



RANGANATHAN RAMASAMY

Manufacturing Engineer

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My Life Philosophy

Failure Will Be Valued, If The Failurer Succeed.

— [Ranganathan Ramasamy](#)

Summary

Manufacturing Engineer professional with 9+ years of experience in process engineering and manufacturing development, specializing in Lean Manufacturing, Six Sigma methodologies, and SAP. Proficient in CATIA drafting and process plan creation, with a proven track record of driving operational excellence and innovation. Key achievements include successfully completing 492 FAI parts for the Dassault Mirage 2000 fighter aircraft and implementing a zero rework production system. Skilled at leveraging expertise in process optimization and manufacturing development to deliver innovative and efficient manufacturing solutions.

Experience



Tech Mahindra Ltd, Client Bombardier Aerospace

Bengaluru, Karnataka

Manufacturing Engineer

02/2023 - Present

- Studies and understand the customer requirements with respect to the supplied technical data package.
- Developed an Excel macro for recipe selection, streamlining the creation of process sheets and QC checks, reducing the need for multiple reference documents and minimizing high-level risks, improving customer satisfaction.
- Developed process sheets and generated tool orders in SAP, aligning with manufacturing and engineering requirements to ensure seamless production workflows.
- Oversaw the New Product Development process for sheet metal skins, stringers, and frame parts, ensuring timely delivery and compliance with quality standards.
- Prepared detailed process documents such as Bill of Materials (BOM), Process Flow Diagrams (PFD), and Part Configuration Control Matrix (PCCM).
- Reviewed and incorporated customer updates (standards and drawing revisions) through Engineering Change Notices (ECN) and New Item Engineering Orders (NIEO).
- Managed and directed project activities, ensuring proper planning, organization, and evaluation.
- Delivered quality outputs while addressing queries from the offshore team.
- Conducted daily morning meetings to update project status, resolve queries, and define action points.



Quest Global Engineering Services Pvt Ltd, Client COLLINS AEROSPACE

Bengaluru, Karnataka

Senior Manufacturing Engineer

10/2022 - 02/2023

- 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).

Experience



TATA SIKORSKY AEROSPACE LTD

Hyderabad, Telangana

Manufacturing Engineer

11/2019 - 10/2022

- 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.



Advanced Technology Centre (Aerospace)-LMW Group

Coimbatore, Tamilnadu

Process Engineer

07/2015 - 10/2019

- 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.
- Designed and created a simple fixture for standard parts, eliminating the need for manual trimming and drilling processes, resulting in improved efficiency and reduced labor time.
- 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 operations, utilizing advanced machinery and manual techniques to ensure precision, quality, and compliance with industry standards.
- 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.

Certification

Lean Six Sigma Green Belt — [Certificate](#)

Lean Manufacturing — [Certificate](#)

Process Design — [Certificate](#)

CATIA V5 — [Certificate](#)

FMEA — [Certificate](#)

Education



Government College of Technology

Coimbatore, Tamil Nadu

Bachelor of Mechanical Engineering



NPA Centenary Polytechnic College

Nilgiris, Tamil Nadu

Diploma in Mechanical Engineering

Languages

English Proficient ●●●●●

French Intermediate ●●●●●

Kannada Native ●●●●●

Tamil Native ●●●●●

Hindi Intermediate ●●●●●

Telugu Intermediate ●●●●●

Areas Of Expertise

•Process Capability Calculation



•ECN Implementation



•Lean Manufacturing



•Feasibility Study



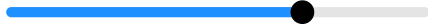
•BOM Preparation



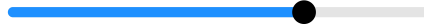
•Lead Time Monitoring



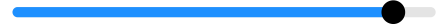
•PPAP/FAI



•Bottleneck Identification



•FAI & Prototype



Key Achievements

FAI Parts Completion

Successfully completed 492 FAI parts for the Dassault Mirage 2000 fighter aircraft, demonstrating exceptional quality.

Zero Rework Production

Achieved a zero rework production system, significantly improving efficiency and cost-effectiveness.

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.

TQM Implementation

Implemented a sheet metal shop TQM, which enhanced quality standards and operational effectiveness.

Time Savings Achievement

Saved substantial time on the Boeing Clip Part project, optimizing operations and throughput.

Process Flowchart Standardization

Developed simple, detailed process flowcharts with clear instructions for all parts, ensuring seamless understanding and execution.

Fixture Development for ALH Project

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.

Skills & Strength

Process Optimization

Expertise in streamlining manufacturing processes with a focus on efficiency, cost reduction, and quality improvement.

Analytical Skills

Strong analytical abilities in FMEA, feasibility studies, and process capability calculations to ensure data-driven decision-making.

New Product Development

Skilled in leading new product launches, prototype development, and APQP documentation to meet stringent quality and timeline requirements.

Continuous Improvement

Dedicated to implementing Lean Manufacturing principles, Value Stream Mapping, and Six Sigma methodologies to drive operational excellence.

Technical Proficiency

Proficient in CATIA V5, SAP (ECM, PP, MM), and CAPPD/MACPAC for seamless project execution and process management.

Leadership

Strong leadership abilities with a focus on team collaboration and driving results.

Projects Handled

Aerospace Manufacturing Projects

Bengaluru, Karnataka

04/2015 - Present

Management of multiple aerospace projects focusing on Process and manufacturing complexities.

- **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.