

RANGANATHAN RAMASAMY

SENIOR MANUFACTURING ENGINEER

CONTACT



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Bangalore, Karnataka



[Ranganathan Ramasamy](#)



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EDUCATION

- Bachelor of Mechanical Engineering, Government College of Technology, Coimbatore, Tamilnadu.
- Diploma in Mechanical Engineering, NPA Centenary Polytechnic College, Nilgiris.

CERTIFICATIONS & SKILLS

- [Lean Six Sigma Black Belt](#)
- SAP
- [Lean Manufacturing](#)
- GD&T
- New Product Development
- Process Improvement
- [Process Design](#)
- [CATIA V5.](#)
- Teamcenter.
- [FMEA](#)
- Continuous Improvement
- Process Optimization

SOFT SKILLS

- Leadership.
- Flexibility.
- Problem Solving.
- Critical Thinking.

PROFILE

Innovative and knowledgeable Manufacturing Engineer with a history of success for the past 9+ years in the Aircraft Detail parts and Assemblies Industry. Highly skilled in using computer-assisted technology to develop new processes. Notable talent in creating new methods of manufacturing that reduce costs and improve product quality. Experience in a variety of manufacturing processes and with many of the most common technologies and innovations.

AREAS OF EXPERTISE

Process Engineering

- Process Sheet Creation
- Manufacturing Process
- ECN Implementation
- Lean Manufacturing
- SAP & Tooling orders

New Product Development

- Prototype Development
- BOM & WI Preparation
- Customer Coordination
- FAI Documentation
- Feasibility Study

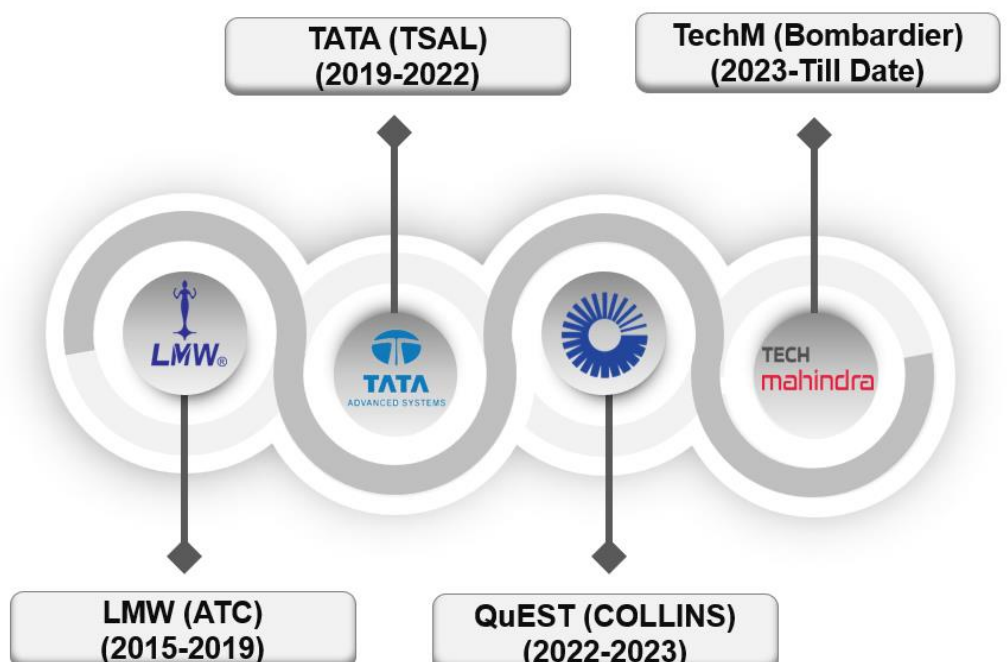
Documentation

- PPAP / APQP / PFMEA
- Control Plans & PFD
- AS9102 Documentation
- Excel Automation Tools
- MIS Reporting

Industrial Engineering

- Lean / Six Sigma (BB)
- Tool Cost Optimization
- Line Balancing
- Bottleneck Elimination
- Cycle Time Study

EMPOWER MY JOURNEY



AWARDS & ACHIEVEMENTS

- FAI Parts Completion**
Successfully completed 492 FAI parts for the Dassault Mirage 2000 fighter aircraft, demonstrating exceptional quality.
- Poka-Yoke Implementation**
Created a macro-enabled Excel tool to error-proof process sheets and automate special process recipe creation, reducing risks and ensuring accuracy.
- Time Savings Achievement**
Saved substantial time on the Boeing Clip Part project, optimizing operations and throughput.
- Fixture Development for ALH**
Created a simple tool for joggle-type parts using a fly press machine, improving forming quality and saving costs for over 250 ALH project parts.
- Draw Forming for Inconel Material**
Applied draw forming for Inconel material in a high-value project, simplifying operations and maintaining quality, with a per-part cost of \$45K.
- Sealant Process Optimization**
Identified and optimized sealant processes for critical lens parts using an existing 3D printing tool for assembly fixtures, reducing rejection ratios and assembly costs by \$577.
- Process Flowchart Standardization**
Developed simple, detailed process flowcharts with clear instructions for all parts, ensuring seamless understanding and execution.

LANGUAGES

- English (Speaking)
- Tamil (Native)
- Kannada (Native)
- Hindi (Basic Level)
- Telugu (Basic Level)

PROFESSIONAL EXPERIENCE

Senior Manufacturing Engineer in Tech Mahindra Ltd, Client Bombardier Aerospace, Montreal, Canada | Bengaluru, Karnataka | Feb – 2023 to Till date.

Roles and Responsibilities:

- Built an Excel-based "MethodGPT" system that supports process planning by allowing users to input queries and receive instant, structured responses from a pre-defined knowledge base—significantly reducing training time for new engineers.
- Delivered quality outputs while addressing queries from the offshore team.
- Studies and understand the customer requirements with respect to the supplied technical data package.
- Delivered quality outputs while addressing queries from the offshore team.
- Developed process sheets and generated tool orders in SAP, aligning with manufacturing and engineering requirements to ensure
- Developed an Excel macro for recipe selection, streamlining the creation of process sheets and QC checks, reducing the need for multiple
- Prepared detailed process documents such as Bill of Materials (BOM), Process Flow Diagrams (PFD), and Part Configuration Control Matrix.

Senior Manufacturing Engineer in Quest Global Engineering Services Pvt Ltd. Client COLLINS AEROSPACE | Bengaluru, Karnataka | Oct– 2022 to Feb – 2023

Roles and Responsibilities:

- Collaborated with suppliers to drive improvements in child parts, ensuring enhanced quality and alignment with project requirements.
- Identified and optimized sealant processes for critical lens parts, reducing rejection ratios, assembly costs, and manpower expenses by \$577, by leveraging an existing 3D printing tool to create precise assembly fixtures.
- Possessed in-depth knowledge of surface finishes, coatings, paints, sealants, bonding, and grounding for aircraft sheet metal parts.
- Reviewing, developing, and improving production methods, facilities, and safety regulations for old aircraft parts.
- Continuously review the existing assembly process and drive process improvements.
- Developing work instructions for installing wire harnesses and components in panels and other.
- Collaborate and support other functions within the manufacturing team during the production builds.
- Working with various quality and MRB personnel to solve re-work problems on a daily basis.
- Fixture planning for critical assembly (Mechanical Fixtures).

PROJECTS HANDLED

- **Tech Mahindra:**
Oversaw the manufacturing of detail parts for **Bombardier** programs, including **Global 5000/6000, Challenger 3500, and Global 8000/9000**, ensuring seamless execution and adherence to quality standards across Detail parts.
- **Collins Aerospace:**
Managed interior and exterior lighting projects for **Bombardier (Global 5000/6000, Challenger 3500, Global 8000/9000), Embraer, Pilatus, Dassault, Airbus, and Gulfstream** aircraft, ensuring compliance with industry standards and customer requirements.
- **Tata Sikorsky:**
Modified sheet metal detail parts for **Boeing AH64, C130, COBHAM, and Airbus** programs, driving precision manufacturing and meeting tight project timelines.
- **LMW ATC:**
Led prototype development and manufacturing for **Mirage 2000, ALH (Advanced Light Helicopter), LCH (Light Combat Helicopter), Sukhoi-30, and Dassault** programs, focusing on innovation and delivering high-quality detail parts.

PROFESSIONAL EXPERIENCE

Manufacturing Engineer in TATA SIKORSKY AEROSPACE LTD | Hyderabad, Telangana | November – 2019 to October-2022.

Roles and Responsibilities:

- Eliminated the use of heavy physical tools for extrusion parts by introducing a simple template for 2.5 mm sheets, achieving a cost saving of \$1,155 per part for future production.
- Applied Lean Manufacturing principles to streamline operations, improving efficiency and reducing waste.
- Collaborated with production, Quality Assurance, and supply chain teams for successful prototype development.
- Improved workflow operations and reduced manufacturing time by 20% through Six Sigma and Lean Manufacturing methodologies.
- Manufactured and modified 300+ detailed prototype parts, including frame components and extrusions, ensuring alignment with new product development requirements and engineering standards.
- Defining the process and process flow for Detail parts and sub-assembly
- New material creation in SAP MM, Preparation of BOM
- Preparation of Work Instruction Derived from Customer Standards.
- Non-Conformance Clearance activities.

Process Engineer in Advanced Technology Centre (Aerospace)-LMW Group | Coimbatore, Tamilnadu | Jul 2015 to Oct-2019

Roles and Responsibilities:

- Lead the Mirage 2000 project, successfully implementing 492 FAI (First Article Inspection) sheet metal parts and standard parts, ensuring compliance with quality and engineering specifications.
- Eliminated the forming process for joggle-type parts in the ALH project by creating a simple tool for the fly press machine, improving efficiency, simplifying operations, and ensuring high-level quality for over 250 parts.
- Applied draw forming for Inconel material in a high-value project, streamlining the process and maintaining high quality, achieving a part cost of \$519 each.
- Implemented a stress-relieving process for 5086 weldable material to address critical forming angles, reducing rejection rates and saving time by utilizing simple, efficient tools.
- Designed clear and simple process flowcharts for each part, accompanied by detailed instructions, to ensure efficient understanding and seamless execution across operations.
- Extensive fabrication experience in extrusion part forming, sheet metal part forming, hand dressing, inspection, and hand straightening
- Supported the production team through First Article Inspection (FAI) as per AS9102 Standards, including documentation preparation.
- Generated APQP and PPAP documentation, including process flow diagrams, PFMEA, and control plans.