Job Description

Job Title: CNC Programmer / Manufacturing Engineer

Job Summary

We are seeking an experienced CNC Programmer / Manufacturing Engineer with strong knowledge of CNC machining, tooling, and work holding designs along with a understanding of casting processes. The ideal candidate will have hands-on experience programming and operating multi-axis CNC equipment and developing or approving cutting-tool and work holding designs.

The successful candidate should be comfortable working with complex castings and have a strong understanding of machining processes, tolerances, tooling, and production efficiency.

Key Responsibilities

- Program and optimize 4th- and 5th-axis CNC machines using Fanuc controls.
- Develop, modify, and troubleshoot CNC programs to produce complex machined components.
- Work directly with castings, including understanding casting variations, machining allowances, datums, and fixturing requirements.
- Develop machining processes and determine the most efficient methods for producing complex parts.
- Design, specify, evaluate, and approve cutting tools and custom tooling for CNC machining operations.
- Work with tooling suppliers to develop custom cutting tools when required.
- Select appropriate cutters, inserts, feeds, speeds, and machining strategies.
- Design and develop fixtures, work holding, and other machining aids.
- Review engineering drawings and models to determine machining requirements, tolerances, and manufacturing feasibility.
- Troubleshoot machining problems such as tool wear, chatter, dimensional issues, poor surface finish, and cycle-time concerns.
- Optimize CNC programs and tooling to improve productivity, quality, and tool life.
- Support production personnel with CNC programming, setup, and machining issues.

- Inspect finished components and help establish appropriate inspection methods and processes.
- Collaborate with quality, maintenance, and production teams.
- Maintain accurate CNC programs, tooling documentation, setup sheets, and manufacturing documentation.
- Help identify opportunities to reduce machining costs, scrap, setup time, and cycle time.
- Ensure machining processes meet required quality and safety standards.

Required Qualifications and Skills

- Strong experience programming Fanuc-controlled CNC machines.
- Proven experience with 4th- and 5th-axis CNC machining.
- Strong knowledge of CNC machining principles and manufacturing processes.
- Proficiency with SolidWorks and other CAD software.
- Experience machining and working with castings.
- Strong understanding of cutting tools, inserts, tool geometry, feeds, speeds, and tool life.
- Ability to design or evaluate custom cutting tools and tooling solutions.
- Ability to read and interpret complex engineering drawings and GD&T.
- Strong understanding of work holding, fixturing, and machining setups.
- Ability to troubleshoot CNC machining and manufacturing problems independently.
- Strong mechanical aptitude and understanding of manufacturing processes.
- Ability to communicate effectively with customers, suppliers, and management.

Preferred Qualifications

- Experience with CAM software for multi-axis CNC programming.
- Experience developing machining processes for complex castings.
- Experience working with high-production machining environments.
- Knowledge of CNC probing and in-process inspection systems.
- Experience with custom tooling manufacturers and tooling development.
- Experience optimizing cycle times and machining processes.

- Manufacturing engineering or machining-related education is preferred, but equivalent hands-on experience will be considered.

Ideal Candidate

The ideal candidate is someone who can take a part from casting and engineering drawing through machining and production. They should be able to understand how a component needs to be held, determine how it should be machined, program the CNC equipment, design or modify the necessary tooling and fixtures, and troubleshoot the process when problems occur.

This position requires someone who is both technically strong and hands-on, with the ability to make practical manufacturing decisions and take ownership of CNC machining processes from development through production.