

MIKE MICHAELSON

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MECHANICAL ENGINEER

Dedicated Mechanical Engineer with mechanical, mathematical, and technical experience. Innovative problem solver committed to introducing and implementing process improvement strategies. Noted for assessing procedural deficiencies and leveraging people, resources, and technologies to provide successful resolutions. A strategic thinker with a proven record of driving new business and ensuring organizational objectives are being met. Strong communicator adept training staff and safeguarding quality standards. Highly technical professional with 2D CAD/CAM & 3D solid modeling, hardware, software, programming, and troubleshooting expertise.

- Product Design
 - Research / Development
 - Troubleshooting
 - Process Improvement
 - Quality Control
 - Technical Strategy
 - Training / Development
 - Leadership
 - Consulting
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TECHNICAL SKILLS

Mechanical / Electrical:	3-axis mill, 3-axis CNC mill, basic lathe, 3D printer Welding – gas, stick, and MIG Network wiring – 568B standard
Engineering Software:	AlphaCam (BretonCam) – 10,500hrs; AutoCAD LT – 3,100hrs; CADKEY – 5,900hrs; SolidWorks – 1,500hrs; MATLAB – 600hrs; Pro/ENGINEER – 300hrs; OnShape – 200hrs; Cura – 50hrs;
Software:	Microsoft Office – Word, Excel, PowerPoint, Outlook, Access
Programming:	C++, Java, NC/G-Code, PLC Ladder Logic, Pascal, BASIC
Web:	HTML / XHTML, CSS / SCSS, PHP, JavaScript, MySQL
Computer:	Setup and maintained Windows networks & NAS devices Built / assembled computers, installed and configured hardware

PROFESSIONAL EXPERIENCE

PERCOCO MARBLE & TILE, INC. – Denver, CO 2001 – Present
Full service custom stone finishing company fabricating marble, granite, and stone into countertops, fireplace surrounds, slab showers, and tables.

Manufacturing Engineer / IT

- Create shop drawings for stone fabrication orders with CADKEY and AutoCAD LT. Program and operate CNC 3-axis mill using AlphaCAM.
- Troubleshoot and resolve manufacturing and technical problems, acting as escalation point for technical, mechanical, and design issues. Additionally, handle all hardware and software purchases and setups.
- Improved productivity by finding ways to more efficiently utilize machinery, tools, and materials. Retrofitted the festoon style cable carrier to a track style cable carrier leading to enhanced usability and reduced machine downtime. Also, decreased sink cutout time by 70%.
- Boosted sales and increased client satisfaction by innovatively programming the CNC machine to give clients additional design options.

- Trained staff on policies, procedures, programming, and machine operation.

PERCOCO STONE FINISHING, LLC. – Denver, CO

2008 – Present

*B2B operation which serves local stone suppliers and fabricators by applying new finishes to granite and marble slabs.***Technical Adviser**

- Designated engineer tasked with evaluating technology solutions for business concept development and implementation. Traveled to France with the president of Percoco to appraise prototype machine. Helped choose which stone finishing equipment would be purchased for the pilot facility.
- Provided engineering and technical expertise for inclusion in the corporate training manual.
- Assisted team in creating finishing methods showcasing the range of options available to the consumer.
- Troubleshoot and remedy technical issues with machinery, ensuring proper programming, settings, and maintenance.
- Design website and internet marketing, collaborating with graphic designers and printers in developing materials and strategies.

CRYOGENIC TECHNICAL SERVICES, INC. – Longmont, CO

1999 - 2001

*Provides engineering and manufacturing of cryogenic systems - fabrication and supply of cryogenic dewars, specialty liquefiers, cooling systems, cryogenic heat exchangers, cryogenic pumps, beamline coolers, superfluid helium systems, superconducting magnet cryostats, sub-cooled cryogen densification systems, high temperature superconducting power, and transmission line systems. Serves research, aerospace and defense, industrial process, and healthcare sectors.***Design Engineer / Vacuum Technology Specialist**

- Participated in projects to solve mechanical, thermal, and manufacturing issues. Performed mechanical and thermal analyses of heat exchangers, cryostats (supports and insulation), and cryogenic valves.
- Created engineering drawings using CADKEY and SolidWorks for projects.
- Designed and arranged components and assemblies to meet customer and ASME / DOT specifications.
- Completed QA functions: He mass spectrometer leak checking, pressure tests, and cold shocking.

Boeing Project: Worked as part of a team in the design, analysis, and manufacturing of liquid oxygen (LOX) heat exchanger test unit for shuttle fueling. The LOX was sub-cooled using liquid nitrogen (LN₂), the LN₂ was kept near the triple point via proprietary process.

Lockheed Martin Project: Participated in a think tank discussing and thinking about how measuring amounts of liquid hydrogen and liquid oxygen in tanks under zero-g conditions.

Harvard / CERN Project: Contributed to the design of components and assemblies for a 3 Tesla super conducting magnet warm bore cryostat. The warm bore was 20" diameter to allow for inserting various test pieces. Components were modeled in SolidWorks (composite supports, helium and nitrogen vapor cooled shields, aluminum nitrogen reservoir, stainless steel inner pressure valve, and stainless-steel outer vessel). Components were non-magnetic, and customer specifications required that the magnet could be removed from the top and bottom. Designed fixture for assembly. Wrote disassembly / re-assembly instructions.

Ball Plastics Project: Revised drawings for bottle forming process per customer specifications. The process used liquid nitrogen to quickly cool bottles after forming.

EDUCATION AND AFFILIATIONS

Bachelor of Science Engineering, Concentration Mechanical - 1998
Walla Walla College – College Place, WA

E.I.T. Certificate #22609 - State of Washington

American Society of Mechanical Engineers, Former Member