Josh Nieman

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PROFESSIONAL SUMMARY

Mechanical/Tooling Design Engineer with 20+ years of experience developing complex tooling, custom machinery, and automation systems from concept development to CAD modeling, drawing release, validation, and long-term end-user support; including remote or on-site troubleshooting & sustaining engineering of deployed systems. Extensive background in metal forming, machining, welding, EDM, metals heat treatments, and additive manufacturing processes. Acting as a senior technical resource providing mentorship, design guidance, and cross-functional leadership. Strong focus on innovative designs optimized for manufacturability, designing for assembly, manufacturing, and safe, ergonomic operation.

CORE SKILLS

- Tooling Design: Punch press die design, welding fixtures, assembly & drill jigs, robotic end of arm tooling, manual & automatic attribute & variable gage design, various mobility & product-specific automation tools
- Design Lifecycle Management: End to end design ownership from concept development to CAD design, drawing release, tryout, production support, and long-term production and field support for damage, uplift redesigns or renewal
- Automated System Design: Robotics, pneumatic, hydraulic, electromechanical systems, and various sensor devices & controls
- CAD/CAM Experience: Autodesk Inventor, Vault, Fusion 360, AutoCAD, Plant 3D, SolidWorks, NX, OneCNC, Mastercam
- Quality and Validation: Design verification using various CMM and laser tracker equipment, design validation via production runoffs / tryouts & controlled testing for lifecycle/limit estimation
- Continuous Improvement: Championing cost-saving change implementation & process optimizations
- Leadership: Project & team leadership, conducting customer design reviews, coordinating between sales and engineering
- Compliance Experience: ISO9001, AS9100, ATF NFA & GCA Manufacturer, participated in safety evaluation teams to ensure product conformance with standards such as ANSI B11, RIA R15.06 & operator ergonomics per customer & industry norms
- Continuing Education: Frequent training courses for industry standards, safety compliance, & new technology familiarization
- Fabrication Experience: CNC lathes & mills, precision grinding, sheet metal forming, MIG/TIG, plastic & metal additive

PROFESSIONAL EXPERIENCE

Melton Machine & Control Company — Mechanical Design Engineer
Washington, MO | 2017 – Present

- Developed tooling, custom machinery, and automation systems from concept through production support
- Designed metal forming tools, welding fixtures, assembly and drill jigs and robotic EOAT for various automated systems
- Developed tooling concepts documents for customer review and supported sales quoting with cost estimations
- Travel with sales as needed to provide technical engineering consultation while assessing customer SOWs or requirements
- Applied continuous improvement principles & value engineering concepts to optimize internal costs & manufacturability
- Collaborating with internal & vendor manufacturers to improve design standards for manufacturability & cost efficiency
- Developed immediate interim & long-term permanent solutions for damaged or underperforming tooling
- Led design validation, tryouts / runoff, proof load test procedures, and controlled lifecycle/limit testing
- Occasional travel to support integration & setup of machinery in-plant at customer sites for calibration & tuning of production
- Acted as a department Senior Engineer / SME: mentoring others, standardizing or consolidating products, acting as ME contact for other departments & suppliers, providing training/education support & authoring knowledge database documentation
- Developed and maintained custom .NET Windows applications and CAD Software API plugins/add-ins for improved efficiency, automation of processes, standard practices conformance, availability of design requirement criteria, automated creation of detail drawings, as well as general user experience improvements

Homeyer Precision Manufacturing — Engineering
Marthasville, MO | 2014 – 2017

- Designed tooling for CNC machining, metal forming, grinding, EDM, and various post-process finishing
- Evaluated manufacturability across machining, forming, finishing, and inspection for continuous improvements
- Led customer design reviews & buyoff inspections, ensuring compliance with design, quality, and specification requirements
- Created company quality manual procedures to ensure compliance with AS9100D Section 8.3 Design & Development
- Managed aerospace customer products and tooling manufacturing for medical, aerospace, energy production industries
- Participated in collaborative manufacturing planning of complex orders for quality, schedule, and cost optimization

Red Jacket Firearms — Lead Machinist
Baton Rouge, LA | 2011 – 2012

- Performed all manufacturing planning, production, inspection, & documentation of firearm components & silencers
- Machine maintenance, programming, setup, and operation of manual & CNC mills and lathes, presses, brakes
- Collaborated on product design emphasizing manufacturability, cost targets, and long-term endurance in abusive conditions
- Evaluated metals in designs for cost & optimal resilience in mechanically demanding, extreme thermal & corrosive conditions
- Ensured ATF NFA/GCA A&D recordkeeping compliance of serialized product inventory & shipments
- Tested products and components for function & durability while redesigning legacy products to meet modern expectations
- Traveled with sales team as technical expert during trade show, agency demonstrations, and other sales opportunities

CASE International — Lead CAD Designer
Lafayette, LA | 2006 – 2013

- Developed mechanical and structural steel systems using model-based design
- Worked under Professional Engineers to design multi-million-dollar oil & gas production & support projects
- Transitioned company from 2D to 3D CAD systems for more efficient, higher quality deliverables production
- Established CAD standards & automation tools to maximize company consistency & efficiency
- Supervised other designers, supporting conformance to design standards & educational support as needed

EDUCATION

East Central College — Computer Aided Drafting & Design

University of Central Missouri — Engineering Technology, Mechanical

East Central College — Precision Machining Program

COMMUNITY INVOLVEMENT

Scouting America — Cubmaster, Assistant Scoutmaster, Merit Badge Counselor