



Mechanical Engineer Job Description

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Page 1 of 1

Summary:

The Mechanical Engineer role is responsible for leading design/build projects for custom-engineered machinery used to manufacture high-performance thermoplastics. This role requires a strong understanding of mechanical principles, materials science, and manufacturing processes, Drake's Engineering team is a highly innovative group responsible for offering material solutions to demanding applications in a global market. The ideal candidate has a curious mind, is engaged in lifelong learning, and is comfortable utilizing engineering concepts to develop creative solutions to unique problems. Drake's engineering team does not follow plastic industry best practices, we create them.

Primary Duties / Responsibilities: to include, but not limited to the following:

- Create and develop mechanical systems, components, and products using CAD software.
- Conduct research to develop new products or improve existing ones.
- Develop detailed technical drawings and specifications for manufacturing.
- Perform simulations and testing to validate designs and ensure they meet performance criteria.
- Analyze mechanical systems and components for reliability, durability, and efficiency.
- Identify and solve engineering problems using analytical methods and tools.
- Conduct failure analysis and implement corrective actions.
- Generate creative design concepts, considering factors such as functionality, manufacturability, and cost-effectiveness.
- Develop prototypes to validate design concepts and assess their feasibility.
- Collaborate with testing and quality assurance teams to ensure designs meet performance and safety standards.
- Analyze test results and iterate designs based on feedback and performance data.
- Provide training and technical support to production personnel to help understand established processes and procedures.
- Maintain accurate documentation of manufacturing processes, including process flow diagrams, standard operating procedures, and work instructions.
- Communicate effectively with team members and stakeholders to ensure alignment on design goals and requirements.

Required Skills / Experience / Education:

- Bachelor's degree in engineering (Mechanical, aerospace, or similar required)
- 3 years' minimum experience designing mechanical systems.
- Proficiency in designing and drafting parts using CAD software (e.g., SolidWorks, Inventor, Creo) and other relevant design tools. SolidWorks preferred.
- Experience using FEA or CFD simulation tools + traditional engineering best practices to conduct part, system, and assembly design studies.
- Experience with hydraulic system design, electromechanical systems, robotics, industrial automation, and failure analysis are a plus.
- Good organizational skills and ability to handle multiple concurrent tasks and deadlines.
- Excellent communication and collaboration skills for effective teamwork with cross-functional teams, suppliers, and clients.

Work Environment / Schedule: (as applicable)

Open shop/office environment with a high level of direct interaction with on-site production facilities. Work schedule is Monday – Friday, during standard business hours.

Drake Plastics is a drug-free workplace. All applicants who receive conditional offers of employment will be subject to pre-employment drug testing.