

1. PROFILE

One of the world's foremost authorities (31 years' experience) in the field of Halon replacements and research into fire & explosion suppression.

Innovative, Professional Scientist, leading and managing a dedicated team of scientists and engineers. Wide ranging background in analytical chemistry, fire and explosion testing. Extensive experience in the design of fire tests and practical hands-on fire testing skills. Thorough knowledge of the workings of the Montreal Protocol, the Assessment Panels and the Technical options Committees.

Member of

UK Halon Alternatives group (HAG, now defunct)

Advanced Agent Working Group (AAWG, now defunct)

Active member and frequent presenter at the International Aviation Systems Fire Protection Working Forum (IASFPF)

Co-chair of the United Nations Halons Technical Options Committee (HTOC)

Member of the UN Technical and Economic Assessment Panel (TEAP)

Voting Member of ASTM D29-06 Committee on Standards for Halon Replacement Agents

2. EDUCATION

University of London, BSc (Hons) Chemistry, 1985

3. PROFESSIONAL MEMBERSHIPS

Member of the Royal Society of Chemistry (CChem, MRSC) and also a Chartered Scientist (CSci).

Member of the Royal Aeronautical Society (RAeS)

4. EMPLOYMENT HISTORY

Jan 2018 - Present **Chief Engineer (Chemistry), Kidde Technologies Inc.**

Responsibilities:

- (1) To support the Engineering Department at Kidde Technologies Inc (NC, USA). Effectively I function as an Internal technical consultant on all suppression related projects.
- (2) Remain as the main focal point for coordinating halon replacements activities across all Kidde companies.
- (3) Mentoring and training my team in all aspects of fire suppression science, halon replacement research activities, certification process and international legislation etc.

Projects

1. Supporting a UTC Consortium working on a halon-free cargo compartment fire protection system demonstrator. This work is funded by the EU Clean Sky 2 scheme under Horizon 2020.
2. Member of the FAA MPS Task Group, currently re-writing the Cargo compartment Minimum Performance Standard.

Jul 2013 – Dec 2017 **Engineering & Technology Manager Kidde Graviner**

Reports

Direct: 7

Responsibilities:

- (1) To lead and manage the Engineering Department. Ensure the timely completion of Engineering design projects and within budget
Ensuring that the Kidde Graviner production departments receive appropriate technical assistance as required.
- (2) Remain as the main focal point for coordinating halon replacements activities across all 5 Kidde companies.

ADAM CHATTAWAY

Projects Supervising a staff member to obtain a Master's in Fire & Explosion Engineering on the unexpected behaviour of HFCs in explosion suppression. This work was also presented at a NIST workshop

Feb 2003 - Jun 2013 **Research Manager Kidde Graviner/Kidde Aerospace & Defense.**

Reports Direct: 5; Indirect ~13

Responsibilities:

- (1) To lead and manage the Research Department of KG/KAD. The role includes all aspects of staff management: recruitment, development, motivation, incentivising
- (2) Provide input on the strategic direction of future research projects
- (4) Ensure that all Department activities remain with budget
- (5) Ensuring that the KAD Business Units receive appropriate technical assistance as required.
Act as the main focal point for coordinating halon replacements activities across all 5 Kidde companies.

Projects Evaluation of several halon replacements for portable extinguishers for aircraft
Evaluation of a dry chemical aerosol as a replacement for aircraft engine fire extinguishing applications.
Evaluation of water mist and inert gas for aircraft cargo compartment extinguishing applications.

Jan 2002-Feb 2003: **Chief Scientist/Head of Suppression Section, Kidde international**

Reports Direct: 2; Indirect 5

Responsibilities:

- (1) To lead and manage research projects undertaken by the Chemistry and Mechanical Engineering Sections of KI Research.
- (2) To identify new areas of research, or exploit existing ideas/technology in new market areas.
- (3) To oversee the provision of technical expertise & assistance to the operating companies (ca. 50) that comprise Kidde International. Effective communication skills, in both ascertaining the problem and providing the solution were vital.
- (4) To act as a central coordinator of technical and scientific knowledge, and to promote the flow of information within the company. Attendance at regular liaison meetings was required. This included presentation of results to Kidde companies around the World, or where applicable, papers at international conferences.

Jan 95-Dec 2001: **Principal Scientist/Head of Chemistry Section**

Reports Direct: 1; Indirect 3

Responsibilities:

- (1) To lead and manage research projects undertaken by the Chemistry Section of Kidde Research.
- (2) – (7) Substantially as for Chief Scientist above.

Projects The development of a hidden fire test for aircraft portable extinguishers. This work was funded by the UK Civil Aviation authority and subsequently incorporated into the Federal Aviation Administration Minimum Performance Standard for Aircraft Portable Extinguishers.

Oct 89-Dec 95: **Senior Research Scientist**

Responsibilities:

- (1) Research Projects included several investigating Halon replacements and the invention and commercialisation of a completely new dry chemical aerosol fire extinguishant.

5. PUBLICATIONS

1. Papers & Conference Proceedings

ADAM CHATTAWAY

1. J.A. Senecal, D.N. Ball, and A. Chattaway; *"Explosion Suppression in Occupied Spaces"*. Proceedings of the 4th Halon Options Technical Working Conference, Albuquerque, NM, May 3-5, 1994, pp 79-86.
2. A. Chattaway; *"The Development of a Hidden Fire Test for Aircraft Hand Extinguisher Applications"*. CAA Research Paper **R95013**, December 1995.
3. A. Chattaway, R.G. Dunster, and D.J. Spring; *"The Evaluation of Non-Pyrotechnically-Generated Aerosols as Fire Suppressants"*. Proceedings of the 5th Halon Options Technical Working Conference, May 9-11, Albuquerque, NM, pp 473-483.
4. A. Chattaway; *"The Development of the Hidden Fire Challenge: Further Results"*, Proceedings of the 21st Product Safety Conference, San Francisco, CA, Jan 8-12, 1996, pp 110-121.
5. A. Chattaway, J. Grigg, and D.J. Spring; *"Halon Replacement Decomposition Product Studies"*, Proceedings of the 6th Halon Options Technical Working Conference, Albuquerque, NM, May 7-9 1996, pp 307-317.
6. A. Chattaway, D.J. Spring, and R. Gall; *"Dry Chemical Extinguishing Systems,"* Proceedings of the 7th Halon Options Technical Working Conference, Albuquerque, NM, May 6-8, 1997, pp 216-227
7. A. Chattaway, et al.; *"The Development of a Small-Scale Class A Fire Test"*. Proceedings of the 7th Halon Options Technical Working Conference, Albuquerque, NM, May 6-8, 1996, pp 498-508.
8. A. Chattaway; *"Aerosol Fire Suppressants"*. Fire Prevention, **289** (1996) pp 20-22
9. M. D. Reed, et al; *"Laboratory Evaluation of Bicarbonate Powders as Fire Suppressants."* Proceedings of the International Conference on Ozone Protection Technologies. November 12-13, 1997, Baltimore, MD.
10. A. Chattaway; *"The Development of a Hidden Fire Challenge"*, Fire and Materials, 1997. **21**: p. 219-228.
11. A. Chattaway, J. Grigg, and D.J. Spring. *"The Investigation of Chemically Active Candidate Halon Replacements."* Proceedings of the 8th Halon Options Technical Working Conference, Albuquerque, NM, May 12-14 1998, pp 33-44.
12. D. N. Ball A. Chattaway, and D.J. Spring; *"There Will be no 'Son of Supergas' "*. Proceedings of the 8th Halon Options Technical Working Conference, Albuquerque, NM, May 12-14 1998, pp 45-56.
13. A. Chattaway, R. G. Dunster and D. J. Spring; *"The Evaluation of Alternative Agents for Suppression of Fuel Spray Explosions in Military Vehicle Crew Compartments"*. Proceedings of the 9th Halon Options Technical Working Conference, Albuquerque, NM, April 27-29, 1999 pp 45-54.
14. J. Grigg, A. Chattaway & E. A. Ural *"AAWG Agent Evaluation by Kidde"*. Proceedings of the 11th Halon Options Technical Working Conference, Albuquerque, NM, April 24-6, 2001.
15. J. Grigg, A. Chattaway *"The Evaluation of Bromotrifluoropropene as a Halon 1211 Replacement"*. Proceedings of the 12th Halon Options Technical Working Conference, Albuquerque, NM, April 30-May 2, 2002.
16. A Chattaway, R. E. Glaser, B. Colton *"Evaluation of a Tropodegradable Bromofluorocarbon for Aviation Applications."* Proceedings of the 4th International Aircraft Cabin Safety Research Conference, Lisbon , Portugal, 15-18 November 2004.
17. A Chattaway, R G Dunster, J B Peoples & P W Weller, *"The Development of a Standard Test for Assessing the Effectiveness of Transit Vehicle Fire Extinguishing Systems"*, to be presented at SAE World Congress in Detroit April 2012
18. A Chattaway, J B Peoples & P D Smith *"A Comparison of Various Fire Detection Methodologies in Transit Vehicle Engine Compartment Fire Protection Systems"*, to be presented at SAE World Congress in Detroit April 2012
19. A Chattaway, R G Dunster, J B Peoples & P W Weller, *"The Development of a Standard Test for Assessing the Effectiveness of Transit Vehicle Fire Extinguishing Systems"*, presented at Fires In Vehicles Conference in Chicago, September 2012
20. A Chattaway, J B Peoples & P D Smith *"A Comparison of Various Fire Detection Methodologies in Transit Vehicle Engine Compartment Fire Protection Systems"*, presented at Fires In Vehicles Conference in Chicago, September 2012
21. J G Gatsonides et al *"Fluorinated halon replacement agents in explosion inerting"*, Journal of Loss Prevention in the Process Industries 2015), pp. 544-552. DOI information: 10.1016/j.jlp.2015.03.001, Reference: JLPP2940
22. A Chattaway, *"Cargo Compartment Testing at UTAS FPS"*, at The Eighth Triennial International Fire

ADAM CHATTAWAY

& Cabin Safety Research Conference, Atlantic City, NJ, USA, 24-27 October, 2016.

23. A Chattaway, "Lab-scale Evaluation of Potential Agents for Cargo Compartment Fire Suppression", at The Ninth Triennial International Fire & Cabin Safety Research Conference, Atlantic City, NJ, USA, 28-31 October, 2019

2. Patents:

Title	Publication number	Publication date
Fire Suppression System Actuation Apparatus And System	CA2884442 (A1)	2015-10-24
Thermodynamically-optimized advanced fire suppression system	BR102013026841 (A2)	2015-08-25
Poppet Valve With A Frangible Sealing Disc For A Pressure Vessel	US2015107685 (A1)	2015-04-23
Freighter Cargo Fire Protection	US2015034342 (A1)	2015-02-05
Fire suppression system and method	ES2401761 (T3)	2013-04-24
Combined fire extinguishing system	BRPI1105534 (A2)	2013-04-09
Odorant for fire suppression system	BRPI1103313 (A2)	2012-11-20
Programmable controller for a fire prevention system	BRPI1103062 (A2)	2012-11-20
Active odorant warning	CN102682563 (A)	2012-09-19
Extended discharge of odorant	CN102671329 (A)	2012-09-19
DISCHARGE OF FIRE EXTINGUISHING AGENT	US2012186831 (A1)	2012-07-26
Combined passive and active vehicle fire prevention system	BRPI1003675 (A2)	2012-04-10
Fire Blanket	HK1051152 (A1)	2010-04-16
Fire blanket	US2005051345 (A1)	2005-03-10
Fire blanket	US2003155134 (A1); US6983805 (B2)	2003-08-21
Fire Or Explosion Suppressants And Methods	WO9924120 (A1)	1999-05-20
Dry fire or explosion suppressants	GB2291590 (A)	1996-01-31