

# CURRICULUM VITAE

**MIKE SIMARD, PE, PMP, CEP**

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## EXPERT WITNESS PROFILE

Licensed mechanical engineer with over 30 years of experience in industrial machinery, process design, and manufacturing systems. Provides expert witness services in equipment failure, design defects, process performance, cost evaluation, industrial safety, and standard-of-care matters. Proven track record in expert reporting and testimony. Recognized for technical leadership, credibility, patents, and published work. Skilled at explaining complex technical issues clearly, reinforced by years of university teaching.

## AREAS OF EXPERTISE

- Mechanical failure and root cause analysis
- Industrial machinery performance and failure analysis
- Manufacturing systems and operations
- Process design, scale-up and troubleshooting
- Equipment specification, selection, and system integration
- Capital projects: pilot plants, full-scale facilities, and retrofits
- Material handling, slurry transport, fluid pumping, and mixing systems
- Cost estimating & manufacturing costs
- Engineering standards of care, quality control, and industrial safety

## EXPERT WITNESS EXPERIENCE

### Litigation Support Services Provided:

- Deliver analysis, written reports, and testimony on technical matters within area of expertise
- Serve as lead expert on targeted, single-expert assignments
- Contribute to large-scale and mega-project litigation as part of multidisciplinary teams
- Support coordinated technical evaluations in high-stakes disputes

### Representative Cases:

- Estate of Steven Herring v. GE, et al. (KY, 2023–)  
*Analysis of manufacturing process design defects following a fatal industrial accident.*
- Prab, Inc. v. Dynamix Casting Fluxes LLC (MI, 2021–2022)  
*Dispute over the design of an industrial manufacturing process and control system.*
- City of Richland v. Earth To Go & P&L Coatings (MO, 2021)  
*Dispute over mold contamination of industrial equipment caused by a leaking roof.*
- Gudel, Inc. v. RSB Transmissions NA, Inc. (MI, 2021)  
*Dispute centered on the design of a robotic manufacturing process for automotive parts.*

## **EDUCATION**

- **Master of Business Administration** (Executive MBA) 1996 – 1998  
Simon Fraser University. Vancouver, BC, Canada.
- **Master of Science in Mechanical Engineering** 1991 – 1994  
Polytechnique - University of Montreal. Montreal, QC, Canada.
- **Bachelor of Science in Mechanical Engineering (Co-op)** 1986 – 1990  
University of Sherbrooke. Sherbrooke, QC, Canada.
- **Associate Degree – Aircraft Maintenance** 1983 – 1986  
National Aeronautics School. St-Hubert, QC, Canada.

## **CERTIFICATIONS**

- Licensed **Professional Engineer** (Pennsylvania)
- Certified **Project Management Professional** (PMP) from PMI
- **Certified Estimating Professional** (CEP) from AACE International
- **Six Sigma** greenbelt and **ISO 9000 auditor**
- **GE Edison Engineering Program** graduate
- Fluent in French (written & spoken)

## **PROFESSIONAL SUMMARY**

- **PACED ENGINEERING, INC.** – PA | *Principal* | 2018–Present  
Provides expert witness services and consulting in mechanical design, process scale-up, cost engineering, and industrial systems. Prepares expert reports, analyzes complex mechanical failures, and supports litigation teams with technical opinions.
- **VILLANOVA UNIVERSITY** – PA | *Associate Professor of the Practice* | 2018–2024  
Developed and taught courses in mechanical design, engineering economics, and senior capstone projects. Mentored design teams and integrated project management techniques into engineering curriculum.
- **RENMATIX, INC.** – GA & PA | *Vice President of Engineering / Projects Director* | 2009–2018  
Led process and equipment design for biomass-based biorefinery systems. Managed capital projects, pilot plants, OEM equipment partnerships, and technology scale-up. Delivered patented solutions for extreme service environments.
- **DISTINCTIVE STONEWORKS, INC.** – GA | *Founder / President* | 2006–2008  
Founded manufacturing business; led facility setup, production operations, marketing, and licensing.
- **CETCO, INC.** – GA | *Plant Manager / Project Manager* | 2003–2005  
Turned around underperforming facility, doubling throughput. Led major plant consolidation and redesign of operations, increasing efficiency and product quality.
- **SOPREMA, INC.** – BC, Canada | *Plant Manager / Project Manager* | 1998–2002  
Managed design/build of a \$15M manufacturing facility, including plant commissioning and

start-up. Directed operations, improved productivity, and implemented ISO, safety, and maintenance programs.

- **GE ENERGY – HYDRO** – QC & BC, Canada | *Contract Mgr / Mfg Engineer* | 1991–1997 Managed \$25M turbine/generator contracts. Led manufacturing engineering efforts, supplier development, and ISO 9001 quality initiatives for the manufacturing and refurbishment of large turbine and generator components. Gained international experience in China and Europe.

### **PUBLICATIONS & PRESENTATIONS**

- Cost Estimating of Chemical Plant Construction. International Solvothermal and Hydrothermal Association Conference. Valladolid, Spain. 11 September 2023.
- PMMA hydrolysis in subcritical water: temperature, time and pH effects. 13th International Symposium on Supercritical Fluids. Montreal, Canada. 16 May 2022.
- Project Management Implementation in a Capstone Design Course. American Society for Engineering Education. 10 April 2021.
- Biomass Processor Banishes Bottleneck. Chemical Processing, April 2016.
- Scaleup Options and Risk. Chemical Engineering, April 2014.
- Scaling Disruptive Technology. Annual Green Chemistry & Engineering Conference. Washington, D.C. 18 June 2013.
- Engineering the Bio-Based Industrial Revolution. ASME Chapter Meeting. Philadelphia, PA. 8 November 2012.
- Rheology and Pumping of Woody Biomass Slurries. AIChE Annual Meeting – Particle Technology Forum. Minneapolis, MN. 19 October 2011.

### **PATENTS**

- Lignin Fired Supercritical Water Generator, System and Method. US 9,518,729B2 - 2016.
- Energy Recovery when Processing Materials with Reactive Fluids. US 9,328,963B2 - 2016.
- Method of Transporting Viscous Slurries. US 9,102,885B2 - 2015.
- Lignin Production from Lignocellulosic Biomass. US 8,663,800B2 - 2014.
- Self-Cleaning Apparatus & Method for Thick Slurry Pressure Control. US 8,409,357B2 - 2013.
- Lignin Production from Lignocellulosic Biomass, US 8,404,051B2 - 2013.
- Lignin Production from Lignocellulosic Biomass, US 8,317,928B1 - 2012.