MANUFACTURING ENGINEER / PRODUCT DESIGNER / MACHINE SHOP MANAGER

Summary

- Dynamic and performance-driven professional with high integrity, strong work ethic and great leadership skills. Meticulous and resourceful leader with proven success leading productive teams
- Results-oriented team leader bringing over 3 decades of expertise in engineering and design, metal fabricating and machining, personnel management, and project conceptualization and management
- Seasoned professional working with a wide range of metals, with a broad and extensive knowledge of fabricating, machining, and welding processes

Skills

- Proficient in MS Office (Outlook, Word, Excel, Publisher, Powerpoint), Solidworks, AutoCAD, SurfCAM, GibbsCAM, PEP (2D shape cutting), manual G-code creation and editing
- Well versed in programming and operation of a wide range of CNC fabricating and machine tools
- Exceptional leadership skills
- Interpret highly detailed drawings and drawing sets
- Ability to handle multiple projects simultaneously
- High attention to detail
- Strong analytical decision-making
- Purchasing and planning
- Cost analysis and savings
- Performance improvements
- Strong work ethic
- Excellent organizational skills

Work History and Experience

AirFlo Cooling Technologies, LLC | City , STATE Manufacturing Engineer / Product Designer / Machine Shop Manager 09/2010 - Current

- Designed, manufactured, and implemented specialized tooling, fixtures, and machinery for upgrades, processes and products
- Assisted company management in selecting and installing the necessary machinery and tooling to produce the components required to manufacture high quality products most efficiently
- Assessed current product designs and associated manufacturing processes, streamlined and upgraded processes to more modern and efficient ones
- Created setups for both manual and CNC fabricating and machining processes
- Programming for CNC fabrication and machine tools
- Performed close tolerance dimensional inspections

Pogany Construction, LLC | City , STATE Project Manager / Shop Supervisor 10/2006 - 05/2010

- Project Manager for new construction projects and power plant maintenance and upgrades
- Conferring with clients
- Project estimation
- Materials procurement
- Oversight of project progress
- Coordination of work schedules with other trades
- Problem resolution
- Assisted company owners with the building of a fabrication and machine shop
- Selected and installed the necessary machinery to produce the components required to support field crews working in the plants
- Coordination with plant management to re-design and upgrade outdated mechanical systems

City Metal Fabrications, Inc | City , STATE Owner / President 10/2000 - 10/2006

- Secured contract work from prospective clients
- Design systems and products necessary for meeting customer requirements and specifications
- Oversight of all shop fabrication, machining, and finishing processes
- Directed staff hiring, initiated new training and scheduled processes to streamline operations.
- Trained teams on specific operations, applicable procedures and techniques for each job
- Monitored supplier operations to verify quality, delivery schedule and conformance to contract specifications.
- Assessed, optimized and elevated operations to target current and expected demands.
- Negotiated with vendors to gain optimal pricing on products resulting in substantial increase in profit margin.

City Metal Products, Inc | City , STATE Shop Fabricator / Machinist 06/1986 - 09/2000

- Project engineering and layouts
- Programming and operating CNC fabrication machinery and machine tools including press brakes, shears, laser cutting machines, 4 axis milling machines, lathes
- Inspected each completed fabrication project to verify adherence to blueprint and procedural specifications
- Analyzed engineering drawings to determine required materials and task sequences

- Prioritized and organized tasks to efficiently accomplish goals
- Demonstrated leadership by making improvements to work processes and helping to train others.
- Exceeded customer satisfaction by finding creative solutions to problems

Education and Training
Clarkson University | City , State B.S in Mechanical Engineering 05/1994
Clarkson University | City , State B.S in Computer Science 05/1994
Previous Notable Projects

- **Gas-fired Brew Kettle:** As one of his first projects, Mr. Lehtola designed and himself fabricated an all-stainless steel, triple walled brew kettle for a small microbrewery. Fired with three 500,000 BTU open flame natural gas burners, the 1,500 gallon kettle reaches optimal boil in 45 minutes. At that point, thermal sensors trigger the burner and damper control systems to adjust automatically, allowing reduced BTU output and slowing of the exhaust gases for maintenance of the optimal boil. Heat recovery coils were placed in the flue gas path for heating facility water supplies, extracting as much remaining energy as possible from the burn. This kettle is still in use after twenty-seven years and is producing over 500,000 gallons of product annually.
- **Heat Treating Chamber:** Working with design criteria and client's engineers, a 5,400 cubic foot heat treating oven for honeycomb core carbon fiber sheets and high gloss flat sheet products was designed and fabricated from high temperature stainless steel and installed in the client's facility. The chamber, approximately 15 feet wide, 20 feet deep, and 18 feet high, had a 8 inch thick pressurized water jacket circulating more than 12,000 gallons of treated water at 100 pounds per square inch, and a hydraulically operated door weighing in excess of 15 tons. The internal atmosphere of pure argon was heated to temperatures exceeding 2,200 degrees during the heat-treating process.
- **Extrusion Punching Fixture:** To update one of his employer's outdated manufacturing processes for punching their custom extruded materials, Mr. Lehtola designed and himself fabricated custom tooling and fixturing for punching precision progressive hole patterns in aluminum extrusions. The design process consumed nearly 4 months, and manufacturing another 3 months, and the resulting modular fixture accepted 15 different shaped extrusions and punched a maximum of 6 different hole sizes and patterns, with 4 spacing options within each pattern, per extruded shape. This fixture allowed for consolidation of multiple operations, which previously had been done in several steps in multiple machines, into one streamlined process using only one of the company's existing machines instead of six, while at the same time creating flexibility for new extruded shapes. By eliminating out-of-tolerance issues created by multiple handlings of the same piece, which frequently occurred with the older processes, scrapped material was reduced by nearly 60%. Additionally, setup times decreased by 80% by utilizing a series of electro-pneumatic mechanisms which the operator controlled with a series of selector switches that determined the shape, pattern, and spacing being punched. After being loaded onto the in-feed rollers, the lengths of materials were automatically fed through the fixture for punching once the cycle had been initiated by the operator.