

Malik Haider Ibtisam

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PROFESSIONAL SUMMARY

Production Engineer with 3+ years of hands-on experience in ISO 13485-certified medical device manufacturing, progressing from Production Operator to Engineer. Delivered measurable engineering contributions including a 67% reduction in product rework, 14% increase in equipment output, and 19% output gain through systematic calibration. Holds a Master of Engineering (Distinction) from RMIT. Seeking an engineering role in manufacturing, production, automation, or a related technical discipline. Full working rights in Australia; open to relocation.

PROFESSIONAL EXPERIENCE

BALDWIN MEDICAL

Knoxfield, VIC

Production Engineer

MAR 2026 - Present

- Reduced product rework by 67% through root cause analysis (RCA) and corrective process changes
- Redesigned roller mechanism to eliminate film misalignment, reducing stoppages and increasing output by 14%
- Optimised tube welding parameters within SOP-defined limits, achieving a 19% output gain
- Performed product integrity testing to support a root-cause investigation, reducing product leak failure rate from 80% to 0%
- Diagnosed recurring print defects through systematic process troubleshooting, reducing reject rate by 70%
- Delivered new product development support by building prototypes, developing BOM and work instructions, and producing 3D CAD models in SolidWorks
- Prepared and supervised a HEPA filter replacement across the cleanrooms, verifying seal integrity and installation to achieve a 15% increase in differential pressure
- Led a facility-wide readiness review across warehouse and cleanroom production areas ahead of an external ISO 13485 audit, resulting in zero non-conformances
- Executed a preventative maintenance program across production equipment, reducing unplanned downtime and improving overall equipment uptime
- Implemented 5S to standardise warehouse component storage, improving material findability and retrieval time
- Reviewed batch records and SOPs facility-wide, identifying and disposing of documentation beyond the ISO 13485 retention period to maintain compliant document control

BALDWIN MEDICAL

Knoxfield, VIC

Production Operator

AUG 2023 – MAR 2026

- Performed in-process quality checks, identifying non-conformances and maintaining a defect rate below 2%
- Conducted final product inspections and documentation, maintaining 100% compliance with ISO 13485 requirements
- Supported sterilisation dose validation at Steritech Pty Ltd, positioning dosimeters and totes as per ISO 11137 protocols
- Routinely diagnosed and resolved quality issues by adjusting equipment and barriers to minimise defects
- Issued and verified components with 100% batch traceability, prepared production kits aligned with schedules, and coordinated delivery of production requirements to minimise line delays
- Trained production operators on machine operation and SOPs, improving team capability and reducing operator errors

EDUCATION

RMIT UNIVERSITY

Melbourne, VIC

Master of Engineering (Robotics and Mechatronics Engineering)

JUL 2023 – DEC 2025

- Graduated with Distinction
- Relevant Coursework: Advanced Mechatronics System Design, Advanced Robotic Systems, Real Time Estimation and Control, Sustainable Engineering and Design, Industry 4.0 Technologies

GHULAM ISHAQ KHAN INSTITUTE OF ENGINEERING SCIENCES AND TECHNOLOGY (GIKI)

Topi, PK

Bachelor of Science in Mechanical Engineering

AUG 2018 – JUL 2022

- Relevant Coursework: Additive Manufacturing, Measurement and Instrumentation, Manufacturing Processes, CAD/CAM, Design of Machine Elements, Mechanics of Solids

PROJECTS

DEVELOPMENT OF A FULLY AUTOMATED TRAMPOLINE MANUFACTURING MACHINE (INDUSTRIAL PROJECT)

- Designed warp tension control system for a fully automated trampoline manufacturing machine (Mr. Trampoline Pty Ltd) in SolidWorks
- Fabricated the mechanical structure for the control system using aluminium beams, linear rails, and steel racks and gears, achieving precise gear-rack engagement with no backlash
- Conducted a formal risk assessment across 10+ failure modes, scoring SEV, OCC, and DET to calculate RPN and guide corrective actions
- Calibrated 3 strain gauge sensors via Arduino feedback control for real-time tension measurement across 120 yarns

SELF-CALIBRATING THERMAL DIGITAL TWIN

- Built a hardware-in-the-loop digital twin on Arduino, deploying a Simulink thermal model with Luenberger observer correction
- Wrote a recursive least squares estimator to learn the cooling coefficient online, with sign gating to prevent inversion during heating
- Tuned observer gain against fault detectability, delivering two-tier condition monitoring for transient and sustained faults

COLLABORATIVE ROBOT PICK-AND-PLACE SYSTEM

- Simulated a 2-robot pick-and-place relay in ABB RobotStudio, programming motion paths for object transfer between arms
- Modelled a 3-DOF robotic arm's forward kinematics using Denavit-Hartenberg parameters.

EMBEDDED TEMPERATURE CONTROL SYSTEM

- Designed an Arduino-based temperature control system, estimating a first-order plant transfer function in Simulink
- Compared PI, discretised PI, and anti-windup control strategies, achieving reference tracking with approximately 10% overshoot

VOLUNTEER WORK

RMIT UNIVERSITY

Melbourne, VIC

Peer Mentor

JUL 2024 – NOV 2024

- Provided one-on-one academic mentoring to engineering students, supporting their transition to university and helping them navigate coursework and personal challenges
- Reviewed assignments, delivered feedback, and conducted regular check-ins to track progress and support goal setting

TECHNICAL SKILLS

SOFTWARE & SIMULATION: ABB Robot Studio, MATLAB, Simulink, SolidWorks, Creo Parametric, Onshape, Python, Arduino

QUALITY AND COMPLIANCE: ISO 13485 QMS, GMP, Document Control, Final Product Inspection, Sterilisation Validation, SOP Development, Batch Traceability, FMEA, Risk Management, Root Cause Analysis, Corrective Action, Instrumentation, Data Analysis, Continuous Improvement

MANUFACTURING PROCESSES: Process Optimisation, Preventative Maintenance, Equipment Troubleshooting, Lean Manufacturing, BOM Development, New Product Development, Operator Training, Prototype Testing, Technical Drawings

CREDENTIALS

SOLIDWORKS Tools Suite Certification | MATLAB Onramp Certification | Supply Chain Logistics - Coursera | Forklift Licence (LF) | Graduate Membership (GradIEAust) - Engineers Australia | Introduction to Data Analysis using Google Spreadsheets - Coursera

REFERENCES

Available upon request.