

Roger M. Johnson
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OBJECTIVE: To be involved with a full time, design and development, mechanical engineering project for technical applications. A **Senior Mechanical Design Engineer** (or equivalent) position is sought.

EDUCATION: Oregon State University Portland State University Passed the Fundamentals of Engineering exam
Corvallis, Oregon 97331 Portland, Oregon 97207 Engineering in training (**EIT**)
September 1985 - March 1989 March 1989 - June 1991
Engineering/Physics Bachelor of Science: **Mechanical Engineering**

TECHNICAL CAPABILITIES: Fields of specialty: **Computer Aided Design/3d Modeling/Engineering/Manufacturing.** Ten years experience. Trained in the *SHAININ* Statistical Engineering problem solving methodology, Statistical Process Control (SPC).

Computer: Systems: DOS, WindowsXP/2000/Server, Unix Languages: HTML, FORTRAN, BASIC
Software packages: Microsoft Office, Exchange Server, Outlook, MathCad, MatLab, Visio, Agile, Adobe Photoshop
Computer Aided Design: **AutoCAD** (6 yrs) **Mechanical Desktop** (4 yrs) **Inventor** (2 yrs) **SOLIDWORKS** (5yrs)
Finite Elements Analysis: **COSMOS/WORKS** (3yrs)

Lab/Mfg: CAD/CAM/CNC integrated numerical control machining and flat layout for plastic and stainless steel parts. Clean room and machine shop lab experience using tensile/compression testers, oscilloscopes, multimeters, programmable thermal data acquisition systems, milling machines. Extensive experience with hi-purity plastic and stainless steel construction, and plumbing techniques. Vacuum pump technology and leak detection experience.

Design: Knowledgeable in Design For Assembly (DFA) and Manufacture (DFM) practices. Quartz ware, stainless steel parts, and wafer storage, transport, handling, fixturing, and cleaning experience. System, process, plumbing, and assembly design experience. System manufacturing and project engineering experience. Fully automated wet process equipment, chemical holding tank, fire suppression, and spray systems design experience. Test and production part, adapter, platform, test bed, and fixture design experience. Knowledge of hi-purity parts cleaning processes and implementation. Knowledgeable of hi-purity plumbing techniques and processes for hazardous slurries and chemistries. Familiar with **SEMI S2** design specifications and FAB product chemistry **MSDS** information. My latest design project involved gases recycle technology for the solar industry.

Project Management: As a **Senior Mechanical Design Engineer** I have a background in semi-conductor tool design as well as experience working as a Project Leader with emphasis on taking specifications and creating prototypes, testing products or components and maintaining a project documentation file. I have been in charge of assigning and checking the work of several drafting and engineering personnel in creating complete system assembly documentation packages and build kits for various manufacturing departments. I have experience with design scheduling, bills of materials creation, parts ordering, new equipment/vendor research, the final check and review of bills of materials, warning label lists, final customer documentation, test procedures, and operations manuals for various systems. I am very experienced with working closely with vendors and I am knowledgeable of SEMI standards associated with tool design. I am experienced with managing a small manufacturing group.

EXPERIENCE: **Sr. Mechanical Design Engineer, BOC Edwards**, Santa Clara, California. My project engineering tasks include stainless steel tool support frames, cabinet shells, enclosures, bracketing, fixturing, and high purity / high pressure gas plumbing system designs. As a senior level engineer I work with the Corporate Technology group in creating new technology products and systems for proof on concept. I help create and deliver new technology design solutions that are commercially viable and designed for manufacturability. A requirement of my role at BOC is to be able to take a concept drawing and design and manufacture a prototype that is very close to the final product the first time around. I utilize my design engineering skills to take the concept from a fresh sheet of paper to a working prototype in a short period of time and utilize project engineering skills to lead the design and build of a prototype. I am responsible for managing several vendor relationships and key bills of materials in order to ensure that all of the correct materials arrive on time and pricing is correct. I am also responsible for maintaining a Technical Construction File for various developing projects. Currently, I am responsible for managing a small manufacturing group who are responsible for building multiple gas recycle systems for the solar industry, a total of four automated tools have been designed, manufactured, tested, and installed by my team.

- 4 years of mechanical design engineering experience, *SOLIDWORKS2006, COSMOSWORKS* experience.
- 2 years of Project Design experience on multiple projects.
- 1 year of managing a small manufacturing group.

2001 **Sr. Mechanical Design Engineer, CHEMWEST Systems**, Portland, Oregon. My project engineering tasks include frame, cabinet, plumbing, and chemical wash process design for components, tools, and systems that support the semiconductor and solar industries. Over the course of the last six months I have designed various quartz ware and stainless steel part

cleaning tools, fixtures, and systems. I have designed various wet process equipment for Intel, Fujitsu, Agilent, BP Solar, and SEH America. I use AutoCAD 2000i and Mechanical Desktop R5 as my primary design tools. I oversee engineering projects from the initial product conception and design, up to final test and install. I also support the sales and customer support personnel with technical issues.

- *Six months of mechanical design engineering experience, AutoCAD2000, Mechanical Desktop experience.*
- *Project Lead experience*

2000-01

Sr. Mechanical Design Engineer, Natural Data / Credence Systems, Beaverton, Oregon. Engineering tasks include part design, solid modeling, and detailing using Autodesk Inventor and Mechanical Desktop CAD software for electromechanical components and systems. Conceptualized and designed electromechanical interface components for automatic test equipment. Worked as a contractor at *CREDESCENCE Systems* for support of several mechanical design groups. Maintained compliance with ISO9000 design process. Responsible for generating engineering change orders, failure resolution reports, and bills of materials.

- *Six months of mechanical design engineering experience, Inventor, Mechanical Desktop experience.*

1999-2000

Sr. Mechanical Design Engineer, ACCU-FAB Systems Inc., Corvallis, Oregon 97330. Project engineering tasks include 3D-computer aided design, drafting, and manufacturing of various quartz ware and stainless steel part cleaning tools, fixtures, and systems. Wet process equipment designed to custom specifications for Intel, AMD, Mitsubishi Silicon, Micron, SEH America, and National Semiconductor. 3D-cad design experience using Mechanical Desktop. Held project design and manufacturing engineering responsibilities.

- *One year of mechanical design/ project engineering experience, AutoCAD, Mechanical Desktop experience.*
- *Project Engineering Lead experience*

1995-99

Mechanical Design/Project Engineer Lead, CHEMWEST Systems, 15845 SW 72nd Avenue Portland, Oregon 97224. Project engineering tasks include cabinet, plumbing, and process design. 3D-computer aided design, drafting, and manufacturing of various quartz ware and stainless steel part cleaning tools, fixtures, and systems. Wet process equipment designed to custom specifications for Intel, AMD, Mitsubishi Silicon, Micron, SEH America, and National Semiconductor with individual values ranging from \$2,000 to \$400,000. 3D-cad design experience using AutoCAD14. Held project lead, design, and manufacturing engineering responsibilities. Overlooked and responsible for the design tasks of three other design engineers and drafters.

- *Four years mechanical design/ project engineering experience, AutoCAD experience.*
- *Project Engineering Lead experience*

1994-95

Mechanical Engineering Technician, Cascade Technical Staffing, (for **Tektronix** Printing and Imaging Division), 10700 SW Beaverton-Hillsdale Hwy., Beaverton, Oregon 97005. Involved with testing and design of the Tektronix Phaser 340, phase change, thermal wax printer hardware, including; materials compatibility, thermal effects, prototype parts, and test bed modifications. Worked with print head designers on proto-type parts and assemblies. Designed parts, fixtures and assemblies using CADKEY. Responsible for writing assembly procedures and drawings.

- *One year mechanical design experience, Pro-Engineer, CADKEY experience.*

PERSONAL:

I have a strong attention to detail. I am able to understand the scope of a project and plan accordingly. I am very well organized in my professional life. I maintain the ability to think and troubleshoot creatively, having the ability to present ideas or examples of solutions in a meaningful way to others. I have very good communications skills, both oral, and written. Over the last several years I have kept and maintained Project Design Packages and Technical Construction Files. I am able to present final product documentation internally as well demonstrating equipment for customers. I am a true team player who gets along well with other co-workers and is able to excel in unsupervised roles as well as in group settings involving close team input and cooperation.

INTERESTS:

Wind surfing, snowboarding, mountain biking, volleyball, basketball, science fiction, PC gaming, and computer systems integration. I am very experienced with Microsoft **Windows 2000/XP** based personal computers, hardware, software, and peripherals. I have over ten years of experience as a PC systems integrator and three years of experience as a computer system network administrator.

ACTIVITIES:

2005

Completed the **Smith System Driver Safety Course** for BOC Edwards.

2002-2007

Landlord, 22361 SW Nottingham Court, Sherwood, Oregon 97140.

1991-2001

Member of the American Society of Mechanical Engineers (ASME).

1998-2002

Member of the Portland State Aerospace Society (PSAS). Group ME advisor.

1995-99

Completed the **Landmark Curriculum for Living**.

1995-97

Duplex Manager, 1360 NW Van Buren, Molalla, Oregon 97028.

1990-91

Design Team Manager, for Portland State University's Human Powered Vehicle design team.

REFERENCES: Available upon request.