# Steve Dohrman, PE

# Objective

I have a long and successful mechanical engineering career and I am looking for a company where I can continue to develop my growth as a member of the design staff.

My career has thus far included: advanced design work in the maritime, aviation, agriculture, mining, petroleum, additive manufacturing, optical and healthcare industries; the conception, design and layout of mechanical parts, hands-on fabrication and extensive project management. I have detailed knowledge of advanced computer design systems and modeling utilized in this type of work that also includes finite element analysis, device testing and implementation with complete systems integration. I also have a great deal of familiarity with aerospace industry and government standards. I am a long-term employee prospect looking for a progressive role with a local employer.

Work experience

October 2020 - Present

Gamma Scientific

San Diego, CA

# **Systems Engineer**

- Project manager, mechanical designer and systems integrator for high brightness and tunable scientific light sources used in printed circuit board quality control machinery.
- Electrical control system design and layout for numerous automated visual inspection assemblies
- Motion control layout and integration of multi-axis near eye display measurement systems

October 2019 – October 2020

Formalloy

Spring Valley, CA

# Senior Mechanical Design Engineer

- Mechanical design and integration of 5 axis motion stages supporting Direct Energy Deposition printing systems.
- Project management for assembly and manufacturing of 3D printing machines and supporting equipment.
- Structural and vibration analysis for supporting components of motion system.
- Prototype fabrication and implementation of new designs.
- Documentation revision for all the company's legacy designs, drawings, manufacturing instructions, processes, test plans and standards

October 2018 - October 2019

Eddy Pump

El Cajon, CA

# Senior Mechanical Design Engineer

- Project management for on water dredging systems
- Pump volute designs for improved performance and more efficient manufacturing processes
- Hydraulic power unit design for 700 horsepower hydraulic drive and control system
- Documentation revision for all of the company's legacy designs, drawings, manufacturing instructions, processes, test plans and standards

November 2015 – October 2018

D2 Realization

San Diego, CA

#### **Senior Mechanical Design Engineer**

 Perform engineering for hydroponic agricultural system to include pump and plumbing loads, structural frame loads and layout for overhead conveyor, selection of motion control components and integration with control system

- Mechanical design, integration, testing and implementation of automated laser welding station
- Industrial control network design and programming for autonomous agriculture system with human interface
- Industrial robot programing and integration with tooling, work holding and pneumatic fixtures
- Project management for component manufacturing and installation

June 2011 - October 2015

Remote Ocean Systems

San Diego, CA

### **Senior Mechanical Engineer**

- Hired by an industry leader in the design of high-tech equipment and systems for subsea, oceanographic, industrial, commercial and military environments
- Perform as a high-level designer and project manager with a focus on submersibles and components
- Act as point-of-contact for all lights, cameras & pan and tilt units
- Duties include complete life-cycle Project Management for many products and components
- Act as a mechanical liaison for manufacturing and sales based on successful business communication skills
- Handle new product specifications, development and mechanical design of assemblies and components
- Utilize Glass and Sapphire for pressure vessel design work

January 2010 - June 2011

General Atomics

Poway, CA

# **Mechanical Engineer**

- Responsible for the design and implementation of payload components and assemblies mounted on unmanned aircraft
- Tasked with engineering change control, aircraft systems integration and mechanical assembly design using Pro/Engineer
- Did prototype development, release to manufacturing and managed data flow both up and downstream

December 2006 - December 2009

SeaBotix, Inc.

San Diego, CA

#### **Mechanical Engineer**

- Hired by world-leading manufacturer of small ROV systems to design, manufacture and produce mechanical and electro-mechanical components and assemblies for use in remotely operated submersible vehicles
- Managed numerous projects to successful completion building and integrating new devices and components
- Performed finite element analysis, pressure vessel analysis, engineering calculations and complete system integration

February 2004- December 2006

OxyHeal Health Group

San Diego, CA

#### **Project Engineer**

- Primarily responsible for the design, manufacture and installation of welded hyperbaric chambers
- Contributed knowledge of pressure hull analysis, correct manufacturing process and standards, detailed construction project management and end-user interface design
- Direct engineering management, successful design of new and reengineered pressure hulls and project completion utilizing SolidWorks and AutoCAD were notable achievements
- Utilized: ASME, PVHO, LSC, FDA, & NFPA codes for analysis and implementation to get chambers certified for human occupancy

November 1999 – May 2003

Mechanical Engineering Machine Shop

Carbondale, IL

#### **Machinist Apprentice**

- Research Equipment Design
- Manufacturing using mill, lathe, welder and other machine shop tools.

April 1994 – April 1998

**United States Marine Corps** 

# **Small Arms Technician**

- Directed the security and maintenance of assigned weapons and ammunition.
- Honorable Discharge

#### **Education**

Southern Illinois University

B.S. Degree

Mechanical Engineering

2003

Notable course work:

- Independent Study: Design and Manufacturing of a Formula SAE Frame and Suspension
- Senior Design: Implementation of Airfoils to enhance dynamic performance of a Formula SAE racecar
- Mechanism Design
- Finite Element Analysis
- Applied Fluid Dynamics

University of California San Diego – Extension

Embedded Engineering

2021

Embedded Systems Design

# **Certifications &**

**Skill Sets** 

- Professional Engineer License
- Lean Six Sigma Yellow Belt
- Leadership Skills Course
- Supervisory Skills Course
- Mechanism Design
- Hydraulic Design
- Pneumatic Design
- Solid Modeling (SolidWorks, Pro/E, Inventor)
- Finite Element Analysis
- GD&T
- **Programming** (C/C++)
- Automation System Design & Integration (PLC, Sensing, Motor controls, GUI)
- Fabrication: Welding, Machining on mill & lathe, shop tools

# Interests

Photography, Electronics, Cooking, Biking, Scuba Diving, Sailing, Backpacking, Snowboarding