

Spencer S. Dickson

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PROFESSIONAL SUMMARY

Manufacturing Engineer with hands-on experience supporting production, industrialization, and quality execution in regulated manufacturing environments. Proven in driving first-pass yield improvement, scrap reduction, and root cause analysis across manufacturing processes. Experienced in production handoff, work instruction development, equipment ramp-up support, and lifecycle process improvements, with a strong factory-side perspective during design and process changes.

CORE SKILLS

Manufacturing Engineering	Quality & Reliability	Technical Tools & Data	Engineering Tools
<ul style="list-style-type: none">• Process Development & Production Readiness• First-Pass Yield (FPY) Improvement• Scrap & Defect Reduction• New Product Introduction (NPI)• Continuous Improvement Initiatives• Manufacturing Line Optimization	<ul style="list-style-type: none">• AS9100 & ISO 9001 Systems• FAIR / Delta FAIR• DFMEA / PFMEA• GD&T (ASME Y14.5)• Statistical Process Control (SPC) & Cp/Cpk• Corrective & Preventive Action (CAPA)• Data-Driven Process Validation	<ul style="list-style-type: none">• Excel (Advanced Data Analysis)• Design of Experiments (DOE)• Minitab (SPC, Capability Analysis)• ERP / MES Exposure (BOMs, Routing, Production Tracking)• Microsoft Project	<ul style="list-style-type: none">• SOLIDWORKS, Fusion 360, ProCAST• G-Code Programming• CNC Machining Support• Weld Process Control (GTAW/TIG, GMAW/MIG)• NDT (X-Ray, FPI, Visual Inspection)• PLC-Controlled Equipment Exposure

EXPERIENCE

Consolidated Precision Products — Manufacturing Engineer (Casting & Weld Repair)

Pomona, California | November 2023 – December 2025

- Led **manufacturing process development and NPI execution** for multiple aerospace casting families, defining process parameters, validation plans, and production controls to enable **stable ramp-up in an AS9100-regulated environment**.
- Increased first-pass yield from **no measurable first-pass yield** to **~63%** on a casting family by eliminating recurring defect modes through structured **root cause analysis and targeted process changes**.
- Improved GTAW/TIG weld-repair yield from **~82% to 91%** through data-driven parameter controls, real-time weld monitoring, operator training, and fixture redesign.
- Supported **DDA X-ray automation**, designing high-throughput fixtures that reduced inspection time from **8–10 hours to ~1.5 hours**, significantly improving throughput and reducing operator variability.
- Reduced scrap on production components through **gating redesign and mold/process optimization** driven by defect trend analysis and process control improvements.
- Authored and maintained **120+ FAIR- and Delta FAIR-compliant work instructions and SOPs**, supporting **AS9100 compliance, production consistency, and continuous improvement initiatives**.

Anheuser-Busch — Manufacturing Engineering Technician (Production & Maintenance)

Riverside, California | January 2021 – November 2023

- Supported **process reliability and equipment performance** on **24/7 high-volume production lines** manufacturing **~12M aluminum can lids/day** across **three high-speed presses** in a **Tier-1 supplier environment**.
- Provided **hands-on mechanical and electrical troubleshooting** for **catch-end presses and auxiliary systems**, performing **RCA on unplanned downtime** and implementing **corrective actions** to restore uptime.
- Improved **equipment reliability** by developing and revising **preventive maintenance plans, work instructions, and operator cross-training**, contributing to **measurable downtime reduction** in continuous production.
- Reduced **scrap and material waste** by increasing **in-process inspection frequency** and enabling **early defect detection** in high-speed manufacturing.
- Collaborated cross-functionally with **maintenance, controls, and operations** during **live production**, supporting **PLC-controlled equipment and automation troubleshooting**.

EDUCATION

B.S. Manufacturing Engineering
— Cal Poly Pomona (2022)

CERTIFICATIONS & TRAINING

AS9100 & ISO 9001 Internal Auditor (Certified)
DFMEA / PFMEA • GD&T (ASME Y14.5) • Six Sigma Green Belt (Internal Training) • NDT