



**Job Title:** Manufacturing Engineer II

**Reports to:** Engineering Manager

**FLSA Status:** Exempt

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**Approved By:** Paul Oppenheim

**Approved Date:** 1/31/2020

**Summary of Position:** Provides manufacturing engineering support to sustain, troubleshoot, and optimize programs involving the manufacture of advanced composite parts and assemblies. Ensures a smooth transition from various program phases (e.g. development, low-rate initial production, full rate production). Strong emphasis on continuous improvement for production programs by leading efforts to improve efficiency in production and production development operations.

Safety is a core value at Matrix Composites. Our department managers/supervisors play a critical role in creating and maintaining a safe workplace for our employees by following all Matrix Composites safety policies and procedures and by observing employees to ensure that safety procedures are followed.

This position requires use of information which is subject to the International Traffic in Arms Regulations (ITAR). All applicants must be U.S. persons within the meaning of ITAR. ITAR defines a U.S. person as a U.S. Citizen, U.S. Permanent Resident (i.e. 'Green Card Holder'), Political Asylee, or Refugee.

**Essential Duties and Responsibilities:** The requirements listed below are representative of the knowledge, skill and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions, where applicable:

Overall expectations for the position:

1. Serves as an integral member of engineering program teams in support of current development and production activities.
2. Actively engages in all manufacturing aspects of production programs to identify and implement opportunities for process improvement by applying statistical process techniques to identify trends, including process capability (e.g. Cp/Cpk and Pp/Ppk) to ensure that all processes are performed with the highest level of efficiency, first time yield and lowest levels of scrap.
3. Responsible for ensuring safe and proper ergonomic conditions for all program programs.
4. Supports successful transition of programs from the development stage to the production stage.

5. Provide assistance to new product design teams to identify and mitigate product ability issues and ensure producible designs.
  6. Develops and updates process procedures to ensure that documentation is accurate and understandable.
  7. Monitor process equipment operation and identify potential deficiencies/errors. Develop solutions to eliminate occurrence of equipment errors.
  8. Assist in implementation of configuration management protocols to engineering documents.
  9. Understand, implement and follow elements of ISO-9001, AS9100 quality system and Nadcap standards.
  10. Contributes to the creation of requisite reports to convey results of process capabilities and/or process modifications to management and to program teams.
  11. Generate purchase requisitions (as required) for the procurement of materials, products and services.
  12. Interfaces with all levels of management and employees to gather information and provide guidance for identification and implementation of new processes.
  13. Attend meetings, as required, to advance communication to support personnel, management and customers about technical elements related to current projects.
  14. Apply the fundamentals of Lean Manufacturing and Six Sigma to active programs.
  15. Represent the Engineering Department on the Material Review Board (MRB) to disposition non-conforming material, develop rework/repair procedures, and perform analysis of root cause corrective action (RCCA).
  16. Fundamental understanding of geometric dimensioning & tolerancing (GD&T)
  17. Technical writing to include the creation, maintenance, and improvement of manufacturing documentation (e.g. work instructions, specifications, and procedures). Convert engineering redlines into permanent changes in documentation.
  18. Identify manufacturing issues associated with flat pattern cutfiles, and support correction of said issues.
  19. Identify manufacturing issues associated with cure recipes & analysis, and support correction of said issues.
  20. Design and optimize workflows and work areas based on Lean principles.
  21. Facilitate the training of personnel on manufacturing processes.
  22. Supporting the estimation and forecasting of manufacturing resources (e.g. personnel, capital equipment, floor space, etc.) to support upcoming production demands.
  23. Other duties as assigned by management.
- A. Specific responsibilities for maximum results and to avoid typical obstacles:
1. Establish and flow down key performance indicators (KPIs) to each program team and identify both the method and frequency of data collection and reporting to program teams and to management.

2. Where prudent (related to Manufacturing engineering), lead FMEA, RCCA, Kaizen events, etc. related to continuous improvement.
- B. Key Performance Indicators (KPIs) and Success Metrics:
1. OTD - Ensure engineering Department support to all programs to meet overall and continuous KPI of  $\geq 98\%$  on time delivery.
  2. Process Capability - All processes, tooling should have active and continual improvement programs targeted at Ppk or Cpk  $\geq 1.33$ .
  3. Ensures all recurring engineering redlines to documentation is expeditiously made into a permanent revision, no longer than 30 calendar days.
  4. Goal of zero findings observed during process audits resulting in product impact.
  5. Ensure the processes of assigned programs meet the budgeted labor time targets and material usages.

**Qualifications:** The requirements listed below are representative of the knowledge, skill and/or abilities required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions, where applicable:

- A) Minimum education: Bachelor's degree in a science, technology, engineering or math (STEM) discipline.
- B) Years of relevant past experience required:
  - Level II: Two to five years of hands-on engineering in a manufacturing environment with minimum of a Green Belt in Lean and Six Sigma.
  - in Lean and Sigma with a minimum of 5 years practical experience.
 NOTE: Higher level training or additional education (e.g. an advanced degree) may be substituted for direct work experience on a discretionary basis.
- C) Other past experience required:  
Relevant past experience is considered to be associated with advanced composites manufacture, and/or aerospace industry serving in an engineering capacity.
- D) Special skills:
  1. Excellent interpersonal, verbal and written communication skills.
  2. Excellent customer service skills.
  3. Ability to work independently and to manage time effectively.
  4. Ability to exhibit poise, composure and confidence when confronting stressful or high-pressure situations.
  5. Demonstrable experience in negotiating prices, terms and conditions.
  6. Competent use of MS Office software including MS Project, and MS Excel (with Macros).
  7. Strong analytical mindset.
  8. Highly organized, detail oriented and able to respond to change quickly.
  9. Ability to manage multiple priorities, and a strong sense of urgency for completing work on time.

10. Fundamental skills in computer aided design (3D modeling & 2D drawings) using software such as Solidworks, Catia, NX, Autodesk Inventor, AutoCAD is a plus
11. Demonstrate basic proficiencies in the fundamentals of the company's composite manufacturing and tooling techniques, inspection and metrology, including use of a Faro Arm and CMM machines.

**Physical demands:** The physical demands described here are representative of those that must be met by an associate to successfully perform the essential functions of this job. While performing the duties of this job, the associate is frequently required to stand, walk and sit. Use hands, fingers, to handle or feel; reach with hand and arms; talk and hear. The associate must occasionally lift/and move up to 10 pounds.

**Certificates, Licenses, Registrations:** Proof of United States Citizenship or Right-to-Work in United States. Must meet the US Persons definition (US Citizen or Green Card holder).