

# **CURRIER PLASTICS, INC.**

## **PRODUCT DEVELOPMENT ENGINEER**

**LOCATION: 101 COLUMBUS STREET, AUBURN, NEW YORK 13021**

### **JOB SUMMARY:**

As part of the Product Development team, apply engineering principles to design and develop new and existing materials, processes, and products, including development, research and planning for the detailed mechanical design of products from concept through to manufacture in relation to ISO 13485.

**ESSENTIAL JOB DUTIES AND RESPONSIBILITIES:** (Additional duties may be assigned)

Operate various computer-assisted engineering software and equipment to perform engineering tasks to control the design and development of new and existing products including, but not limited to:

- Detailed design of plastic injection and blow molded parts from the concept stage through a production release using 3D CAD software such as SolidWorks Premium with FEA Simulation, Autodesk Fusion 360 and Autodesk Mold Flow Part Advisor.
- Effectively communicate and collaborate product designs and proposals with customers, toolmakers and production engineers to ensure optimum moldability.
- Create presentations, reports and design studies using MS Office Professional (Word, Excel and PowerPoint) and provide 3D printed part samples for review.
- Reverse engineer existing products using basic and advanced metrology equipment and Next Engine 3D laser surface scanner.
- Create and maintain product design related documents in an organized file format and location including; CAD files, file transmittals, ECN log, design request log, Email communication, engineering test and analysis, meeting notes and minutes.
- Attend design meetings where designs are documented and reviewed which could include travel to other's facilities.
- Create designs of single cavity prototype injection and blow molds, including CAM programming using MasterCAM software.

Control the design of parts, components and assemblies for use in production tooling and equipment including but not limited to:

- QC inspection gages and fixtures.
- Reverse engineer machine parts as needed to support production.
- Engineer and design automation equipment upgrades and repair parts.
- Evaluation of mold production issues and offering of design solutions.

Perform other design related computer management functions including but not limited to providing support to Engineering, Business Development and Operations teams in support of the product development process.

### **MINIMUM QUALIFICATIONS STANDARDS:**

- AAS or equivalent in a Product Design/Mechanical Engineering discipline and have at least 5 years experience in product development.
- 3-5yrs experience designing mechanical components and mechanisms using SolidWorks® 3D CAD.
- Plastics part design experience is desirable.

### **KNOWLEDGE, SKILLS, ABILITIES:**

- Knowledgeable in the selection and specification of engineering materials
- Knowledgeable in the management of 3D and 2D technical drawings within the context of a structured PDM system
- Experience with 3D modeling software (SolidWorks®, Fusion 360)
- Familiarity with 3D printing
- Understanding of tools such as FEA Simulation, MoldFlow, DFM, tolerance analysis and other analytics and their role in the design process
- Reverse engineering of parts using micrometers, Vernier calipers, radius gauges, etc.
- Strong communication skills including the use of MS Office Suite and cloud based programs (Share Point, Teams, One Drive, etc)
- Develop test methods to determine success of Designs for Functionality
- Computer proficiency including CAD/CAM and Windows Server
- Ability to design components and fixturing on CAD/CAM
- Sound knowledge and understanding of different manufacturing processes and materials
- Basic understanding of our molding capabilities (injection molding, extrusion blow molding, injection stretch blow molding and injection blow molding)
- Plastics material background a plus
- Quality Assurance experience with metrology (can read a print, understands tolerancing, understands GD&T)
- Full understanding of Parametric Technology for part print/model relationships
- Aptitude for research
- Must be able to generate and explain detailed schedules, performance and design objectives
- Ability to analyze and solve problems effectively
- Excellent attention to detail
- Promote the Quality Improvement Process
- Contribute to the overall success of the company by performing all assigned duties in a professional, timely, and accurate manner

## **SUPERVISORY RESPONSIBILITIES:**

The product development engineer does not have any supervisory responsibilities.

## **MENTAL REQUIREMENTS:**

Moderate mental and visual attention required for performing manual work, machine operation, set-up, inspection, and adjustments that require decisions to detect and adjust for variance from proper operation.

## **PHYSICAL REQUIREMENTS:**

Exerts up to 30 pounds of force occasionally and/or a negligible amount of force frequently or constantly to lift, carry, push, pull or otherwise move objects, including the human body. Ability to sit for extended periods of time, use fingers, talk and hear.

## **EQUIPMENT, MACHINES & SOFTWARE USED:**

This position requires the regular use of general office equipment including, but not limited to, computer, printer, copier, fax machine, and telephone. Occasionally use measurement instruments and tools.

*Computer Software:* SolidWorks®, Office Professional, PDM Works and AutoCAD software. Microsoft Office.

## **SAFETY, PROTECTIVE CLOTHING AND GEAR REQUIREMENTS:**

Safety requirements for this position include but are not limited to eye protection when on the production floor and in the tool room. Employees must follow any additional safety requirements as posted in specific job areas.

## **ENVIRONMENTAL CONDITIONS:**

Work is performed in a typical office work environment with occasional production floor and tool room exposure.

## **COMMUNICATIONS SKILLS:**

Ability to read, analyze and interpret general reference periodicals, professional journals, technical procedures, or government regulations. Ability to write reports, correspondence and procedure manuals. Ability to effectively present information and respond to questions from groups of department heads and managers, clients and members of the general public.

**MATH SKILLS:**

Ability to add, subtract, multiply and divide in all units of measure, using whole numbers, common fractions, and decimals. Ability to calculate figures and amounts such as interest, proportions, percentages, area circumference and volume. Ability to apply concepts of basic algebra and geometry. Ability to interpret bar graphs plus ability to work with mathematical concepts such as probability and statistical inference, and fundamentals of plane and solid geometry and trigonometry.