



WARREN

THE WARREN GROUP, INC. FORENSIC ENGINEERS & CONSULTANTS
7805 ST. ANDREWS ROAD | PO BOX 1608 | IRMO, SOUTH CAROLINA 29063
TEL 803.732.6600 FAX 803.732.7576 ↓↓ WARRENF0RENSICS.COM

Aron M. Olson, P.E.

Mechanical Engineer

Codes & Standards Research

Failure Analysis

Industrial Accident Reconstruction

Machine Design

Machine Safeguarding

Machinery and Equipment Analysis

Products Liability

Three-Dimensional Scan Imaging

EDUCATION

- | | |
|-------------|--|
| 2007 | Bachelor of Science in Mechanical Engineering
University of South Carolina |
| 2001 | Bachelor of Science in Packaging Science
Clemson University |
-

EXPERIENCE

- | | |
|-------------------------------------|---|
| February 2014
to present | The Warren Group, Inc., Columbia, South Carolina. Consultant, P.E., providing analysis of machinery and equipment incidents and failures related to property loss and unintentional injury involving mechanical engineering. Mechanical engineering analysis of machines, equipment and facilities with regard to safety. |
|-------------------------------------|---|

Safety Design Analysis (both personal injury and property damage)

Industrial accident reconstruction, machine controls, machinery and equipment failures, machine safeguarding, OSHA compliance, standards and codes compliance, maintenance, products liability, product failures, failure analysis, consumer products.

- Evaluation of machine guarding
- Hazard analysis of machinery and equipment
- Create alternative designs.

Computer Aided Design, Finite Element Analysis and Three-Dimensional Imaging

- Create models, assemblies, and drawings of existing and alternative machine designs using SolidWorks 3D modeling software.
- Analyze stress and strain in new and existing machine designs using finite element analysis software.
- Use FARO 3D scanning technology to capture point cloud data to image things like machinery, fire scenes, vehicle accident scenes, structural collapses, and building interiors and exteriors.
- Computer-aided processing of collected scan data.

EXPERIENCE, Continued

2013 to 2014 Dogwood Company, LLC, Newberry, South Carolina, Co-Owner in charge of operations.

Buy, Renovate and Sell Real Estate

- Hands-on experience including electrical wiring, plumbing, sheetrock installation and finishing, roof inspection, and painting.
- Assess safety and code compliance of existing real estate property.
- Interact with local code officials and licensed contractors to bring older properties into compliance with applicable codes and standards.

Renovate Properties

- Evaluate hazards of existing properties, including ingress and egress requirements, electrical wiring, gas lines, plumbing, and structural soundness.
- Interact with local government and licensed contractors to bring older properties into compliance with applicable codes and standards.

2012 to 2013 Professional Lawn Care Services, Columbia, South Carolina, Owner.

Exterior Home Maintenance

- Mow lawns and maintain landscapes. Identify customer needs and solve their problems.
- Evaluate, buy, sell, and repair lawn maintenance machinery.

2008 to 2012 Rhythmlink International, LLC, Columbia, South Carolina, Product Engineer, evaluating and designing medical products for the neurodiagnostic field.

Create New Products and Manufacturing Processes

- Oversee the design process from inception to start of manufacture. Identify customer needs within the neurodiagnostic community. Evaluate requests for quotation regarding customized products or packaging. Create new electrode designs using CAD tools. Create and test prototypes. Document all aspects of the design process.
- Integrate new product lines into existing overseas production facilities. Create and document new manufacturing processes. Analyze and improve existing processes.
- Reduce overall cost by optimizing new and existing shipping packaging materials and pallet loading.

EXPERIENCE, Continued

Evaluate and Mitigate Hazards

- Evaluate hazards of new and existing electrode designs, including hazards related to magnetic resonance imaging, electrical shock hazards, thermal burns, infection, trauma, and chemical injury.
- Develop improved products to control these hazards, especially those related to magnetic resonance imaging.
- Ensure that designs and manufacturing processes comply with applicable laws and standards related to design and manufacture of medical electrodes, including Food and Drug Administration regulations.

2007 to 2008

Agilis Group, Inc., Camden, South Carolina, Design Engineer, creating designs for gas turbine engine components and performing finite element analysis.

Optimize designs for durability and energy efficiency

- Create accurate CAD models of compressor and turbine blades, rotor assemblies, and structural components for large gas turbines used for electrical power generation, with focus on durability and energy efficiency.
- Evaluate others' models for overall design quality and suitability for finite element analysis

Finite Element Analysis

- Perform and interpret finite element analysis on gas turbine components. Evaluate the results of others' analysis. Recommend design changes to improve component performance.

2005 to 2007

RhythmLink International, LLC. Columbia, South Carolina, Engineering Intern.

Design and build machinery

- Create customized machinery for the manufacture of medical electrodes.
- Evaluate the hazards of such machinery and include design elements such as lock-out/tag-out features, emergency stop switches and lockout features.

Design packaging systems

- Create primary and secondary packaging for medical electrodes.
- Interpret Food and Drug Administration regulations and other relevant standards to design compliant medical device labeling.

EXPERIENCE, Continued

- 2003 to 2005** University of South Carolina Department of Vehicle Management and Parking, Columbia, South Carolina, Assistant Transportation Coordinator.
- Schedule and Lead Bus Drivers**
- Schedule buses and drivers on two shifts and on field trips. Interact with riders, customers, repair personnel, and law enforcement officers. Respond to automobile collisions involving buses. Resolve personnel conflicts.
- Recruit and Train Bus Drivers**
- Conduct interviews and evaluate candidates. Teach new employees how to drive buses and perform required pre-trip inspections, assist them in earning a class B commercial driver's license.
 - Control the hazards inherent in operating buses by promoting a culture of safety within the organization. Ensure that new drivers understand the importance of regular mechanical inspections and cautious operation.
- 2002 to 2003** University of South Carolina Department of Vehicle Management and Parking, Columbia, South Carolina, Bus Driver.
- Drive Buses**
- Operate type C and D buses in congested urban areas. Perform pre-trip inspections. Identify possible mechanical problems and report to repair personnel. Earned class B commercial driver's license.

PROFESSIONAL ORGANIZATIONS

American Society of Mechanical Engineers
 American Society of Safety Engineers
 ASTM International F13 Committee on Pedestrian/Walkway Safety and Footwear

REGISTRATIONS

Professional Engineer in South Carolina (#33594)

CERTIFICATIONS

Class B Commercial Driver's License, Passenger Endorsement, Airbrake Certified
 Class M Motorcycle Driver's License

CONTINUING EDUCATION

May 16, 2016

“SOLIDWORKS Flow Simulation” presented by Christopher R. Hoyler of TPM, Charlotte, North Carolina

January 19-22, 2016

Four-day course on three-dimensional scanning technique and registration with FARO technology taught by Dustin Forensics

August 6, 2015

Training in “Warren’s Written Fall Protection Program & Policies,” by Steve Hunt, CPCU, ARM, Fall Protection Manager, Irmo, South Carolina

“Fall Protection - 29 CFR 1926, Subpart M (1926.500- 1926.503) Training,” Course designed by: Prosafe Solutions, Inc., conducted by Steve Hunt, CPCU, ARM, Fall Protection Manager, Irmo, South Carolina

- Part I – Guardrails & Personal Fall Arrest Systems
- Part II – Horizontal Lifelines, Safety Nets, Roofing Procedures & Training

July 13, 2015

“Fall Protection 101 Training” presented by Kent Earle of Capital Safety, Irmo, South Carolina

May 16, 2015

FORCON Walkway Auditor Training Course

March, 2014

Completed CXLT Certification Program provided by Excel Tribometers, LLC

Spring 2014

OSHAcademy online training course 726 “Introduction to Machine Guarding

Spring 2014

OSHAcademy online training course 710 “Energy Control Program – LOTO

Spring, 2011

Motorcycle Safety Foundation Basic Rider Course

PATENTS

“Electronic Probe Head,” US Patent # D644,738S