

Brian Quigley

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Mechanical Engineer

Design ~ Manufacturing ~ Process ~ Research & Development

Astute, technically-inclined mechanical engineer offering several years' experience in manufacturing and proven aptitude for advancing organization production and process goals. Well-qualified with an MS in mechanical engineering and bachelor's in industrial technology. Adept in working independently or collaboratively on complex, multi-stage projects; effective communicator and training facilitator. Advanced knowledge of manufacturing processes as well as leading 3D design software.

*Continuous Improvement / Design for Manufacturability / Machining & Prototype Fabrication /
New Product Development / Quality & Functionality / Presentations & Project Facilitation /
Process Optimization / Technical Training / Testing & Analysis*

PROFESSIONAL EXPERIENCE

Manufacturing Engineer (7/2017 – Present) IMI Precision Engineering, Norgren Inc. - Littleton, CO
Brought in under contract to assist in new product development dealing primarily with pneumatic and fluid control products and assemblies. Designed and developed functioning prototypes for initial testing and analysis, as well as production parts for exploratory product lines. Provided support to existing product lines when modifications or updates to procedures, fixturing, tooling, and layouts were necessary.

Key Achievements:

- Tasked with bringing conceptual projects through design and development and into full production helping to expand the company's market share in certain business sectors.
- Utilized design for manufacturability (DFM) principles to decrease production time and increase assembly simplicity resulting in higher profit margins.
- Designed and fabricated fixtures and layouts for new and existing production assembly cells to increase efficiency, ergonomics, and functionality.
- Led a 5S project to standardize the contents and layout of the machinists' toolboxes to support the company's lean initiatives.

Manufacturing Engineer Technician (8/2014 – 4/2017) Proto Labs Inc. - Plymouth, MN
Within a quick-turn manufacturer of CNC machined and injection molded parts, tasked with supporting research, design, testing, analysis, and continuous improvement functions. Created design prototypes, conducted testing, and performed analysis of 3D models and injection mold designs in pre-manufacturing stage. Operated CNC mills and lathes, following standard procedures for safety. Coordinated and completed processes for final product quality and functionality analysis necessary for production. Worked closely with operators and supervisors to improve equipment and process efficiency through research and development. Trained teams in new manufacturing processes and operation of in-house design software.

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Key Achievements:

- Proposed and fostered integration of 5S and lean manufacturing principles to production floor; led several Kaizen events to drive enterprise goal achievement.
- Formulated and implemented new projects advancing continuous improvement objectives, resulting in lower rework rates and improved on-time shipping.
- Led project to reduce material waste in U.K. plant through implementation of new fixture technique and machining process.
- Entrusted to extend revised and improved CNC milling and hard metal lathing processes to Japanese plant.
- Effectively engaged teaching background to conduct technical training, both domestically and abroad, in engineering, production, design, and sales for new processes and procedures.

Instructor/Coach (8/2011– 10/2014)

Red Wing Public Schools - Red Wing, MN

Provided instruction in industrial technology to high school students. Planned and developed curriculum for courses in electrical/civil engineering, architecture, and automotive systems. Led practical skill development in welding, milling, lathe, woodworking, and cabinetry; advised on proper techniques and safety requirements in use of industry equipment, tools, and machinery. Facilitated assessments and exams, tracked outcomes, and reported outcomes to administration.

Key Contributions:

- Completed requirements to become Project Lead The Way (PLTW) Certified for Digital Electronics and Civil Engineering and Architecture through Milwaukee School of Engineering and Minnesota State University – Mankato, respectively.
- Acted as SkillsUSA Advisor, a national career and technical organization promoting collaboration among teachers, students, and industry professional in interest of building a skilled workforce.
- Provided leadership as Head Boys Soccer Coach and Assistant Track & Field Coach.

EDUCATION AND TRAINING

Master of Science, Mechanical Engineering

University of St. Thomas, St. Paul, MN

Bachelor of Science, Industrial Technology – Education

Bemidji State University, Bemidji, MN

Completed program with magna cum laude honors

Named to Dean's List multiple semesters and awards repeat Presidential Citations

Competed as member of Division II Varsity Track & Field team

Technical Proficiencies

Mechanical: CNC Mills | CNC Lathes | Welding | Precision Grinding

Industry Software: ANSYS | AutoCAD | Inventor | Mastercam | Minitab | Multisim | Revit | Solidworks