

# ***HALES & GOOCH LTD.***

*LARGE LOSS AND DESIGN PROCESS INVESTIGATIONS*

## **Crispin Hales, PhD, CEng, FIMechE.**

Crispin Hales has 40 years of experience in engineering design, principally in industry but also including research and teaching at undergraduate and postgraduate levels. For the past twenty years he has been consulting in failure analysis, engineering design, boiler explosions, safety of mechanical systems and accident reconstruction within the U.S and internationally. He joined Triodyne Inc. in 1989 and then in 2004 established Hales & Gooch Ltd. with Dr. Shayne Gooch in New Zealand, to focus more specifically on design issues. Recently he has been involved with a number of large investigations concerning the engineering design process and has helped to introduce improved approaches to engineering design within several manufacturing companies. In association with Cambridge University in the United Kingdom and Canterbury University in New Zealand, he has contributed towards more effective design teaching and professional training for young engineers.

Prior to undertaking research on the management of engineering design, Dr. Hales spent six years at IIT Research Institute in Chicago designing and constructing a wide variety of research equipment. He established and managed a specialized design team that developed and built numerous high-pressure testing systems for the evaluation of materials under extreme temperature and pressure conditions. Projects included a \$3 million refractory test facility for the Department of Energy and a multi-wall, high-pressure vessel system for NASA to creep-test six different super-alloys simultaneously in a hydrogen environment.

Dr. Hales holds a Bachelors Degree in Mechanical Engineering from Canterbury University in New Zealand, a Masters Degree in Engineering Design from Loughborough University in England and a Ph.D. in Engineering Design from Cambridge University in England. He is registered professionally as a Chartered Engineer in the U.K. and is a Fellow of the Institution of Mechanical Engineers. Dr. Hales is also a Fellow of the American Society of Mechanical Engineers and served as Chair of the Design Theory and Methodology Committee (1992-1994), as an Executive Committee member of the Design Engineering Division (1994-2000) and as Chair of the DED (1999-2000). In 2002 he received the Robert E. Abbott Award for two decades of service to the ASME Design Engineering Division. Dr. Hales has written many papers and technical reports in the field of engineering design and continues an active involvement in engineering design research internationally. He has also been a keynote speaker at conferences and a presenter at seminars and workshops on forensic engineering. He is author of the book *Managing Engineering Design* (1<sup>st</sup> ed: Hales 1993; 2<sup>nd</sup> ed: Hales & Gooch, 2004) and has written chapters in several other books covering various aspects of the engineering design process.

***[www.halesgooch.com](http://www.halesgooch.com)***

*1000 Sheridan Road, Winnetka, IL 60093, USA*

*Office: +1-847-501-3765 Fax: +1-847-501-4107 E-mail: [crispin@halesgooch.com](mailto:crispin@halesgooch.com)*