



FLSA Status: Non-Exempt

Reports To: Engineer & Fabrication Supervisor

Summary:

The Cad Technician is responsible for creating and updating models and drawings utilizing Autodesk Inventor.

Education/Experience:

HS Diploma/GED and additional courses taken in engineering field such as the following:

- Engineering and Technology -- Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.
- Mechanical -- Knowledge of machines and tools, including their designs, uses, repair, and maintenance.
- Design -- Knowledge of design techniques, tools, and principals involved in production of precision technical plans, blueprints, drawings, and models.
- Production and Processing -- Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.
- Mathematics -- Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.

Essential Duties and Responsibilities include the following. *Other duties may be assigned.*

Part Modeling:

- Be able to quickly and efficiently create a model utilizing basic shapes and sound modeling techniques that allow the model to be simply modified and updated as needs require.
- Be able to take physical object, measure it, create a simple 3d model and maintain the critical dimensions/features pertaining to its use at STS.
- Create 3d objects in a way that lends itself to efficient assembly both in Inventor and in real life as much as practical.
- Update properties of each part with, description, category, part number etc.
- Learn to utilize parameters effectively for creating template parts and assemblies.

Assembly:

- Become proficient at assembling components within Inventor this involves:
 - Using a minimum number of constraints. Often this involves utilizing planes effectively.
 - Keep future uses of the model in mind when creating the assembly-make it easily modifiable/update correctly when components change-where practical.
- Learn to convert and use .STEP files from vendors in assemblies.

Drawing:

- Create drawings utilizing sound cad practices that convey the required information.
 - Sound practices involve: Including all necessary dimensions to describe an individual part.
 - Dimensioning parts in a way that will maintain their critical requirements.
 - Utilize reference dimensions where needed to show technicians needed information. Reference dimensions are enclosed in ().
 - Required views and notes to show critical assembly requirements.

Layout for CNC Plasma Table:

- Create flat layouts utilizing Autodesk Inventor to be used on a CNC Plasma table.
- Assist in creating and updating Lead in / Lead out and burn files for CNC Plasma table.
- Assist in creating and updating nesting layouts for CNC Plasma table.

Bill of Materials:

- Update BOM properties and tables for assemblies with information on ordering, quantities, and pulling the parts for assembly.

Vault:

- Learn to use Autodesk Vault to store and retrieve all models, assemblies and drawings in the required folders.
- Upload files from local working folder to Vault consistently and clear working files when finished with them.

Communication and Interaction:

- Recognizing that communication, interaction with coworkers and a good attitude is essential to success in this, and any job, the following requirements are listed:
 - Treat all those around you in a professional and respectful manner.
 - Regularly update your supervisor and key personnel on your progress-bringing necessary issues affecting your project to their attention.
 - Display a willing and “Can Do” attitude at all times.

Qualifications:

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed are a representative of the knowledge, skill and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

- Oral Comprehension -- The ability to listen to and understand information and ideas presented through spoken words and sentences.
- Written Comprehension -- The ability to read and understand information and ideas presented in writing.
- Problem Sensitivity -- The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
- Deductive Reasoning -- The ability to apply general rules to specific problems to produce answers that make sense.
- Inductive Reasoning -- The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).

- Information Ordering -- The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).
- Oral Expression -- The ability to communicate information and ideas in speaking so others will understand.
- Near Vision -- The ability to see details at close range (within a few feet of the observer).
- Visualization -- The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.
- Excellent computer skills and proficient in excel, word, and outlook.
- Excellent communication skills both verbal and written.
- Demonstrated leadership and vision with major projects or initiatives.
- A demonstrated commitment to high professional ethical standards in a diverse workplace.
- Excellent people skills, open to direction and collaborative work style
- Commitment to meet objectives.
- Ability to challenge and debate issues of importance to the organization.
- Ability to look at situations from several points of view.
- Persuasive with details and facts.

Knowledge, Skills, and Other Abilities:

- Mathematics -- Using mathematics to solve problems.
- Complex Problem Solving -- Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
- Critical Thinking -- Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
- Science -- Using scientific rules and methods to solve problems.
- Reading Comprehension -- Understanding written sentences/paragraphs in work documents.
- Active Listening -- Giving full attention to what others are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- Judgment and Decision Making -- Considering the relative costs and benefits of potential actions to choose the most appropriate one.
- Time Management -- Managing one's own time and the time of others.
- Writing -- Communicating effectively in writing as appropriate for the needs of the audience.
- Must have strong work ethic and be reliable.
- Must be well-organized, a self-starter, and detail oriented.
- Ability to communicate effectively verbally and in writing.
- Ability to interact with employees, customers, and public in a professional manner.
- Ability to work independently and with a team in a fast-paced and high-volume environment with emphasis on accuracy and timeliness.
- Ability to protect value by keeping information confidential.
- Positive and professional work attitude.
- Willingness to learn and grow.

Physical Demands:

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly required to talk or hear. The employee is frequently required to see, walk, sit and use hands with dexterity for typing and drawing. The employee

is occasionally required to stand, lift/manipulate 50 pounds independently and/or up to 100 pounds with assistance, and varying temperature changes in an open shop environment.

Acknowledgement:

This job description has been designed to indicate the general nature and level of work performed by employees within this classification. It is not designed to contain or be interpreted as a comprehensive inventory of all duties and responsibilities required of employees assigned to this role. By signing below the employee acknowledges and agrees to abide by items listed within the job description.

Print Employee Name

Employee Signature

Date