

Xavier Guzman

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SUMMARY

Senior manufacturing engineer with 10 years of progressive experience supporting aerospace and **high reliability production** environments. Leads **Integrated Product Teams** through producibility studies, manufacturing concepts, process architecture, tooling strategy, capital planning, and production scaling for complex subsystems. Converts program requirements into repeatable workstations, controlled processes, and practical build architectures that support safety, quality, cost, capacity, and schedule goals. Applies Manufacturing Execution Systems, MBD and MBE practices, simulation, production data, root cause analysis, corrective action, and Six Sigma methods to resolve production constraints. Provides technical oversight for engineering deliverables, installation plans, process documentation, and tooling changes. Mentors engineers and coordinates design, quality, supply chain, production, industrial engineering, and external partners. Active **U.S. Secret clearance** and experience with **Final Assembly and Ramp operations** support secure, reliable program execution.

EXPERIENCE

Senior Manufacturing Engineer, Aerospace Subsystems

July 2022 - Present

Orion Aerostructures

St. Louis, MO

Leads **manufacturing engineering** for complex aerospace subsystem build areas, guiding IPT decisions, production architecture, capital planning, process control, and technical review across multiple assembly cells.

- Translated program requirements into scalable **tooling** and workstation plans for subsystem build areas
- Chaired cross functional IPT sessions that resolved producibility constraints before **final assembly** schedule impacts
- Built capital cases using capacity models, labor content, flow constraints, and production rate requirements
- Applied MES records, simulation, and production data to balance flow across assembly cells
- Directed root cause investigations and **corrective actions** using Six Sigma **process controls**
- Mentored engineers and reviewed **installation plans**, tooling changes, and production documentation

Manufacturing Engineer III, Aerospace Assemblies

March 2020 - June 2022

Summit Defense Manufacturing

O'Fallon, MO

Owned manufacturing plans for high reliability **aerospace** assemblies while integrating tooling, work sequencing, inspection, material flow, MBD and MBE data, and production readiness decisions.

- Integrated tooling, inspection points, material flow, and operator access into executable build concepts
- Used **MBD** and MBE data during **design reviews** to reduce assembly and manufacturing risk
- Coordinated workstation upgrades with **production** and facilities teams for capital implementation
- Analyzed **MES** history to isolate cycle time variation, bottlenecks, and recurring subsystem defects
- Led corrective action teams through root cause verification and updated **process controls**
- Guided early career engineers and verified manufacturing documentation before production release

Manufacturing Engineer II, Aerospace Components

January 2018 - February 2020

Gateway Aerospace Components

Chesterfield, MO

Developed **manufacturing concepts** for aerospace components and assemblies, supporting producibility reviews, **Final Assembly and Ramp operations**, supplier coordination, and production readiness.

- Converted engineering requirements into routing, tooling, workstation, and process needs
- Conducted producibility reviews that identified tolerance, access, sequence, and inspection concerns
- Resolved **Final Assembly** and Ramp constraints through engineering dispositions and documentation updates
- Compared planned and actual flow data to prioritize constraint removal during rate changes
- Facilitated **root cause analysis** for **quality** escapes and assembly interruptions
- Coordinated suppliers and internal teams on tooling readiness for scheduled deliveries

Manufacturing Engineer, High Reliability Assemblies

June 2016 - December 2017

Midwest Precision Systems

St. Peters, MO

Supported **manufacturing engineering** for precision, high reliability assemblies by creating process plans, evaluating product definitions, studying capacity, and maintaining controlled shop floor documentation.

- Created process plans and tooling requirements from engineering definitions for precision assemblies
- Evaluated drawings for assembly sequence, tooling access, tolerances, and inspection requirements
- Collected workstation cycle data for capacity studies and daily flow constraint reviews
- Investigated manufacturing nonconformances with quality and production personnel
- Updated standard work and **process controls** after approved engineering changes
- Coordinated engineering, production, quality, and material stakeholders on manufacturing readiness

PROJECTS

Subsystem Production Scaling 📅 2024

Partnered with design, quality, production, and industrial engineering stakeholders to shape scalable build architecture, balance assembly flow, and prepare capacity for planned aerospace rate increases.

MES Process Validation 📅 2022

Used MES history, simulation, and structured production data to validate process changes, identify bottlenecks, and support repeatable controls across subsystem assembly operations.

LEADERSHIP & AWARDS

- Recognized for technical leadership across complex aerospace subsystem manufacturing and cross functional IPT execution.
- Selected to mentor manufacturing engineers and review engineering deliverables, installation plans, and production documentation.
- Trusted to lead corrective action work for recurring manufacturing issues and establish controlled solutions.

EDUCATION

Bachelor of Science in Manufacturing Engineering
Missouri University of Science and Technology GPA: 0
Coursework: Manufacturing systems, process design, quality engineering, production planning

2016
Rolla, MO

CERTIFICATIONS

- U.S. Secret Security Clearance 📅 2024
- Lean Six Sigma Green Belt 📅 2019

TECHNICAL SKILLS

- **Manufacturing Systems:** MES, MBD, MBE
- **Process Improvement:** Six Sigma, root cause analysis, corrective action
- **Production Planning:** Capacity planning, flow balancing, rate planning
- **Aerospace Operations:** Subsystem assembly, Final Assembly, Ramp operations
- **Tooling and Equipment:** Tooling strategy, workstations, automation
- **Engineering Methods:** Producibility studies, manufacturing concepts, process architecture
- **Data and Simulation:** Data analytics, production data, process simulation
- **Quality Engineering:** Process controls, inspection planning, quality risk
- **Capital Programs:** Capital equipment, business cases, throughput analysis
- **Technical Leadership:** IPT leadership, engineering review, technical mentoring

SKILLS

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|-----------------------------|------------------------|-----------------------|---------------------|
| • Aerospace manufacturing | • Producibility | • Six Sigma | • MBD and MBE |
| • Aerospace subsystems | • Process architecture | • Root cause analysis | • Data analytics |
| • Manufacturing engineering | • Tooling strategy | • Corrective actions | • Capacity planning |
| • IPT leadership | • Capital planning | • MES | |

PROFESSIONAL AFFILIATIONS

- Manufacturing engineering collaboration with design, quality, supply chain, production, and industrial engineering teams.
- Aerospace production support across complex subsystems, Final Assembly, Ramp operations, and high reliability build areas.

LANGUAGES

- English (Native)
- Spanish (Proficient)

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST