

King Mason

NPI Manufacturing Engineer

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SUMMARY

Driven NPI Manufacturing Engineer with over five years' experience refining manufacturing processes in medical device production. Passionate about contributing technical design expertise, collaborating actively on product development teams dedicated to robotic surgery technology. Proven ability creating low to mid-volume manufacturing lines—streamlining BOMs, workflows, and instructions for improved efficacy and cost-effectiveness. Demonstrated success validating equipment and enhancing operational reliability through metric-driven continuous improvement initiatives. Committed to fostering strong relationships with industry-leading suppliers while maintaining rigorous standards of compliance with quality regulations.

EXPERIENCE

NPI Manufacturing Engineer

Innovative MedTech Solutions 📅 January 2023 - Present 📍 Greensboro, NC

Role encompasses the design, implementation, and validation of advanced manufacturing processes tailored for new product introductions. Involves comprehensive collaboration both within manufacturing and external supply chain partners, focusing on producing reliable electro-mechanical assemblies for surgical applications.

- Spearheaded design and persistent improvements on low to mid-volume manufacturing lines, ensuring reduced cycle times and enhanced workflows.
- Developed detailed work instructions and Bills of Materials (BOM) for efficiency gains, driving enhanced output on introduced products.
- Executed PFMEA analyses for risk-assessing manufacturing procedures, underscoring impacts on product dependability.
- Oversaw successful qualification of new machinery per IQ/OQ/PQ protocols, bolstering process validity.
- Collaborated closely on software testing phases, preventing downtimes that could disrupt operations.
- Initiated impactful projects targeting first pass yield enhancement, leading to continual cost savings.

Manufacturing Engineer

NextGen Robotics 📅 June 2019 - December 2022 📍 Durham, NC

Focused on innovative assembly techniques and documentation of manufacturing processes aimed at optimizing operational footprint and accuracy across multiple production functions.

- Designed and streamlined tool documentation efforts that contributed to reduced assembly error rates.
- Conducted training sessions that empowered operators with practical knowledge, minimizing transitional downtime.
- Managed supplier engagements ensuring access to progressive tools and machinery serving current and future manufacturing needs.
- Provided input into DFx documentation, maximizing manufacturability metrics on emerging designs.
- Performed extensive failure analysis on productions, soliciting feedback loops that directly impacted discrepancy reductions.
- Championed practices promoting adherence to medical quality systems resulting in swift corrective actions based on findings.

Junior Manufacturing Engineer

Tech Innovators LLC 📅 August 2016 - May 2019 📍 Raleigh, NC

Engaged in supportive roles during early-stage developments and validations for innovative surgical instruments within a cohesive engineering team, fostering improved operational principles from inception.

- Assisted collaborative teams developing procedural guidelines for effective product launches.
- Supported critical improvements stemming from documented manufacturers' workflows geared towards consistency.
- Participated in the prototype phase for design adjustments, influencing adjustments pre-launch.
- Enhanced operators' understanding of quality methods through training-oriented sessions.
- Contributed passionately to efficiency-based initiatives, helping motivate teams toward productivity-focused goals.

LEADERSHIP & AWARDS

- Certified Manufacturing Engineer (CMfgE) awarded by the Society of Manufacturing Engineers, 2026.
- Achieved Employee of the Month due to outstanding contributions and active mentoring, December 2021.

EDUCATION

Bachelor's Degree in Mechanical Engineering

University of North Carolina 🎓 GPA: 3.5 📅 2016 📍 Chapel Hill, NC

Coursework: Manufacturing Processes, Robotics, Quality Control, Design Engineering

CERTIFICATIONS

- Certified Manufacturing Engineer (CMfgE) 📅 2026
- Lean Six Sigma Green Belt 📅 2025

TECHNICAL SKILLS

- **Project Management Tools:** Trello, Asana, JIRA
- **Design Software:** AutoCAD, SolidWorks, CATIA
- **Statistical Analysis:** Minitab, Excel, R
- **Manufacturing Equipment:** CNC Machines, Injection Molding, 3D Printers
- **Quality Control Techniques:** Control Plans, Inspection Methods, Testing Protocols
- **Compliance Standards:** ISO 13485, FDA Regulations, cGMP
- **Risk Management:** FMEA, Root Cause Analysis, Risk Assessment
- **Collaboration Platforms:** Slack, Microsoft Teams, Zoom
- **Documentation Practices:** Technical Writing, Standard Operating Procedures, Work Instructions
- **Validation Processes:** Installation Qualification, Operational Qualification, Performance Qualification

SKILLS

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|------------------------------------|----------------------------------|--------------------------------|---------------------------|
| • Manufacturing Process Validation | • Quality Systems Compliance | • Robotic Surgery Applications | • Testing Protocols |
| • PFMEA | • Tool Design | • Electromechanical Systems | • Training Development |
| • DFX | • Production Support | • Process Documentation | • Equipment Qualification |
| • Continuous Improvement | • Cross-functional Collaboration | • Prototyping | |

PROFESSIONAL AFFILIATIONS

- Member of the Society of Manufacturing Engineers, enhancing professional growth and networking capabilities.
- Actively participate in regional engineering workshops promoting industry advancements and sharing best practices.

LANGUAGES

- English (Native)
- Spanish (Intermediate)

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST