Titus Pratt

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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

July 2024 - Present

VectorForge Manufacturing *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

June 2022 - June 2024

Lakeview Advanced Materials *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

June 2021 - May 2022

Midwest Production Systems *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.
- 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

2021

Lawrence Technological University GPA: 3.5 *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

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
- Technical Training
- Process Characterization

PROFESSIONAL AFFILIATIONS

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

LANGUAGES

- English (Native)
- Spanish (Intermediate)

ADDITIONAL INFORMATION

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

REFERENCES

AVAILABLE ON REQUEST