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Hamburg Aerospace Lecture Series
Hamburger Luft- und Raumfahrtvorträge

HAW HAMBURG

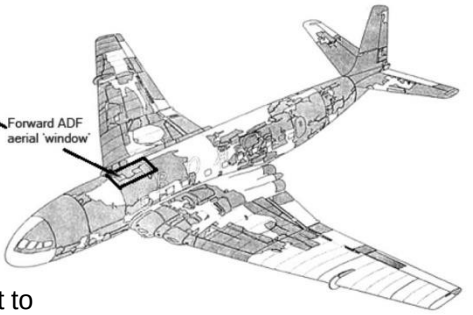
RAeS Hamburg in cooperation with the DGLR, VDI, ZAL & HAW invites you to a lecture

The Real Story of the Comet Disasters

Prof. **Paul Withey,** School of Metallurgy and Materials, University of Birmingham

Date: Thursday 24 January 2019, 18:00
Location: HAW Hamburg Berliner Tor 5, (Neubau), Hörsaal 01.11

Lecture followed by discussion
No registration required !
Entry free !



The de Havilland Comet was the first commercial jet aircraft, and ushered in the 'Jet Age' on 2nd May 1952 by taking fare paying passengers from London to Johannesburg.
This aircraft contained a number of new technologies to allow the aircraft to operate economically and to enhance the flying experience for the passengers. For a number of months the aircraft led the world by halving journey times and offering comfort levels which could not be matched on other, piston engine aircraft. However, two accidents in 1954 grounded the Comet fleet and the subsequent investigation has ensured the Comet has notoriety as an example of fatigue failure. This high profile incident encouraged much work in the field of fatigue and this has led to a much better understanding of the science of fatigue and the use of fracture mechanics to evaluate the life of components and structures.
This talk will look at the history of the Comet aircraft, from concept to entry into service, review the accident investigation and use modern analysis to review the fatigue failure which sparked the research. Using this analysis the general perceptions of the causes can be examined and a likely chain of events which led to the failure is proposed.

Paul Withey joined the University of Birmingham School of Metallurgy and Materials in 2018 after a career in Rolls-Royce, culminating as the Engineering Associate Fellow in Casting Technology. This has limited the number of refereed papers to just over thirty, but this has been balanced by fourteen published patents. Paul's interests involve investment casting with a focus on the casting of aerospace components. Much of his industrial career has been spent developing the processes, and understanding of the single crystal casting of turbine components. The fundamental link between the materials chosen for casting, processing to form the desired shape, and the properties achieved through processing will form the basis of his ongoing research.

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