

Titus Pratt

Manufacturing Process Engineer, Additive Manufacturing

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STRENGTHS

- ♥ **Process analysis**
OEE reviews and capability studies turned production signals into practical actions. Teams gained clearer priorities during difficult builds.
- ⚙️ **Equipment launches**
Commissioning work connected suppliers, operators, and engineers. A calm handoff helped production move from trial runs into reliable startup.
- 🔍 **Root cause work**
Red X and Practical Problem Solving made recurring defects easier to discuss. Colleagues often joined early, which shortened issue closure.
- 👥 **Cross functional trust**
Shared build history and inspection evidence gave quality, design, and operations a common view of problems and next steps.
- 🎓 **Technical training**
Clear guidance on slicing, parameters, and escalation helped operators act with confidence. Questions became useful signals for process improvement.

SKILLS

Additive Manufacturing

Process Engineering OEE Analysis

DOE Planning Cp/Cpk Studies

Build Preparation Slicing Software

Equipment Validation

Root Cause Analysis

Lean Manufacturing Six Sigma

BOP Documentation

BOE Documentation

SUMMARY

Manufacturing process engineer with five years of experience supporting polymer and metal additive production, equipment industrialization, process characterization, and **continuous improvement**. Hands on work includes FFF, MJF, SLS, and PBF systems, **build preparation**, slicing workflows, parameter development, troubleshooting, and production data analysis. Applies OEE, yield, scrap, **cycle time**, throughput, DOE, and Cp/Cpk studies to identify variation and guide practical corrective action. Has led equipment commissioning, validation, startup, and controlled production release while maintaining BOP, BOE, **manufacturing standards**, and launch records. Works closely with quality, operations, design, suppliers, and engineering teams, sharing technical training and clear recommendations. Brings a steady, practical approach that connects equipment performance with safe, stable, scalable production.

EXPERIENCE

Senior Additive Manufacturing Process Engineer

VectorForge Manufacturing 📅 July 2024 - Present 📍 Dearborn, MI

Owns performance and industrialization for polymer and metal additive cells, guiding production execution, process studies, equipment validation, documentation, and **technical training** across engineering and operations.

- Reviewed OEE, **yield**, scrap, cycle time, and **throughput** data with production partners weekly.
- Built PBF DOE plans and **Cp/Cpk** studies for critical dimensional characteristics and stable release.
- Directed industrial system **commissioning** and validation through controlled production release with supplier support.
- Applied **Red X** analysis to recurring build defects using logs, material history, and trials.
- Maintained BOP, BOE, process specifications, setup standards, and validation records for production.
- Trained operators on build preparation, slicing, parameter controls, troubleshooting, and escalation criteria.

Additive Manufacturing Engineer

Lakeview Advanced Materials 📅 June 2022 - June 2024 📍 Novi, MI

Supported polymer and metal additive equipment, process characterization, production startup, and technical problem solving, connecting build history, inspection results, materials data, and supplier action plans.

- Supported FFF, MJF, SLS, and PBF equipment across **polymer** and **metal** production applications.
- Prepared builds with part orientation, support definition, nesting, slicing, and controlled settings.
- Analyzed **scrap**, alarms, cycle time, inspections, and material lots to isolate process variation.
- Planned capability studies combining dimensional measurements, process data, and mechanical test results.
- Supported **installation** and **startup** of two production systems through supplier issue closure.
- Connected mechanical test results with parameters and build history during **process characterization**.

Manufacturing Process Engineer

Midwest Production Systems 📅 June 2021 - May 2022 📍 Livonia, MI

Supported **advanced manufacturing** processes and production equipment, translating performance data into corrective actions, updated standards, acceptance evidence, and clear recommendations for engineering and operations.

- Created **OEE** summaries that exposed downtime patterns, scrap drivers, and throughput constraints.
- Applied **Lean Manufacturing** and **root cause** tools during containment and corrective action reviews.

Technical Training

Process Characterization

LANGUAGES

English Native

Spanish Intermediate

MY CAREER



● Senior Additive Manufacturing Process Engineer at VectorForge Manufacturing (2.2 Years)

● Additive Manufacturing Engineer at Lakeview Advanced Materials (2 Years)

● Manufacturing Process Engineer at Midwest Production Systems (11 Months)

- Updated **manufacturing standards** and process instructions after approved engineering changes.
- Collected installation and **validation** evidence against equipment acceptance criteria for production readiness.
- Prepared technical briefings that connected findings with trials, maintenance actions, and follow up studies.
- Built working relationships with maintenance and engineering peers to close recurring equipment issues.

LEADERSHIP & AWARDS

- ASQ Six Sigma Green Belt, 2025
- SME Additive Manufacturing Fundamentals Certificate, 2024
- Technical leadership recognition for additive equipment launch support, 2024

EDUCATION

Bachelor's Degree in Manufacturing Engineering

Lawrence Technological University 🎓 GPA: 3.5 📅 2021 📍 Southfield, MI

Coursework: Additive manufacturing, manufacturing systems, materials science, process control

CERTIFICATIONS

- ASQ Six Sigma Green Belt 📅 2025
- SME Additive Manufacturing Fundamentals Certificate 📅 2024

TECHNICAL SKILLS

- **Additive Processes:** FFF, MJF, SLS, PBF
- **Build Preparation:** Part Orientation, Support Definition, Nesting
- **Process Analysis:** OEE, Yield Analysis, Scrap Analysis
- **Statistical Methods:** DOE, Cp/Cpk, Capability Studies
- **Equipment Operations:** Polymer Systems, Metal Systems, Build Systems
- **Industrialization:** Installation, Commissioning, Validation
- **Production Documentation:** BOP, BOE, Manufacturing Standards
- **Problem Solving:** Red X, Practical Problem Solving, Root Cause Analysis
- **Manufacturing Methods:** Lean Manufacturing, Six Sigma, Kaizen
- **Materials Engineering:** Polymers, Metallurgy, Mechanical Performance

PROFESSIONAL AFFILIATIONS

- Society of Manufacturing Engineers, additive manufacturing community member
- American Society for Quality, Six Sigma professional community member

ADDITIONAL INFORMATION

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

REFERENCES

AVAILABLE ON REQUEST