to joining HSE in 2005, David worked for fifteen years for multi-national companies in the batch chemical industry at locations in the UK and USA. He is a Chartered Engineer and Fellow of the Institution of Mechanical Engineers.

Professor Phil Irvine (Cranfield University)

Phil Irving has been applying, teaching and conducting research in the fields of fatigue, fracture and life prediction of components and structure for much of his working life. After a short period working for the National Physical laboratory, he joined GKN Automotive in Wolverhampton to perform research into service life prediction in the automotive industry. He then moved to Cranfield University to take a Civil Aviation Authority sponsored Chair in Aircraft Fatigue and Damage Tolerance. He became increasingly interested in the contribution which health monitoring systems and prognostics could make to reduce inspection and maintenance costs in the aircraft industry, and has published many papers on structural health monitoring and life prediction.

Bruce Wilson (Sellafield Sites)

Bruce Wilson is a graduate chemist and member of the Association of Project Management with over 30 years of experience in the nuclear industry. He served 15 years in the Thorp

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commissioning & operations team, holding the positions of Safety Case Manager, Operations Support Manager and Manufacturing Manager. In 2006, Bruce joined the Project Management Capability. He managed both new build and decommissioning projects before being appointed in December 2016 to the Head of Projects role in the Remediation Value Stream. His current £160m portfolio encompasses demolition projects across the Sellafield site.