SEMKE FORENSIC
A Keystone Company
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St. Louis
154 Hughes Lane
St. Charles, MO 63301
T 636.896.9995

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

November 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 or 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.