

JOB TITLE	Senior Mechanical Design Engineer
LOCATION	Reading, UK
EMPLOYMENT	Permanent
REPORTS TO	Engineering Manager

DESCRIPTION OF FUNCTION

The mechanical design engineer is responsible for the design of new and existing products within the company's portfolio of products. This can include taking an idea to the concept stage, developing the design, ensuring that it conforms to the relevant standards, calculations and FEA where required to verify designs. The engineer is also responsible for the product design, project planning and execution throughout the project life cycle, including gathering and prioritising project and customer requirements, defining the project objectives, and working closely with the team to ensure revenue and customer satisfaction goals are met.

There will also be a need to undertake design reviews to manage the product to the final design stage whilst also ensuring that "Design for Manufacture" (DFM) principles are applied. Products will need to be fit for the purpose intended, that their form matches the design requirements and that the product functions as intended by the design brief.

The mechanical design engineer will need to be familiar with the different types of materials and understand the requirements of surface finish and tolerances which would involve being able to perform full stack-up tolerance analysis to confirm function. Experience of 2D and 3D CAD is also a requirement with the ability to perform calculations.

JOB RESPONSIBILITIES & DUTIES

- Gain familiarity and ensure compliance with the company's IMS and HSE Policy.
- To support the development of the company's product lines.
- To develop and maintain a relevant technical reference source on the company's main IT servers.
- To support analysis of offshore operations from operational reports to develop a database of standard times and costs for repeatable activities.
- Maintain project schedule by monitoring project progress; coordinating activities; resolving problems.
- Prepare project Quality Plans, ITP's, Risk assessments.
- Performing QA/QC reviews on vendors and subcontractors, as well as internal reviews.
- Prepare project specific work instructions, procedures and processes.
- Obtain quotations and carry out bid analysis.
- Manage suppliers and sub-contractors.
- Able to produce 2D design drawings using AutoCAD and 3D models using Autodesk Inventor.
- Ensure full compliance with the company's Integrated Management System Policy that details HSEQ requirements.
- To produce hand calculations to verify a design and when fully understood, to then create a parametric Microsoft Excel calculation.

- To apply industry standards, analytical procedures, FEA analysis (where appropriate) to the designs and assemblies as the company may require.
- To liaise with clients to accommodate their functional requirements, ensure compliance with their specification and meet regulatory standards.
- To make use of 3D Printing technologies to reduce cost to final manufacture.
- To apply fatigue analysis to components to improve safety and reliability.
- To ensure a product can be made reliably and will perform consistently within its specified operating environment for its design lifespan.
- The nature of the role may require worldwide travel at a short notice.
- The role may require the travel to remote/ offshore locations.
- To be the trusted representative of the company for all tasks being completed.
- To demonstrate flexibility and customer focus, and to perform any other tasks, which may be, required in order ensuring the efficient operation of the company.

CAPABILITY PROFILE; KNOWLEDGE, SKILLS AND EXPERIENCE

- Bachelor's degree in mechanical engineering.
- A minimum of 10 years of experience as a Mechanical Design Engineer.
- Excellent computer skills, previous experience with project management software
- To understand FEA analysis and be able to run the relevant analysis software
- Proficiency with engineering design programs such as AutoCAD, Inventor.
- To be familiar with applicable Industry Standards.
- Possess a good working knowledge of Geometric Dimensioning & Tolerancing (GD&T).
- Ability to manage and exceed client requirements and expectations.
- Strong analytical and problem-solving abilities.
- Exceptional time management and organizational skills.
- Excellent verbal and written communication abilities.
- Attentive to detail and critically minded