

JAMES P. BOURQUE

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OBJECTIVE

Hardworking Mechanical Designer seeking a conceptual design position involving technical and design skills acquired through previous employments. I'm experienced in the latest CAD and design software tools and ASME Y14.5M Standards.

EXPERIENCE

Advanced Measurement Solutions LLC – Fitchburg, MA

MECHANICAL DESIGNER - 2010-

Freelanced for a small testing facility which performs electrical and radiation test on electrical components.

- Designed and produced a quick-release fixture for testing high voltage batteries.
- Design layout on an electrical enclosure, used in portable test equipment, which tested Li-io automotive battery cells.
- Various other solid modeling and complete detail drawing packages complete with B.O.M.

Cobham Sensor Systems – Bolton, MA

MECHANICAL DESIGNER - 2004-2010

Working in a team environment, I helped to design and development military radar, tracking and communication antennas and antenna subsystems under strict military requirements. Utilized AutoCAD Inventor solid modeling in the design and development of various prototype and production merchandise.

Accomplishments:

- Tactical data link systems for reconnaissance and surveillance purposes which entailed quick-deploy man portable antennas and vehicular mounted antennas.
- Electronic warfare antenna capable of jamming Improvised Explosive Device's.
- Communication antennas ranging from ground mount, mast mount to vehicular mount. All antennas had to withstand rigorous environmental conditions.
- Aircraft mounted Scanner Antenna Unit consisting of a solid one piece reflector and a dual yagi antenna encapsulated under a single radome.
- Log periodic antennas for mast mount.
- Shipboard mounted "whip" antennas for communication.
- Exercised Kaizen methods and Six Sigma to improve products and reduce cost on several products with great success.

Tri-Cycle Product Design – Hudson, MA

MECHANICAL DESIGNER – 2001-2004

Being one of the first employees in a small engineering firm, I was able to develop skills encompassing every aspect of product development from conceptualizing and prototyping, to manufacturing and final production. I assisted with the design and development of projects listed below utilizing Solidworks.

Accomplishments:

- Automated lamination equipment for super conducting wire production.
- Billet packing equipment for super conducting wire production.
- Automated solar cell stringing machine with visual inspection station.
- Golf training device that utilized accelerometers and gyroscopes to monitor the heads movement in relation to the body during the golf swing.
- Sheet metal design of packaging and enclosures for UL rated equipment.
- Hand held "mouse" for computer and presentation applications.
- Simplified bathing solution concept for NASA

Atlantic Microwave Corporation – Bolton, MA

AUTOCAD OPERATOR/DRAFTSMAN – 1998-2001

I assisted in the design and development of commercial and military radar, tracking and communication antenna systems utilizing AutoCAD 2000 solid modeling.

Responsibilities

- Detail various drawing types from small pieces parts to complex multi sheet assemblies in accordance with company standards.
- Review new order release contracts in agreement with company policies through ERN and ECO process, which insures accuracy, completeness and compliance prior to release to manufacturing.
- Create and update Bill of Materials in Visibility MRP System
- Create and maintain AutoLISP routines for engineering/drafting department to automate repetitive tasks, manipulate drawings to improve the efficiency of work.

Raymond Engineering Service – Billerica, MA

AUTOCAD OPERATOR/DRAFTSMAN – 1995-1998

Drafted detailed drawings from verbal to written instructions utilizing AutoCAD release 14 and Benchmark 7 on various types of plans to include Preliminary, Definitive, As-Built Subdivisions and Conservation Plans.

Responsibilities

- Download field data from Data Collector into Benchmark 7 or TDS and interpolated information.
- Transfer information into AutoCAD and finalize drawings in accordance with company standards and Town Rules & Regulations.
- Design and create line types, Wblocks, symbols and prototype drawings and apply them to all AutoCAD workstations to ensure the consistency of ongoing and future projects.

D&M/CHU Technologies Inc. – Littleton, MA

FOREMAN, WELDING DEPARTMENT – 1994-1995 (welder 1983-1994)

Fabricated sophisticated state-of-the-art communication, radar, tracking, and navigationally antenna systems for commercial and military applications in accordance with U.S. Government standards and specifications.

Responsibilities

- Design, construct and implement tooling fixtures, prototypes and final configuration of antennas in accordance with detailed blueprints, rough sketches, engineering concepts and verbal instructions.
- Manufactured antenna systems utilizing GMAW and GTAW on a broad range of materials to include aluminum, mild steel, stainless steel and other various metals,
- Coordinated with production shops to affect the efficient work flow from engineering to final assembly.
- Schedule, supervise, and inspect job assignments of other welders in the department; prepare work orders and trained personnel.

CAD EXPERIENCE

Inventor® • SolidWorks® • AutoCAD® • Mechanical Desktop® • Benchmark®

SOFTWARE SKILLS

Microsoft Word® • Excel® • PowerPoint® • Adobe Photoshop®

EDUCATION

Montachusett Regional Vocational Technical School, Fitchburg, MA - AutoCAD Certificate Program Completion

Leominster Trade High School, Leominster, MA

Advanced Geometric Dimensioning and Tolerance course

HOBBIES

Carpentry • Weightlifting • Exercise • Chess • Cooking • Landscaping

References provided upon request