

## EDUCATION

- 2013 **Masters of Engineering, Mechanical**  
University of Idaho, Moscow, Idaho
- Robotics, Acoustics, Turbomachinery, Combustion Engine Systems, Human Factors in Engineering Design, Mechanical Engineering Analysis, Continuum Mechanics
- 2008 **Bachelor of Science, Mechanical Engineering**  
Gonzaga University, Spokane, Washington

## EXPERIENCE

- September 2016  
to Present **Engineering Design & Testing Corp.**  
**Seattle-Tacoma, Washington**
- Consulting Engineer*  
Root cause analysis of incidents involving machinery, mechanical systems, and plumbing systems in residential, commercial, industrial, and maritime applications. Analysis of heating, ventilation, and air condition (HVAC) systems and their associated control systems. Cost estimation of damage to mechanical systems. Consultations including failure analysis, mechanical design analysis, construction evaluation, and damage assessment. Review and preparation of estimates for damaged mechanical equipment. Residential, municipal, and commercial water system investigations. Vehicle investigations. Gearbox investigations. Hydroelectric dam investigations. Residential, commercial, and industrial origin and cause fire investigations, including food processing equipment, heavy equipment, and vehicles.
- June 2008  
to September 2016 **Puget Sound Naval Shipyard**  
**Bremerton, Washington**
- Senior Nuclear Test Engineer*  
Inspections, repairs, upgrades, and testing of nuclear power plant equipment and support systems onboard U.S. Navy submarine/aircraft carrier platforms. Systems included those used for heat generation, reactor cooling, auxiliary component cooling, pneumatic operation, hydraulic operation, steam, and electrical distribution. Experienced with heat exchangers, pumps, piping, steam turbines, valves, sensors, control systems, power distribution systems, and integrated reactor plant operations. Supervised reactor plant: startups, operation, and shutdowns. Performed hydrostatic testing, equipment operational testing, and reactor plant control certification testing. Led investigations and root cause analysis of electrical and mechanical problems. Trained submarine/aircraft carrier's crew on equipment upgrades, evolutions, and testing. Reactor plant casualty response training. Responsible for the safety of the reactor plant, its crew, the shipyard personnel onboard, and the surrounding local population. Evaluated the use/implementation

of equipment operation and maintenance procedures by a submarine's crew. Performed personnel and equipment safety audits that resulted in the prevention of loss.

## **PROFESSIONAL ORGANIZATIONS**

American Society of Mechanical Engineers (ASME)

ASM International

National Fire Protection Association (NFPA)

National Association of Fire Investigators (NAFI)

Puget Sound Marine Claims Association (PSMCA)

## **REGISTRATIONS and CERTIFICATIONS**

Registered Professional Engineer in Washington (#51716)

Registered Professional Engineer in Oregon (#92172PE)

Registered Professional Engineer in Idaho (#P-17193)

Registered Professional Engineer in Montana (#PEL-PE-LIC-48888)

Registered Professional Engineer in Nevada (#24809)

Registered Professional Engineer in Hawaii (#18378)

National Council of Examiners for Engineering and Surveying (#14-820-38)

Certified Fire and Explosion Investigator (CFEI #21963-12725v)

Certified Vehicle Fire Investigator (CVFI #21963-12725v)

S6G (Los Angeles Class) Nuclear Reactor Plant Shift Test Engineer (2009-2013)

S6W (Seawolf Class) Nuclear Reactor Plant Shift Test Engineer (2011-2016)

SolidWorks Certified Professional (2007-2008)

SolidWorks Certified Technician (2007-2008)

## **PUBLICATIONS**

2018 "Industrial Plant Process Controls," presented at the Engineering Design & Testing Annual Meeting.

2018 "Unexpected Failures and Recoveries," presented at the National Association of Independent Insurance Adjusters Western Regional Conference in Portland, Oregon.

2018 "Determination of Cause: Evaluation of Losses in a Marine Environment," Presented at the Puget Sound Marine Claims Association April meeting in Seattle, Washington.

2018 "User-related Failures: Ferry Loss of Propulsion," presented at the Materials Science & Technology Conference in Columbus, Ohio.

2019 "Vehicle Fires," presented at the Engineering Design & Testing Annual Meeting.

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## PRESENTATIONS

Review of Progress in Quantitative Nondestructive Evaluation, Brunswick, ME, 1991

American Society for Nondestructive Testing, 1992 Fall Conference, Chicago, IL

## CONTINUING EDUCATION

- 2008 LEAN Manufacturing, Puget Sound Naval Shipyard
- 2008 Radiation/Contamination Worker, Puget Sound Naval Shipyard
- 2008 Confined Space Gas Free Entry, Puget Sound Naval Shipyard
- 2009 Hydrogen Gas Monitoring, Puget Sound Naval Shipyard
- 2009 S6G (Los Angeles Class) Nuclear Reactor Plant Design/Operation, Puget Sound Naval Shipyard
- 2009 Nuclear Reactor Plant Materials, Physics, Chemistry, and Radiological Control, Puget Sound Naval Shipyard
- 2009 Electrical Safe Work Practices, Puget Sound Naval Shipyard
- 2010 Adult and Pediatric First Aid/CPR/AED, American Red Cross
- 2011 S6W (Seawolf Class) Nuclear Reactor Plant Design/Operation, Puget Sound Naval Shipyard
- 2013 S6G (Los Angeles Class) Nuclear Reactor Plant Design/Operation – Qualification Maintenance Puget Sound Naval Shipyard
- 2013 S6W (Seawolf Class) Type II Nuclear Reactor Plant Control Design/Operation, Puget Sound Naval Shipyard
- 2015 S6W (Seawolf Class) Nuclear Reactor Plant Design/Operation – Qualification Maintenance Puget Sound Naval Shipyard
- 2016 3D Printing Basics, Pierce County Library
- 2016 OSHA Permit-Required Confined Space Entry, eTraining Inc.
- 2016 Adult and Pediatric First Aid/CPR/AED, American Red Cross
- 2017 Determination of Cause, Engineering Design & Testing
- 2017 Maritime Casualty, Engineering Design & Testing
- 2017 Ballast Water Management, Engineering Design & Testing
- 2017 HVAC Systems & Managing Power, Engineering Design & Testing
- 2017 A Review of Typical Motorcycle-Vehicle Collision Scenarios, Engineering Design & Testing
- 2017 National Fire, Arson and Explosion Investigation Training Program, NAFI
- 2017 Principles of Failure Analysis, ASM International
- 2018 Industrial Plant Process Controls, Engineer Design & Testing
- 2018 Brewing, Fermentation, and Common Problems in the Brewing Process, Engineer Design & Testing
- 2018 Metallurgy for the Non-Metallurgist and Its Use in Root Cause/Damage Assessments, Engineer Design & Testing
- 2018 Basic Fatigue Analysis, Engineer Design & Testing

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- 2018 Investigation of Gas and Electric Appliance Fires, Fire Findings LLC
  - 2018 Vehicle Fire Arson & Explosion Investigation Science & Technology Seminar, NAFI
  - 2018 User-related Failures – Transportation, Annual Material Science & Technology Conference
  - 2018 Manufacturing-Related Failures – Welding/Joining Failures, Annual Material Science & Technology Conference
  - 2018 Manufacturing-Related Failures – Casting Failures, Annual Material Science & Technology Conference
  - 2019 Vehicle Fires, Engineering Design & Testing
  - 2019 Basics of Insulation Resistance Testing, Engineering Design & Testing
  - 2019 Construction Engineering: A Focus on the Use of Cranes in Construction Operation, Engineering Design & Testing
  - 2019 Quantitative Measurement of LP and Natural Gas Systems, Engineering Design & Testing
  - 2019 Subchapter M, Engineering Design & Testing