Nipun Bolem

MECHANICAL QUALITY ENGINEER - 8D, 5Why's, GD&T

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SKILLS

- **Root Cause Analysis**: methodologies like 8D, 5Why's, and Fishbone diagram to address and resolve issues.
- **Failure Mode and Effects Analysis**: FMEA to identify potential failure points in manufacturing processes.
- **Design Validation**: Design validation, verification activities to ensure products meet customer specifications.
- **Engineering Standards**: GD&T, IATF 16949, and ISO standards, maintaining product quality & consistency.
- **Process Optimization**: SPC, PPAP, and APQP to enhance product quality and operational efficiency.
- **Quality Control**: Product inspections, audits, and process improvements using industry-standard tools.

WORK EXPERIENCE

Production Associate **August 2023 – Present**
Denso *Ontario*

- Conduct quality inspections of components using statistical process control methods, ensuring 100% defect-free output across high-volume automotive production lines, with data analysis improving process stability by 15%.
- Collaborate in Kaizen events, contributing to continuous improvement initiatives that refined in a 15% reduction in production downtime through process re-engineering, waste reduction, and overall workflow optimization.
- Resolved equipment malfunctions using predictive maintenance techniques, reducing unplanned production interruptions by 10% by implementing timely corrective actions and data-driven preventive measures.
- Applied 8D methodology to address recurring quality issues, utilizing root cause analysis, corrective actions, and process optimization. These efforts resulted in a 20% reduction in defects and enhanced production consistency.

Material Handler **March 2023 – June 2023**
Skyjack *Ontario*

- Operated overhead cranes and tow vehicles to transport heavy machinery, enhancing warehouse overall operational efficiency by 20% through improved material handling processes and optimized routing for delivery.
- Managed inventory systems using barcode scanning and ERP software, maintaining 99% accuracy in tracking materials, and reducing stock discrepancies by implementing lean inventory practices during peak periods.
- Coordinated material handling logistics to ensure timely delivery of parts to assembly lines, reducing material shortages by 15% through effective scheduling and communication with the production team on daily basis.
- Authored the 5Why's root cause analysis technique to identify and address the underlying causes of material delays. By conducting in-depth analysis, led to a 10% reduction in lead time, improving supply chain efficiency.

CAD Engineer **May 2021 – September 2022**
Defence Research and Development Laboratory *India*

- Performed engineering calculations and simulations to validate component function, improving component durability by 10% through advanced stress and thermal analysis techniques, including Fatigue Life Prediction.
- Collaborated with suppliers and vendors to procure materials based on technical specifications and quality standards, reducing project delays time by 15% and ensuring the timely availability of critical components.
- Arranged comprehensive quality inspections and root cause analysis on production, identifying process flaws and reducing material waste by 25% through corrective actions and improvements in manufacturing processes.
- Executed root cause analysis using Fishbone diagrams on missile component designs, pinpointing critical vulnerabilities; initiated design modifications and process improvements to diminish defects by 20% in six months.

Apprentice **September 2020 – May 2021**
Nuclear Fuel Complex *India*

- Guided daily maintenance and overhauled heavy machinery, ensuring continuous plant operations and achieving 0 unplanned downtime by adhering to scheduled PM plans and Reliability-Centered Maintenance strategies.
- Monitored production lines to ensure compliance with quality standards and parameters, resulting in a 12% reduction in non-conformance reports by improving process consistency through Statistical Process Control.
- Analyzed in troubleshooting machinery failures by using failure mode analysis (FMA) and predictive diagnostics, improving maintenance response times by 15% and reducing mean time to repair through root cause analysis.
- Revamped in root cause analysis (RCA) for recurring equipment failures, identifying critical areas for improvement, which led to a 10% increase in equipment reliability and a reduction in process downtime by 8%.

EDUCATION

Post Graduate Diploma in Mechanical Engineering January 2023 – April 2024
Conestoga College, Ontario

Bachelor of Technology in Mechanical Engineering August 2016 – October 2020
Jawaharlal Nehru Technological University, India

CERTIFICATIONS

- **Certified SolidWorks Professional** April 25, 2024
- **Certified Quality Process Analyst** October 7, 2024