



Queensland University of Technology

To whom it may concern.

I was engaged by Aquatherm Australia to investigate the Aquatherm pipe failures at Jacksons Landing and I participated in site inspections and also conducted numerous experiments on samples of the failed Aquatherm pipe.

From my analysis, the Jacksons Landing failures were restricted to recirculating hot water loops and were caused by a combination of primarily mechanical stress due to poor installation practice, non Standards compliant clipping, excessively high water temperature and dissolved copper ions from severe erosion-corrosion of copper pipes within the recirculation system.

These conditions are outside the performance envelope of the stabilised PP-R pipe and fittings. Aquatherm pipe and fittings comply with all relevant Australian and international standards.

I am an expert in the performance and failure of polymers and composite materials and my qualifications and experience are described in my attached short CV.

A handwritten signature in black ink, appearing to read 'G. George', written in a cursive style.

Graeme George AM

15 August, 2012

Professor of Polymer Science
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SHORT CV Professor Graeme A. George

Date of Birth: 30 November 1944
Current Positions: Professor Emeritus of Polymer Science, QUT
Program Leader, Co-operative Research Centre for Polymers
Qualifications: BSc(Hons) 1967; PhD 1971. (University of Queensland)

PREVIOUS APPOINTMENTS:

1997-2005 Dean, Faculty of Science, Queensland University of Technology (QUT)
1997 Director of Research and Postgraduate Studies, Faculty of Science, QUT
1993-1996 Professor of Chemistry and Head, School of Chemistry, QUT
1989-1992 Senior Lecturer in Physical Chemistry, The University of Queensland
1983-1988 Senior Lecturer in Physical Chemistry, Queensland Institute of Technology
1979-1983 Principal Research Scientist and Head – Polymer Research Group, Materials
Research Laboratory (MRL), Melbourne
1978-1979 Senior Research Scientist, (MRL)
1975-1976 Visiting Scientist, US Army Materials and Mechanics Research Center,
Watertown, USA
1970-1978 Research Scientist, (MRL)

PROFESSIONAL BODIES AND AWARDS:

Member, Order of Australia (AM) 2007
Polymer Medal, Royal Australian Chemical Institute, 2006
Medal of Département du Rhône, France, 2004
Honorary Medal, Polymer Institute, Slovak Academy of Sciences, 2003
President, Royal Australian Chemical Institute (RACI), 1999
Citation for Outstanding Research, RACI Polymer Division, 1997
Applied Research Medal, (the D H Solomon Award), RACI, 1994
Pacific Polymer Federation – Australian Councillor (1993-8)
Editorial Boards:
Polymer Degradation and Stability (UK) Editor
Polymer International (UK) (Associate Editor) (1993-2010)
Polymers for Advanced Technologies (USA) (1996-2011)
High Performance Polymers (UK) (1989-2001)
Progress in Polymer Science (USA) (1997-2007)
Journal of Macromolecular Science (USA) (2000-05)
Chairman, RACI Polymer Division, 1992-93
Fellow, Royal Australian Chemical Institute, 1987

RESEARCH AND CONSULTANCY

Professor Graeme George has had 30 years experience in studying the properties and performance of polymers (plastics, rubbers, textiles and composite materials), particularly when used in hostile environments. He presently leads a research group of postgraduate students and postdoctoral fellows at QUT and the University of Queensland investigating the development and application of novel sensitive spectroscopic techniques to study polymerization, structure and performance of thermoplastic and thermosetting polymers. This research has produced over 200 refereed journal articles, book chapters and conference presentations at an international level.

Professor George has been an expert witness in the field of polymer analysis, performance and failure to the District, Coroner and Supreme Courts in Queensland and New South Wales as well as an expert and Referee for the NSW Supreme Court. He has also been a consultant to over 80 companies, government departments and professional bodies in the field of polymer science. He has been engaged as an expert in the area of failure of industrial polymers, geomembranes and composite materials.