

SAMAC

ENGINEERING LTD.



ANSWERS YOU CAN DEPEND ON

SAMAC Engineering has provided failure analysis services to hundreds of insurance, legal, and commercial clients across Western Canada since 1992. With 15 staff and consultant experts, we can assist clients on just about any loss.



MECHANICAL, ELECTRICAL, MATERIALS, CIVIL/STRUCTURAL

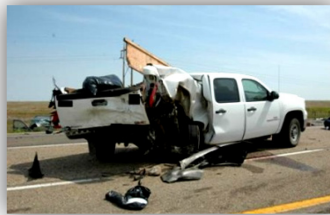
We investigate all types and sizes of residential, commercial, oil & gas, and industrial failures to determine what factors caused or contributed to the loss (see website). As well, we analyze repair costs and business interruption issues.

SAMAC's in-house laboratory and the advanced test equipment we routinely utilize help us determine the "fingerprint" of a failure.



FIRE ORIGIN AND CAUSE

SAMAC's fire investigators and engineers have the investigative, operational and engineering expertise to tackle the origin and cause of any fire, whether it is a building, industrial plant, vehicle, ship or aircraft fire. Our team provides a seamless integration from the initial on-scene investigation to the engineering analysis of fire causation.



TRANSPORTATION AND INJURY

Our experts analyze vehicle collisions and losses of control to assess speeds, impact locations, potential to avoid, and seatbelt effectiveness. Our expertise includes computer simulations & animations, analysis of Event Data Recorder data, vehicle testing, and product liability investigations. Personal injury investigations such as slip and falls are also routinely carried out.

Transportation and Injury

- ✓ **Accident reconstruction:** computer simulations and animations, event data recorders
- ✓ **Mechanical:** vehicle component failure & defect analysis, regulations, compliance issues
- ✓ **Restraint systems:** analysis of seatbelt use and effectiveness; airbag issues
- ✓ **Wheel & tire failures:** cause of tire failures & wheel-offs, loss of control investigations
- ✓ **Biomechanics:** detailed analysis of injury causation
- ✓ **Testing:** seatbelts and seats to Transport Canada standards, mechanical components
- ✓ **Worker Safety & Personal Injury:** workplace/OH&S investigations; ladders, slips/trips, wheelchairs, etc

Commercial / Industrial / Residential

- ✓ **Mechanical Engineering:** machinery, residential, commercial, and industrial failures
- ✓ **Electrical Engineering:** electronic/electrical component failures; fire causation; buildings
- ✓ **Fire Origin and Cause:** fire and explosion investigations, fire department management
- ✓ **Oil and Gas, Mining:** surface facilities; downhole operations; drilling; large mobile equipment
- ✓ **Materials Engineering:** metallurgy, composites, plastics; failure analysis, repairs, salvage
- ✓ **Civil/Structural Engineering:** failure analysis; repairs
- ✓ **Product Liability Analysis:** cause of failures

STAFF & CONSULTANTS

SAMAC experts have the industry and forensic experience you need - from field investigations to expert testimony at trial. Detailed resumes available on our website or via email (admin@samaceng.com).

- 1) **Steve MacInnis PEng** (35+ yrs): President; accident reconstruction, mechanical failure analysis, oilfield, tire & wheel failures, and personal injury incidents. Court qualified over 40 times.
- 2) **Gilles Amirault PEng** (7 yrs): Mechanical failures, materials, testing, and accident reconstruction. Currently taking his M.Eng. in Materials Engineering. Court qualified.
- 3) **Vladimir Panlilio MSc MEng PEng** (30 yrs): Mechanical failure analysis and accident reconstruction. Assoc. Prof. at UofC; RCMP instructor; Mgr of Hanna test track. Court qualified.
- 4) **Dave Hines, PEng (EE)** (7+ yrs): Electrical failures, fire dynamics, electrical fire causation. Dave, both a technologist and an engineer, is currently taking his M.Sc. in Fire Protection.
- 5) **Tyler Dyck BEng** (3 years): Accident reconstruction and mechanical failure analysis.
- 6) **Ted Semeniuk** (Vehicle & OH&S consultant, 35+ yrs): Vehicle mechanical failures, defects, and fires (16 yrs w/SAMAC; >200 time at trial). Certified HS&E adviser; OH&S investigations.
- 7) **Chris deRosenroll CCFI CFEI CFII CVFI** (Fire origin & cause consultant; 40+ yrs): Fire chief w/3 fire departments; managed all National Defence fire operations, investigations and training.
- 8) **Taras Semeniuk MEng PEng** (Materials consultant; 25+ yrs): Senior metallurgical, materials & failure expert. Taras spent 6 yrs w/SAMAC and now works frequently with Gilles Amirault.
- 9) **Ron Harder PEng** (Civil/Structural consultant; 35+ yrs)
- 10) **Curtis Feeg MSc PEng** (Civil/Structural consultant; 30+ yrs): Ron and Curtis are highly experienced civil engineers who assist clients with fire repair analyses as well as with Code reviews and design & construction issues.
- 11) **Chris Pierce PEng** (Oil & Gas facilities and pipeline consultant; 35+ yrs)
- 12) **John Gray PEng** (Oil & Gas drilling consultant; 40+ yrs): The depth of technical experience and industry knowledge that Chris and John bring to the table enable them to analyze all types of design, construction, maintenance, and operational issues within their areas of expertise.
- 13) **Greg Wohl PhD** (Biomechanical consultant 15+ yrs): Ass't Professor, McMaster University
- 14) **Joe Bergman PEng MD FRCSC** (Biomechanical consultant; 15+ years): Orthopaedic surgeon
Greg & Joe have been biomechanical consultants with SAMAC for over 15 years.
- 15) **Jeff Caird PhD** (Human Factors consultant, 20+ yrs): Professor, Dep't of Psychology, University of Calgary. Jeff's expertise includes transportation human factors & traffic safety, among others.



Vladimir Panlilio, Tyler Dyck, Gilles Amirault, Dave Hines, Steve MacInnis & Ted Semeniuk

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RESIDENTIAL • TRANSPORTATION • OIL & GAS • COMMERCIAL • INDUSTRIAL**