

## MANUFACTURING ENGINEER

I am a Manufacturing Engineer with 7 years of medical device manufacturing experience who is mechanically inclined and highly creative, both in design and in problem solving. I consider multiple perspectives in designing, including ease of manufacturability, cost, and end usability. I have participated in each step of the engineering design process of Class II medical devices from prototyping, to 510(K) approval, and to manufacturing. I am proficient in achieving goals efficiently, effectively, and adaptively with little to no supervision due to my professional experience in a lean manufacturing environment.

## CAREER PROGRESSION

**Encision Inc.** - Boulder, CO

November 2011 to Present

### **Operations/Manufacturing Engineer (Promoted 2014)**

Encision Inc. is an EN ISO 13485 certified and FDA complaint medical device manufacturer that develops proprietary Active Electrode Monitoring technology, making laparoscopic surgery safer.

- ♦ Identify inefficiencies and develop mechanical solutions to optimize and streamline various manufacturing processes.
- ♦ Compose and implement manufacturing and maintenance procedures for operation of production machines and tools.
- ♦ Direct, train, and supervise machine shop personnel.
- ♦ Design and manufacture in-house test, production, and tooling fixtures utilizing the engineering design process and CAD.
- ♦ Operate, maintain, and troubleshoot anomalies of EDM wire, EDM drill machines, and CNC vertical mill.
- ♦ Create CAM tool paths and N/C programs for Fadal CNC vertical mill machine utilizing MasterCAM X8.
- ♦ Design and manufacture prototype and end use 3D models using Rapid Prototyping Fused Disposition Modeling for conceptual mechanical solutions and preliminary testing.
- ♦ Perform in-process inspection and first article inspection of products and components.
- ♦ Execute containment, failure analysis, disposition, and rework of Non-conforming materials and subassemblies.

### **R&D Engineering/Product Development Intern**

- ♦ Design tests methods and draft Process and Design Verification and Validation Protocols to test Class II medical devices to IEC 60601-1 standards per ASTM test methods.
- ♦ Conduct Verification and Validation testing, analyze variable and attribute test data, and compose V&V reports.
- ♦ Utilize MiniTab statistical analysis software to evaluate Confidence Interval and Reliability of variable data sets collected from V&V testing of Class II medical devices.
- ♦ Determining statistical process capability from test data utilizing MiniTab statistical software.
- ♦ Testing, soldering and inspection of Class 3 0603 SMT components to IPC standards.
- ♦ Perform and process Engineering Orders and Change Notice releases and revisions of product designs in SolidWorks PDMWorks.
- ♦ Conduct electrical testing and documentation of monopolar medical devices utilizing oscilloscopes, function generators, and high potential test systems.
- ♦ Perform tensile, compressive, and torque testing of product utilizing Instron electromechanical test stand.

## ADDITIONAL SKILLS and ACHIEVEMENTS

- |                                      |                            |  |
|--------------------------------------|----------------------------|--|
| ♦ Tektronix and Lecroy Oscilloscopes | ♦ Inspire 2015 software    | ♦ Cura 3D model slicing software       |
| ♦ GD&T                               | ♦ MiniTab software         | ♦ Ultimaker 2 FDM machine              |
| ♦ Statistical Process Control        | ♦ Solidworks 2017 software | ♦ PCBA SMT soldering and inspection    |
| ♦ N/C Programming                    | ♦ PDMWorks software        | ♦ Smartscope optical inspection system |
| ♦ Rapid Prototyping                  | ♦ MasterCAM X8 software    | ♦ EDM Wire and Drill machines          |

## EDUCATION

**Metropolitan State University  
of Denver, ABET Accredited  
Graduated 2018**

Denver, Colorado

Bachelor of Science in Mechanical Engineering with Concentration in Manufacturing. Awarded Additive Manufacturing Certification and Society of Manufacturing Engineers CMfgE Certification