

## Large Loss Experts

SAMAC Engineering is a dedicated failure analysis firm supporting insurance, legal, and commercial clients across Western Canada. We offer clients a proven record in large loss investigations of all types and an excellent industry reputation.



## Property

SAMAC is an industry leader with multiple experts across a broad range of disciplines, including:

- |                                |                                      |
|--------------------------------|--------------------------------------|
| <b>Mechanical</b>              | <b>Construction Defects</b>          |
| <b>Materials</b>               | <b>OH&amp;S Investigations</b>       |
| <b>Electrical</b>              | <b>Product Liability</b>             |
| <b>Fire Origin &amp; Cause</b> | <b>Structures &amp; Architecture</b> |
| <b>Metallurgical</b>           | <b>Geotechnical</b>                  |
| <b>Aviation</b>                |                                      |

At SAMAC, we pride ourselves on:

- Determining the 'fingerprint' of a failure using our in-house materials laboratory and inspection bay, along with routine use of SEM, FTIR, and other advanced analysis tools.
- Reviewing all potential technical issues – design, manufacturing, installation, operation & maintenance.
- Assessing what caused or contributed to the failure using data and logic.
- Providing readers a clearly written technical report in simple language.

## Transportation, Injury Biomechanics & Infotainment

Our team has the leading edge knowledge and litigation experience to analyze any type of vehicle incident.

### Transportation

In house expertise includes on-road and off-road vehicles, trucking fleets, computer simulation and animations, analysis of Event Data Recorders (both passenger vehicle and heavy truck), testing, and product liability issues.

### Injury Biomechanics

Biomechanical & personal injury investigations include seat belt effectiveness, low speeds, slip/trips/falls, OH&S worker safety and ladders. Analyses can also include testing as well as design, building code and lighting issues.

### Infotainment

We can extract and analyze data from in-car communication and navigation systems, including:

- Voice and text data
- GPS locations
- Destinations
- Speed logs
- Doors opening, parking lights, etc.

## Property Personnel

**Gilles Amirault** PEng, Director – Property.

### MECHANICAL

HVAC, boilers, engines, design; industrial to residential. Mobile and industrial/oil & gas equipment; maintenance & reliability. Commercial and residential failures; testing.

**Vladimir Panlilio** MSc, MEng, PEng, Lead

**Gilles Amirault** PEng

**Jonathan McCarthy** MEng, PEng

**Masoud Mashkournia** MSc, PEng

### ELECTRICAL

Electrical & electronic design, installation & failure analysis. Failure analysis of commercial, industrial, and residential installations, incl. transmission, distribution, appliance, equipment failures, and fire investigations.

**Ian Read** PEng, CFEI

### AVIATION

Failure analysis of airframes, engines, propellers, systems, etc. Aircraft maintenance – piston & gas turbines, airframes & systems.

**David Coates** PhD, PE (California)

**Dave Bakker** AME, C-Tech

### MATERIALS & LABORATORY

Buildings, pipelines, plumbing/HVAC, plants. Industrial plants, buildings, pipelines and plumbing, aircraft, vehicles, tools, medical implants, etc.

**David Coates** PhD, PE (California), Lead

**Gilles Amirault** PEng

**Oksana Shevchenko** CET, Lab Manager

### FIRE ORIGIN & CAUSE

Fire origin & cause, particularly large loss (Chris) and electrical issues (Ian).

**Chris deRosenroll** CCFI, CFEI, CFII

**Ian Read** PEng, CFEI

### OIL & GAS

**Kursad Ulusoy** MSc, PEng

Process design & operation – upgraders, refineries, SAGD.

**Chris Pierce** PEng

Design, construction & operation of facilities and pipelines.

**Dave Bakker** C-Tech, AME

Rotating equipment, plant operations, turbines, compressors.

**John Gray** PEng

Drilling, workover, production & development operations.

### SAFETY

Industrial hazard investigations; OH&S compliance; human factors; industrial hygiene; hazardous materials management.

**Ryan Campbell** BSc, CSRP

**Ted Semeniuk**

### STRUCTURES & ARCHITECTURE

Failure related design & construction, fires, failure analysis.

**Ron Harder** PEng

**John Hallett** MRAIC, AAA

### GEOTECHNICAL

Geotechnical analysis, permafrost, and mine wastes.

**Kevin Biggar** PhD, PEng

## Transportation, Injury & Infotainment Personnel

**Steve MacInnis** PEng, Director - Transportation, Injury, and Infotainment.

### TRANSPORTATION

Collision reconstruction, event data recorders, simulations; potential to avoid, animations, re-enactments, seatbelt use, injury mitigation.

Heavy duty mechanic - failures, defects, OH&S.

**Tyler Dyck** PEng, Lead

**Tyler Haladuick** MASC, PEng

**Robert Townsley** BASc

**Ted Semeniuk**

### INJURY BIOMECHANICS

Biomechanics & injury analysis - vehicle; slips, trips and falls; mTBI.

**Tyler Haladuick** MASC, PEng

### INFOTAINMENT & TELEMATICS

Data collected by in-car systems including call and SMS logs, media files, connected devices, destinations, travel routes, velocity logs, odometer readings and more.

**Ian Read** PEng, CFEI