

Curriculum Vitae

Douglas R. Stahl, PE, CFEI / CVFI

Principal Engineer

Doug.Stahl@Stahl-Engineering.com

REGISTRATIONS

Professional Engineer - State of Florida, 0052778, with continuing education, 1998 - present

Professional Engineer - State of Indiana, PE10302133, with continuing education, 2003 - present

Certified Fire and Explosion Investigator - National Association of Fire Investigators, 7188-2673, with continuing education / recertification, 2000 - present

Certified Vehicle Fire Investigator - National Association of Fire Investigators, 7188-2673v, 2003 - present

Commercial Driver's License - Class A - State of Indiana – Tank Vehicles, Passenger Transport, School Bus, and Double/Triple Trailer endorsements, 2007 - present

EMPLOYMENT / EXPERIENCE

Stahl Engineering & Failure Analysis, LLC - Fort Wayne, IN
2009 - present, Principal Engineer

Navistar / International Truck and Engine Corporation - Fort Wayne, IN
1999 - 2009, Staff / Senior Engineer - Product Integrity Group/Truck Reliability Center
2004 - 2005, Reliability & Quality Program Manager - 3200 IC Integrated Mobility Bus

Stahl Engineering & Failure Analysis, Inc.
1999 - 2001, Principal Engineer, Fort Wayne, IN
1998 - 1999, Principal Engineer, Fort Lauderdale, FL

Benedict Engineering Company - Tallahassee, FL
1995 - 1998, Senior Engineer / Team Leader
1993 - 1995, Forensic and Design Project Engineer

Rolls Royce, Inc. - Atlanta, GA
1992, Test Engineer - Materials and Mechanical Technology

Georgia Institute of Technology - Atlanta, GA
1985 - 1992, Research and Teaching Assistant - Materials Engineering
1985 - 1993, Materials & Mechanical Behavior Research - Mechanical Properties Research Lab
1983 - 1985, Manager - Fracture & Fatigue Research Laboratory

Independent Engineering Consultant - Atlanta, GA

1983 - 1991, Failure Analysis, Material Analysis, Materials Testing, and Mechanical Design

The Timken Company, Inc. - Canton, OH

1978 - 1983, Eight alternating quarters - Engineering Cooperative Professional Practice – Project works. Steel and Bearing Divisions - Metallurgy Lab, Steel Sales, Bearing Manufacturing, Steel Properties and Specifications Lab, Steel Melt Shop, Steel Rolling Mills, and Seamless Tube Mills.

EDUCATION

Georgia Institute of Technology - Atlanta, GA

1983 - 1985 – Master of Science in Metallurgy with minor in Mechanical Engineering, 1985, Master's Thesis research in multiaxial fatigue and deformation mechanisms of jet engine superalloy metals supported by NASA - Space Shuttle Main Engine Development Program.

University of Cincinnati - Cincinnati, OH

1978 – 1983 - Bachelor of Science in Materials Science & Metallurgical Engineering, 1983, Cum Laude, including eight alternating quarters of Co-Operative engineering work with The Timken Company. Senior Project research supported by General Electric - Jet Engine Division and NASA – Space Shuttle Main Engine Development Program.

Georgia Institute of Technology -Atlanta, GA

1986 – 1993 - Successfully completed all PhD course requirements in Materials Science & Engineering with minor in Mechanical Engineering. Additionally, conducted PhD post-graduate sponsored research with multiple published papers from research findings, while supervising interdisciplinary Mechanical Properties Research Lab testing as Graduate Research Assistant.

PATENTS

-) *Lift dolly for use in conjunction with stand-mounted power tools and the like –*
U.S. Patent 7112028 - 9/26/2006
-) *Lift dolly for use in conjunction with stand-mounted power tools and the like –*
U.S. Patent 6837665 - 1/4/2005
-) *Lift dolly with stand-mounted power tools and the like, including mounting mechanism –*
U.S. Patent 6659706 - 12/9/2003
-) *Lift dolly in conjunction with stand-mounted power tools and the like, including mounting mechanism –*
U.S. Patent 6533524 - 3/18/2003
-) *Safety guard stop for power saws -*
U.S. Patent 6119569 - 9/19/2000
-) *Lift dolly in conjunction with stand-mounted power tools and the like, including mounting mechanism –*
U.S. Patent 6079931 - 6/27/2000
-) *Lift dolly for use in conjunction with stand-mounted power tools and the like -*
U.S. Patent 5957649 - 9/28/1999
-) *Miter saw blade guards -*
U.S. Patent 5950514 - 9/14/1999
-) *Radial arm saw blade guard -*
U.S. Patent 5918522 - 7/6/1999

PROFESSIONAL AFFILIATIONS / AWARDS

❖ AWARDS & SERVICE

ALPHA SIGMA MU - Materials Science and Engineering Honorary Society
ASM - American Society for Materials - ASM Cincinnati Chapter - 1978 Stenger Award
ASSE - American Society of Safety Engineers - Tallahassee Section President, 1995 – 1997
NFPA - National Fire Protection Association - member of NFPA 1192/1194 Technical Committees on Recreational Vehicles and Recreational Vehicle Parks and Campgrounds, 2013 – 2024
SAE - Society of Automotive Engineers -*Motor Vehicle Fire Investigation Task Force*, Task Group of the National Fire Protection Association (NFPA) 921 Technical Committee, 2005 – 2020

❖ CURRENT MEMBERSHIPS

ASME - American Society of Mechanical Engineers
FWEC - Fort Wayne Engineer's Club
NAFI - National Association of Fire Investigators - Life Member
NFPA - National Fire Protection Association
SAE - Society of Automotive Engineers
TMC - Technology & Maintenance Council - American Trucking Association

❖ PRIOR MEMBERSHIPS

ASM - American Society for Materials
ASSE - American Society of Safety Engineers
ISPE - Indiana Society of Professional Engineers
NSPE - National Society of Professional Engineers
TMS - The Minerals, Metals, and Materials Society

PRESENTATIONS & TRAINING SEMINARS

Fire, Fire Everywhere: How Do You Investigate Truck Fires? Cargo Convos seminar series, hosted by Maloof & Browne LLC, 2023, Online Seminar

Vehicle Fire Investigation Training, United Parcel Service, Canadian regional managers 2022, Online

Vehicle Fire Investigation Training, United Parcel Service, US regional managers, 2022, Hodgkins, IL

Case Study with a Fire Origin and Fire Cause Remotely Located from the Root Cause of the Failure in a Commercial Vehicle, - D.R. Stahl, 11th International Symposium on Fire Investigation Science and Technology (ISFI), 2018, Itasca, IL

Vehicle and Equipment Failure Analysis - Fire and Forensics, Fort Wayne Independent Insurance Adjusters Association, 2012, Fort Wayne, IN

Applicability and Limitations of Arc Mapping in Vehicle and Equipment Fire Investigation, International Symposium on Fire Investigation Science & Technology (ISFI), 2012, University of Maryland, College Park, MD

Truck & Bus Fires; Origin & Cause in Diesel, Alternate Fuel, and Hybrid Vehicles, 13th Annual Indiana Fire Investigation Conference - Indiana Chapter of the International Association of Arson Investigators (IAAI), 2012, Indianapolis, IN

Technology in Accident Reconstruction, Tallahassee Claims Association, 1997, Tallahassee, FL

Uniaxial and Torsional Low Cycle Fatigue of Waspaloy at 24 and 649C, ASM / TMS - AIME Winter Conference, 1988, Cincinnati, OH

Uniaxial and Torsional Low Cycle Fatigue of ODS MA754 at Ambient and Elevated Temperatures, ASM / TMS-AIME (ASM International / The Minerals, Metals & Materials Society of the American Institute of Mining, Metallurgical, and Petroleum Engineers) Annual Conference, 1987, Phoenix, AZ

The Effect of Temperature, Microstructure, and Stress State on the Low Cycle Fatigue Behavior of Nickel Base Alloys, ASTM (American Society for Testing and Materials) Symposium on Low Cycle Fatigue - Directions for the Future, 1985, Lake George, NY

PUBLICATIONS

Case Study with a Fire Origin and Fire Cause Remotely Located from the Root Cause of the Failure in a Commercial Vehicle, - D.R. Stahl, and K.D. Parrott, Proceeding's 11th International Symposium on Fire Investigation Science and Technology (ISFI), 2018

A Case Study on the Use of Reverse FMEA (rFMEA) and the Scientific Method in a Fire Cause Determination, - K. D. Parrott and D.R. Stahl, Fourth International Conference on Fires in Vehicles (FIVE), 2016, Baltimore, MD. SP Fire Research, SP REPORT, 2016:75 ISBN 978-91-88349-64-4 ISSN 0284-5172 2016, Baltimore, MD

Electrical Arcs and Sparks: A Literature Review of Definitions and Their Implications in the Analysis of 12 Volt Direct Current Electrical System Fires, - K. D. Parrott and D. R. Stahl, International Symposium on Fire Investigation Science & Technology (ISFI), 2014

Case Studies of Parking Brake Fires in Commercial Vehicles - K. D. Parrott and D.R. Stahl, SAE Technical Paper 2013-01-0207, 2013, doi:10.4271/2013-01-0207

Parking Brake Fires in Commercial Vehicles - K. D. Parrott and D. R. Stahl, Second International Conference on Fires in Vehicles (FIVE), 2012, Chicago, IL

Applicability and Limitations of Arc Mapping in Vehicle and Equipment Fire Investigation - K. D. Parrott and D. R. Stahl, pp. 617-623 in IFSI 2012 - Proc. 5th International Symposium on Fire Investigation Science & Technology (ISFI), 2012, University of Maryland, College Park, MD

Applying Advanced FMEA Methods to Vehicle Fire Cause Determinations - K. D. Parrott, P. J. Mattes and D. R. Stahl, ASME. ASME International Mechanical Engineering Congress and Exposition, Volume 9: Transportation Systems; Safety Engineering, Risk Analysis and Reliability Methods; Applied Stochastic Optimization, Uncertainty and Probability: 621-631. doi:10.1115/IMECE2011-65159, 2011

Effect of Temperature, Microstructure, and Stress State on the Low Cycle Fatigue Behavior of Waspaloy D. R. Stahl, M. Mirdamadi, S.Y. Zamrik and S. D. Antolovich, American Society of Testing and Materials, Special Technical Publication 942, 1988

Effects of Nonproportional Cyclic Loading Histories on Type 304 Stainless Steel - D. R. Stahl, D. L. McDowell, R. Kelly Payne, and S. D. Antolovich, Proceedings of the French Metallurgical Society, 1985

Biaxial Path Dependence of Deformation Substructure of Type 304 Stainless Steel - D. L. McDowell, D. R. Stahl, S. R. Stock, and S. D. Antolovich, Metallurgical Transactions, Volume 19A, Number 5, PP 1277, May 1988. doi.org/10.1007/BF02662589

CONFERENCES & SEMINARS

TMC Spring Meeting & Transportation Technology Exhibition - Technology & Maintenance Council's Spring Meeting, Orange County Convention Center, 2023, Orlando, FL

TMC Fall Meeting & Transportation Technology Exhibition - Technology & Maintenance Council's Fall Meeting, Cleveland Convention Center, 2022, Cleveland, OH

TMC Fall Meeting & Transportation Technology Exhibition - Technology & Maintenance Council's Fall Meeting, Cleveland Convention Center, 2021, Cleveland, OH

TMC Annual Meeting- Technology & Maintenance Council's Virtual Annual Meeting, 2021 International Conference on Fires in Vehicles – FIVE 2020, Rise Research Institutes of Sweden, Virtual Event, 2020

TMC Fall Meeting- Technology & Maintenance Council's Fall Meeting, Cisco Webex and TMC connect Environments Virtual Event, 2020

TMC Annual Meeting & Transportation Technology Exhibition- Technology & Maintenance Council's Annual Meeting, Georgia World Congress Center, 2020, Atlanta, GA

TMC Annual Meeting & Transportation Technology Exhibition- Technology & Maintenance Council's Annual Meeting, Georgia World Congress Center, 2019, Atlanta, GA

TMC Annual Meeting & Transportation Technology Exhibition- Technology & Maintenance Council's Annual Meeting, Georgia World Congress Center, 2018, Atlanta, GA

The International Construction & Utility Equipment Exposition (ICUEE)- Kentucky Exposition Center, 2017, Louisville, KY

TMC Annual Meeting & Transportation Technology Exhibition - Technology & Maintenance Council's Annual Meeting, Nashville Music Center, 2017, Nashville, TN

TMC Annual Meeting & Transportation Technology Exhibition - Technology & Maintenance Council's Annual Meeting, Nashville Music Center, 2016, Nashville, TN

TMC Annual Meeting & Transportation Technology Exhibition - Technology & Maintenance Council's Annual Meeting, Nashville Music Center, 2015, Nashville, TN

TMC Annual Meeting & Transportation Technology Exhibition - Technology & Maintenance Council's Annual Meeting, Nashville Music Center, 2014, Nashville, TN

TMC Fall Meeting & National Technician Skills Competition - Technology & Maintenance Council's Fall Meeting, Walt Disney's Swan & Dolphin Resort, 2014, Orlando, FL

Fire Investigator Scene Safety - International Association of Fire Investigators, 2014, Sarasota, FL

The International Construction & Utility Equipment Exposition (ICUEE)- Kentucky Exposition Center, 2013, Louisville, KY

TMC Fall Meeting & National Technician Skills Competition - Technology & Maintenance Council's Fall Meeting, Lawrence Convention Center, 2013, Pittsburgh, PA

Product Safety & Compliance and Liability Seminar – Association of Equipment Manufacturers, 2013, Orlando, FL

International Symposium on Fire Investigation Science & Technology (ISFI), 2012, University of Maryland

13th Annual Indiana Fire Investigation Conference - Indiana Chapter of the International Association of Arson Investigators, 2012, Indianapolis, IN

Diesel Emissions and Control Technologies - SAE Professional Engineering Education Seminar, 2011, Troy, MI

TMC Fall Meeting and National Technician Skills Competition - Technology & Maintenance Council's Fall Meeting, Raleigh Convention Center, 2011, Raleigh, NC

National Seminar on Fire Analysis Litigation - National Association of Fire Investigators/National Fire Protection Association, 2009, Sarasota, FL

Federal Motor Carrier Safety Regulations - J.J. Keller and Associates, 2009, Fort Wayne, IN

Fundamentals of Automotive Fuel Delivery Systems - SAE Professional Engineering Education Seminar, 2008, Detroit, MI

Florida Board of Professional Engineers Board Hearings - Continuing Education Attendance, 2008, Jacksonville, FL

Engineering Mechanics of Heavy-Duty Truck Systems - University of Michigan, UMTRI, 2007, Ann Arbor, MI

Vehicle Air Brake Systems & Components - Bendix Commercial Vehicle Systems, 2006, Huntington, IN

Global 8-D Problem Solving, Ford Technical Education Program, 2005, Fort Wayne, IN

Design Failure Mode & Effects Analysis Workshop - Eastern Michigan University, 2005, Fort Wayne, IN

Vehicle Fire, Arson, and Explosion Investigation Training Program - National Association of Fire Investigators, Eastern Kentucky University, 2003, Richmond, KY

Tire and Wheel Safety Issues - Society of Automotive Engineers, Professional Engineering Education Seminar, 2002, Indianapolis, IN

Commercial Vehicle Inspection Familiarization - Commercial Vehicle Safety Alliance, 2002, Fort Wayne, IN

Automotive Glazing Materials - Society of Automotive Engineers, Professional Engineering Education Seminar, 2000, Troy, MI

National Advanced Fire, Arson, and Explosion Investigation Science and Technology Program – National Association of Fire Investigators 1 National Fire Protection Association, Eastern Kentucky University, 2000, Richmond, KY

Braking Performance of Heavy Commercial Vehicles - Radlinski and Associates, 1999, Fort Wayne, IN

Forty-first Stapp Car Crash Conference-SAE, 1997, Orlando, FL

Injuries, Anatomy, Biomechanics & Federal Regulations - SAE Professional Engineering Education Seminar, 1997, San Diego, CA

Pedestrian Crash and Causation - Florida Department of Transportation, 1995, Tallahassee, FL

Traffic Accident Reconstruction - Northwestern University Traffic Institute, 1995, Evanston, IL

Defensive Driving Techniques - North Florida Safety Council, 1995, Tallahassee, FL

SELECTIVE COURSE WORK

Safety in Design - SunCam, eLearning, 2024
Manual on Uniform Traffic Control Devices: Traffic Signals - SunCam, eLearning, 2024
Manual on Uniform Traffic Control Devices: Signs - SunCam, eLearning, 2024
Fire Protection - SunCam, eLearning, 2024
Manual on Uniform Traffic Control Devices: Pavement Markings - SunCam, eLearning, 2024
Forensic Engineering - Case Histories: Corrosion Failure Analyses - SunCam, eLearning, 2024
Engineering Probability and Statistics I, II - SunCam, eLearning, 2022
Analysis and Design of Bolted Connections - SunCam, eLearning, 2022
Railroads - An Introduction to Fundamental Components - SunCam, eLearning, 2022
Forensic Engineering - Four Classes of Metals / Mechanical Failures - SunCam, eLearning, 2022
Forensic Engineering - Case Histories: Metals and Mechanical Failure Analysis - SunCam, eLearning, 2022
Structures - Bending Strength Of Materials - SunCam, eLearning, 2020
Structures - Axial Strength of Materials - SunCam, eLearning, 2020
Structures - Statics Fundamentals and Applications - SunCam, eLearning, 2020
Construction Site Safety - EZ PDH, eLearning, 2020
Welded Connections - Analysis and Design - SunCam, eLearning, 2018
Welded Connections - Basic Concepts and Weld Symbols - SunCam, eLearning, 2018
Corrosion Control and Tactics - SunCam, eLearning, 2018
Welding Technology - SunCam, eLearning, 2018
Structural Concepts for Non-Structural Engineers - SunCam, eLearning, 2018
Automotive Bearing Technology - SunCam, eLearning, 2016
Forensic Analysis Involving Fugitive Natural Gas and Propane - SunCam, eLearning, 2016
Introduction to Gear Technology - SunCam, eLearning, 2016
Future Highways – Automated Vehicles - SunCam, eLearning, 2016
Electrical Engineering Fundamentals for Non-Electrical Engineers - SunCam, eLearning, 2016
Electrical Components - What They Are, How They Work, What They Look Like – PDH Engineer online, 2014
Fuses and Circuit Breakers - PDH Engineer, eLearning, 2014
Variable Frequency Drives - PDH Engineer, eLearning, 2014
Basics of Fire Protection - Engineer Educators, eLearning, 2011
Roller Bearing Technology - SunCam, eLearning, 2011
Bone Mechanics - University of Florida FEEDS Program, 1997, Tallahassee, FL