

CURRICULUM VITAE OF DANIEL J. SOVAR, P.E.

June 2026

I. General Information

A. Position Senior Mechanical Engineer
Semke Forensic
154 Hughes Lane
St. Charles, Missouri
Telephone: 636-896-9995

II. Professional Summary

A. Education: Bachelor of Science
Mechanical Engineering
Washington University St. Louis
St. Louis, Missouri
1992

Bachelor of Science
Engineering Science
Minor Chemistry, Mathematics
Baker University
Baldwin City, Kansas
1992

Rosary High School
St. Louis, Missouri
1987

B. Experience:

January 2020 to Present

Position: Senior Mechanical Engineer
Semke Forensic
154 Hughes Lane
St. Charles, Missouri

Responsible for mechanical engineering projects with emphasis in fuel-fired equipment, mechanical design analysis, fire suppression systems.

April 2012 to January 2020

Position: Mechanical Engineer
Semke Forensic
154 Hughes Lane
St. Charles, Missouri

Responsible for mechanical engineering projects with emphasis in fuel-fired equipment, mechanical design analysis, fire suppression systems.

January 2009 to April 2012

Position: Project Design Engineer
Star Manufacturing
St. Louis, Missouri

Responsible for design of gas fired and electrical commercial cooking equipment for the Lang brand. In charge of projects from design concept until first production. Projects included development of new griddles, ranges, and gas hot plates.

March 2008 to November 2008

Position: Project Engineer
Battery Handling Systems
St. Louis, Missouri

Responsible for assisting with design of CE certified battery handling machinery.



January 2007 to February 2008

Position: Project Design Engineer
Star Manufacturing
St. Louis, Missouri

Responsible for design and implementation of Lang branded commercial cooking equipment. Projects included design, modification, and cost reduction of griddles, ranges, ovens, and broilers.

June 1999 to January 2007

Position: Design Engineer
Empire Comfort Systems
Belleville, IL

Responsible for design of gas fireplaces and gas BBQ grills. Responsible for project design from concept to first production. Projects included design of vent free fireplaces, direct vent fireplaces, and outdoor gas grills. Responsible for design and setup of NOx test system and hood.

June 1997 to June 1999

Position: Design Engineer
Hussmann Corporation
Bridgeton, Missouri

Responsible for design, cost reduction, and engineering support of medium temperature Impact refrigerated display cases.

November 1993 to June 1997

Position: Design Engineer
Alco Controls
Maryland Heights, Missouri

Responsible for new products, cost reduction, and maintenance engineering for system protectors and regulator product lines.

III. Seminars and Technical Courses Attended

- 1993 – ProEngineer Basic/Advanced Training
- 2002 – UL & Gas Consultants Gas Fired Heating Equipment Seminar
- 2008 – Adobe Indesign Training
- 2012 – Fire & Arson Conference, IAAI, Illinois Chapter, Fairview Heights, Illinois
- 2012 – Advanced Insurance Seminar, NSPII, Missouri Chapter, St. Louis, Missouri
- 2012 – Fire & Arson Conference, IAAI, Illinois Chapter, Champaign, Illinois
- 2012 – Investigating Solid Fuel-Burning Appliances Fires, Fire Finding, Benton Harbor, Michigan
- 2012 – Investigation of Gas and Electric Appliance Fires, Fire Findings, Benton Harbor, Michigan
- 2013 – Fire & Arson Conference, IAAI, Illinois Chapter, Fairview Heights, Illinois
- 2013 – Gas Explosions Webinar, NASP
- 2013 – Fire & Arson Conference, IAAI, Missouri Chapter, Lake Ozark, Missouri
- 2014 – Fire & Arson Conference, IAAI, Missouri Chapter, Lake Ozark, Missouri
- 2015 – Fire & Arson Conference, IAAI, Illinois Chapter, Fairview Heights, Illinois
- 2015 – Fire & Arson Conference, IAAI, Missouri Chapter, Lake Ozark, Missouri
- 2015 – National Propane Gas Association Certified Employee Training Program, 1.0 Basic Principles and Practices
- 2016 – IAAI-IL Buxton-Mazzone
- 2016 – Fire & Arson Conference, IAAI, Missouri Chapter, Lake Ozark, Missouri
- 2017 – Fire & Arson Conference, IAAI, Missouri Chapter, Springfield, Missouri
- 2018 – Missouri Propane Gas Association Training Program, Basic Principles and Practices
- 2018 – Fire & Arson Conference, IAAI, Illinois Chapter, Swansea, Illinois
- 2018 – Fire & Arson Conference, IAAI, Missouri Chapter, Springfield, Missouri
- 2019 – Fire & Arson Conference, IAAI, Illinois Chapter, Caseyville, Illinois
- 2019 – Fire & Arson Conference, IAAI, Missouri Chapter, Springfield, Missouri
- 2019 – Commercial Plumbing with PEX, AEC Daily Corporation
- 2020 – Ventilation and IAQ, ASHRAE Learning Institute
- 2020 – Achieving Fire Suppression and Safety with Standpipe Systems, AEC Daily Corporation
- 2020 – Fire-Safe Building Design: An Introduction to Automatic Sprinkler Systems, AEC Daily Corporation
- 2020 – HVAC for Home, Failure & Damage Analysis, Inc.
- 2021 – Fire & Arson Conference, IAAI, Missouri Chapter, Springfield, Missouri
- 2021 – Fire & Arson Conference, IAAI, Illinois Chapter, Caseyville, Illinois
- 2022 – Fire & Arson Conference, IAAI, Missouri Chapter, Springfield, Missouri
- 2024 – Forensic Analysis Involving Fugitive Natural Gas and Propane, SunCam, Inc.
- 2024 – Plumbing 101 – 12 Steps to a Successful Plumbing Design, American Society of Plumbing Engineers (ASPE)
- 2025 – Fire & Arson Conference, IAAI, Illinois and Iowa Chapters, Rock Island, Illinois

IV. Professional Affiliations

International Association of Arson Investigators (IAAI)
Illinois Chapter of the International Association of Arson Investigators (ILIAAI)
Missouri Chapter of the International Association of Arson Investigators (MOIAAI)
National Fire Protection Association (NFPA)
American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)
American Society of Plumbing Engineers (ASPE)

V. Patents

US Patent 6945160 for Outdoor Cooker and Smoker Apparatus
US Patent 20130206128 A1 for “Instant On” Gas Burner

VI. Civic Involvement

USA Hockey Certified Coach, Level 3
Coach Twin Bridges Lightning – 2004-2007, 2009-2012
Youth Minister & Moderator – St. Ferdinand Church 1999-2016

VII. Professional Registration

Registered Professional Engineer in the States of Missouri, Illinois, Kansas, and Arkansas

VIII. Courses Instructed

2014 – Shelter Insurance, Columbia, Missouri – *Mechanical Evaluations*
2014 – Shelter Insurance, Columbia, Missouri – *Mechanical Evaluations: Sprinkler Systems, Plumbing Systems, HVAC Equipment*
2016 – Haren Laughlin, Lenexa, Kansas – *Building Fire Suppression System Basics*
2017 – IAAI Illinois Buxton/Mazzone Southern Zone Training Conference, Swansea, Illinois – *Mechanical Evaluations*
2022 – IAAI Missouri – *Building and Kitchen Fire Suppression Systems, Gas Systems and Appliances*
2024 – Brinker Doyen – *Fuel-Fired Appliance Fire Causes*
2024 – IAAI Missouri – *Explosion Basics*
2025 – Jefferson County Fire Marshall - *Mechanical Causations*

IX. Publications

Sovar, D. J. (2016). Fire Suppression Systems – Determining Liability. *Subrogator*, Spring/Summer 2016, 110-114.