

SMT JOB DESCRIPTION

JOB TITLE
Machine Designer

REPORTS TO
Vice President

Machine Design

SKILLS/EXPECTATIONS

- 1) Responsible for the quality of your own work; including control of cost, rework, and scrap.
- 2) A thorough knowledge of 3D Modeling (preferably Inventor).
- 3) A high level of computer skills is required in Windows environment.
- 4) Use of "MS WORD, EXCEL, and Powerpoint is required.
- 5) Must be capable of determining appropriate fits, strengths, clearances, and overall mechanical feasibility.
- 6) Ability to effectively use measuring equipment.
(Dial Calipers, Micrometers, and Indicators)
- 7) An understanding of machining processes.
(Capabilities, Limitations) (MasterCam experience preferred)
- 8) Must be capable of determining appropriate clearance drills, tap drills, & counter-bore sizes.
- 9) Thorough understanding of material concepts.
(Steels, Tool Steels, Aluminum, Stainless Steels)
- 10) Sound mechanical reasoning, and solid drafting practices.
- 11) Math skills for design work.
(Arithmetic, Trigonometry, Geometry, Force calculations)
- 12) Must be able to follow instructions to minute detail to assure accuracy, and check own work effectively for meeting job requirements.
- 13) Must be able to engage in multiple tasks at a time, and maintain focus to minimize errors.
- 14) Must be able to independently research reference materials and select components for appropriate performance characteristics.
- 15) Must be able to evaluate customer specifications to verify conformance to requirements.
- 16) Must understand the impact of design on cost, and implement efficient concepts that are cost effective, and competitively manufactured.
- 17) Must have good temperament and good communication skills to deal with a variety of personalities, and situations while representing the company positively.

RESPONSIBILITIES

- 1) Concept and design Jigs, Dies, Fixtures, Tools, and Custom Machines.
- 2) Design improvements to CNC Remanufacture program including development of multiple manufacturers standards and specifications.
- 3) A solid understanding, and recall of lessons learned from previous projects is critical.
- 4) Work with Machine builders, and machining department to assure updated "as built" drawings are available.
- 5) Exercise Teamwork with problem solving skills.
- 6) Create new designs and forward them to the project manager or manufacturer for evaluation. In doing this, he/she will stick to the acceptable standards of engineering designs.
- 7) Consider the safety of clients, manufacturers and workers by taking safety precautions and avoiding ideas that could endanger health and safety.
- 8) Accurately follow specifications outlined in proposed projects to ensure that the overall production goal is achieved in the end.
- 9) Be present for consultation with clients for an in-depth discussion job expectations.
- 10) Monitor the step by step progress of the project and make a detailed report of observation which will be submitted to the project supervisor to determine if the project conforms to the initial design provided.
- 11) Efficient and productive use of time including recording, and tracking of hours tracked to Shop Orders.
- 12) Electronic filing as well as returning reference materials to appropriate storage area.
- 13) Must show an interest in learning, and improving skills and abilities.
- 14) Assure that SMT provides documentation to customers in a timely manner.
(Drawing updates, layouts, manuals, etc.)
- 15) Support Sales function at the company to develop concepts in order to submit proposals.
- 16) Provide technical support to SMT manufacturing, purchasing, and quality functions.
- 17) Assure timely and accurate response to customer requests.
- 18) Keep work area neat and organized.
- 19) Must follow instructions, and complete tasks assigned.
- 20) Understanding and appreciation of Shop Safety and Shop Rules.

Education/Experience

Required

- 1.a) A minimum of 10 years manufacturing experience.
- 1.b) 3-D modeling software usage experience.
- 1.c) Technical school training.
- 1.d) Computer skills in Windows environment.

Preferred

- 2.a) 10+ years machine design specific experience.
- 2.b) Degree (Mechanical engineering, Mechanical Design)
- 2.c) Experience in (Machine shop/Tool and Die/Custom Machinery build) environment.
- 2.d) Experience with Tube bending, and processing.
- 2.e) Tube end-forming experience.