



Richard Kooren

CFII

Consultant

OFFICE

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Richard specializes in fire and explosion investigation, fire department litigation, wood-burning appliance investigations, marine fires and chemical reactions. As a forensic engineer and designated consulting engineer with more than 35 years of industry experience, Richard has conducted over 3,500 fire and explosion investigations and has been accepted as an expert by all levels of courts in five provinces.

EDUCATION

University of Waterloo

Degree in Bachelor of Applied Science in Chemical Engineering

Waterloo, Ontario, Canada

1978

PROFESSIONAL EXPERIENCE

Vice President and Investigative Engineer

OCI Group (Formerly Origin and Cause Inc.)

Ancaster, Ontario

1991 – 2021

- Investigation of fires and explosions in buildings and vehicles
- Analysis of fire scenes with respect to temperatures attained and combustibility of materials exposed to a fire
- Installation of wood burning appliances
- Investigation of chemical spills
- Fire suppression system failures and fire spread analysis
- Liability issues pertaining to Fire Departments

Part-time (Volunteer) Firefighter holding the rank of Lieutenant

Hamilton Fire Department

Ancaster, Ontario

January 1993 – December 2010 (Retired)

Senior Associate and Investigative Engineer

Forensic Engineering Incorporated,

Burlington, Ontario

1985 – June 1991

- Investigation of fire and explosions in buildings and vehicles
- Research of fire causes and effects

Special Projects Engineer

Office of the Fire Marshal, Minister of the Solicitor General (Government of Ontario)

Toronto, Ontario

1982 – 1984

- Fire and vapour explosion investigation and research
- Inspections of buildings for Fire Code violations

Process Engineer and Quality Control Manager

Prestolite Battery Company of Canada

Maple, Ontario

1980 – 1982

Supervised Q.C. program for manufacturing facility.

Set up and developed operating parameters for processing equipment.

Research and qualifying company to supply original equipment to major automotive manufacturer.

Research Engineer

Lever Detergents Limited

Toronto, Ontario

1978 – 1980

- Development of new and existing products for the manufacturer of liquid detergents and hard surface cleaners
- Manufacturing trouble-shooting and product quality

Co-op Student

Stelco

Hamilton, Ontario

1974 – 1978

- Employed by industries during work terms while attending the Co-Operative Engineering Program at the University of Waterloo
- Air and water quality control analysis
- Plant water consumption surveys
- Co-op Student, Proctor & Gamble, Hamilton, Ontario
- Various engineering projects including processing and pollution surveys

FURTHER TRAINING & EDUCATION

- 69th Annual International Training Conference, International Association of Arson Investigators, May 2018, Dallas, Texas.

- 67th Annual International Training Conference, International Association of Arson Investigators, April 2016, Orlando, Florida.
- 27th Annual Training Seminar, International Association Marine Investigators, March 2017, Savannah, Georgia.
- International Association of Marine Investigators Mobile, Alabama, March 2015
- International Association of Marine Investigators, Oklahoma City, Oklahoma, February 2014
- International Association of Marine Investigators, Charleston, South Carolina, February 2013
- International Association of Marine Investigators, San Diego, California, February 2012
- International Association of Marine Investigators, Galveston, Texas, January 2010
- International Association of Marine Investigators, Portland, Oregon, March 2009
- International Association of Marine Investigators, Baton Rouge, Louisiana, February 2008
- Fire Investigation Professional Development Seminar – Saskatchewan Association of Fire Chiefs, Saskatoon, November 2007
- International Association of Marine Investigators, Panama City Beach, Florida, February 2007
- Fire Investigation Professional Development Seminar – Saskatchewan Association of Fire Chiefs, Regina November 2006
- International Association of Marine Investigators, Virginia Beach, Virginia, February 2006
- Investigation of Boat Fires, IAAI/ IAMI, Wells Beach, Maine, June 2005
- Investigation of Boat Fires, CAFI, Orillia, Ontario, October 2001
- 52nd Annual seminar – International Association of Arson Investigators Atlantic City, New Jersey, May 2001
- Investigation of Gas and Electric Appliance Fires, Benton Harbour, Michigan, May 2000
- 48 Annual Seminar – International Association of Arson Investigators Toronto, Ontario, May 1997
- Canadian Coalition against Fraud Seminar – Program Facilitator, Banff, Alberta, June 1996
- UBC Fire Science and Fire Investigation Workshop, Vancouver, British Columbia, May 1996
- 47th Annual Seminar – International Association of Arson Investigators
- St, Louis, Missouri, April 1996
- NAFI/NFPA Fire, Arson & Explosion Investigation Training Program – CFII (Certified Fire Investigation Instructor) Certification, Chicago, Illinois, August 1995
- 45th Annual Seminar – International Association of Arson Investigators

- Biloxi, Mississippi, May 1994
 - 39th Annual Seminar – International Association of Arson Investigators
 - Niagara Falls, New York, May 1988
 - Electrical Fire Investigation – University of Wisconsin, Madison, Wisconsin, April 1987
 - Level III – Canadian Fire Investigation School, Toronto, Ontario, November 1983
 - Level II – Canadian Fire Investigation School, Arnprior, Ontario, September 1982
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PRESENTATIONS

- Boat Fires, IAAI Ontario Chapter, Kingston, Ontario, June 2016
- Boat Fires, IAAI Ontario Chapter, Barrie, Ontario, June 2013
- Causes of Fires & Explosions on Marine Vessels, IAMI, Charleston, South Carolina, February 2013
- Working with Private Sector OMFPOA Symposium, Brantford, Ontario April 2014
- Lectured on boat fires and freshwater electrocutions, OFM Staff Conference, Ontario Fire College, Gravenhurst, Ontario, June 2012
- Boat Fire, IAAI Ontario Chapter Arson Seminar, St. Catharines, Ontario, June 2011
- New Building Materials & Their Effect on Fire Spread, OIAA Niagara Chapter, Jordan, Ontario, October 2010
- Lectured on boat fires and freshwater electrocutions, IAMI Regional Seminar, Niagara Falls, Ontario, June 2009
- Lectured on Marine fires, IAAI Ontario Chapter Arson Seminar, Kingston, Ontario, May 2009
- Fire dynamics and behaviour, new recruit training, Hamilton Fire Department, Hamilton, Ontario, May 2009
- Lectured on Fire investigation and overhauling fire scenes, Oxford County Mutual Aid Fire Departments, Oxford County, Ontario, May 2008
- Fire dynamics and behaviour, new recruit training, Hamilton Fire Department, Hamilton, Ontario, May 2008
- Spontaneous heating and chemical reactions, IAAI BC Chapter Arson Investigators Conference, Vernon, British Columbia, April 2008
- Lectured on Marine fires, IAAI Ontario Chapter Arson Seminar, Kingston, Ontario, June 2007
- Fire dynamics and behaviour, new recruit training, Hamilton Fire Department, Hamilton, Ontario, May 2007
- Fire dynamics and behaviour, new recruit training, Hamilton Fire Department, Hamilton, Ontario, May 2006
- Origin and cause investigations, Burlington Fire Department, Fire officer training,

Burlington, Ontario, October 2005

- International Association of Marine Investigators, Marine Fires & Explosion Investigations, Vancouver, British Columbia, November 2004
- International Association of Marine Surveyors, Marine Fires & Explosion Investigations, Society of Accredited Marine Surveyors, Toronto, Ontario, October 2004
- Marine fires and explosion investigations, International Association of Marine Investigators, Toronto, Ontario, February 2004
- Fire dynamics and behavior, new recruit training, Hamilton Fire Department, Hamilton, Ontario, March 2003
- Origin and cause of boat fires, Metropolitan Toronto Police, Toronto, Ontario, March 2002
- Lectured on fire investigation and overhauling fire scenes, Selkirk Fire Station, Haldimand EMS, Selkirk, Ontario, June 2001
- Lectured on fire investigation and overhauling fire scenes, Northumberland County Mutual Aid Fire Departments, Northumberland County, Ontario, January 2001
- Lectured on fire investigation and overhauling fire scenes, Haldimand-Norfolk Mutual Aid Fire Departments, Haldimand-Norfolk County, Ontario, September 2000
- Origin and cause of fires, fire science, lectured to Bruce County Insurance Brokers Association, Walkerton, Ontario, March 2000
- Properties of flammable liquids, International Police Diver Symposium, Hamilton, Ontario, September 1999
- Fire scene investigation and properties of flammable liquids, IAAI Ontario Chapter Arson Seminar, Simcoe, Ontario, June 1999
- Alternate uses of GC/MS/MS, Presentation at CSFS Conference, Wolfville, Nova Scotia, 1998
- Lectured on Fire investigation and overhauling fire scenes, Peterborough County Mutual Aid Fire Departments, Peterborough, Ontario, September 1996
- Lectured on Fire Department Liability, Association of Fire Department Training Officers, March 1995
- Lectured on fire investigation and overhauling fire scenes, Bruce County Mutual Aid Fire Departments, Bruce Country, Ontario, March 1995
- Forensic Engineering, Toronto 1995, Presentation at CSFS Conference, Toronto, Ontario, 1995
- Lectured on fire investigation and overhauling fire scenes, Wellington County Mutual Aid Fire Departments, Wellington Country, Ontario, October 1995
- Lectured on Fire investigation and overhauling fire scenes, Grey County Mutual Aid Fire Departments, Grey County, Ontario, November 1994

- Cellulose Insulation Fires and Vehicle Fire Fatality, Presentation at CSFS Conference, Vancouver, British Columbia, 1994
 - Lectured on Fire investigation and overhauling fire scenes, Huron County Mutual Aid Fire Departments, Huron County, Ontario, September 1994
 - Flashover Fires, Presentation at CSFS Conference, Winnipeg, Manitoba, 1993
 - Origin and Cause of Fires, lectured to Insurance Claims Personnel, Cambridge, Ontario, June 1992
 - Origin and Cause of Fires, lectured to Hamilton Wentworth Regional Fire School, Hamilton Ontario, May 1992
 - Organized and Chaired Fire Investigation Program, Technical University of Nova Scotia (TUNS), Toronto, Ontario, 1991
 - Computer fire programs, presentation at CSFS Conference, Toronto, Ontario, 1998
 - Fire scene investigation, IAAI Ontario Chapter Arson Seminar, London, Ontario, October 1998
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PUBLICATIONS

- The Subtle Signature of Spontaneous Combustion, O&C Newsletter, August 2015
- 3 Strategic Advantages of Involving a Forensic Expert in Your Case, O&C Newsletter, November 2014
- “Pyrolysis: Ignition by Stealth”, Without Prejudice, March 2010.
- “Hazards of Propane”, OCI newsletter, October 2008
- “Carbon Monoxide Poisoning in Open Spaces”, OCI newsletter, May 2007
- “Flashover: An Arson Defense Tool?”, Fire-Arson Investigator, California Conf. Of Arson Investigators, April 1997
- “Forensic Engineering”, Canadian Independent Adjuster, 1997
- “Forensic Engineering”, Canadian Society of Forensic Science Journal, March 1997.
- “Flashover: An Arson Defense Tool?”, The Team Approach, IAAI Quarterly, Summer 1996
- “Fires Involving Chimneys and Woodburning Appliances”, Parts I & II BC Adjusters’ Quarterly, January 1995
- “Fires Involving Chimneys and Woodburning Appliances”, Parts I & II BC Adjusters’ Quarterly, October 1994
- “Flashover: An Arson Defense Tool?”, BC Adjusters’ Quarterly, April 1994
- “Flashover: An Arson Defense Tool?”, Canadian Society of Forensic Science Journal, March 1994

COURT EXPERIENCE

- Testified in High Court of Fiji.
- Expert witness in all levels of Ontario Court: Supreme, District and Provincial.
- Testified at numerous Provincial offences cases, including ones involving welding accidents.
- Testified Queen's Bench, Provinces of Manitoba, Alberta and Saskatchewan.
- Testified Judicial Court, Province of New Brunswick.
- Testified Queens Bench, Province of New Brunswick.
- Testifying in Civil Court for Plaintiff and Defendant.
- Testifying in Criminal Court for Crown and Defendant.
- Testifying in Preliminary Hearings for Criminal matters.
- Testifying in Coroner's Inquests.