

Mechanical Design Engineer



Category

Engineering



Based in

Lancaster, UK



Line Manager

Senior Mechanical Design Engineer



Salary Range

£32,000-£35,000 depending on experience

About Us

Founded in 2017 by veterans of the industrial gases and hydrogen fuel-cell industries, NanoSUN is a fast-growing engineering company that develops novel cascade hydrogen fuelling technology for a wide range of hydrogen powered applications, where high pressure, safe and cost-effective hydrogen storage, distribution and dispensing solutions enable end users to operate zero-emission products.

Based in Lancaster we are uniquely placed close to the Lake District National Park, and the small city of Lancaster for local amenities, good schools and outstanding natural beauty. NanoSUN's team of highly experienced industry experts, coupled with early career engineers and scientists, is currently dedicated to the provision and scale up of its core product offering, the mobile Pioneer Hydrogen Refuelling Station (HRS). With a clear focus on accelerating hydrogen transportation across the UK and Europe, our innovative and convenient hydrogen refuelling system is specifically developed to facilitate hydrogen mobility and rapid, low-cost deployment of the support infrastructure needed to encourage the adoption of hydrogen vehicles from buses and heavy-duty trucks to construction and material handling equipment.

As a company driven by the twin goals of reducing carbon emissions and local air pollution, NanoSUN's primary objective is to supply optimal solutions for delivering hydrogen in the endeavor for hydrogen to become a major energy vector in a decarbonised world.

About the Role

The Mechanical Design Engineer role sits at the heart of the NanoSUN Engineering Team. They are responsible for generating the detailed structural and process designs, as well as being responsible for the design integration of all equipment, including the routing and installation of electrical and controls items.

The Mechanical Design Engineer is deployed to a project team working on a specific product, and will work under the day-to-day tasking of the Project Engineer or Senior Project engineer to develop this product through its entire life-cycle. They will provide important input when generating product requirements, create mock-ups of potential concept solutions, and ultimately work with the Process Engineers and Electrical, Controls and Instrumentation Engineers (EC&I) to complete the detailed design of a complete product. They may also be involved in the development of support equipment or one-off projects such as R&D rig set-up.

The Mechanical Design Engineer also works with the Development Engineering team in order to complete structural and mechanical analysis. This may be through FEA modelling, or multi-phase CFD.

The Mechanical Design Engineer reports to the Senior Mechanical Design Engineer.

Key responsibilities include:

- Generating product requirements, concept designs and detailed drawings and models
- Responsibility for generating and managing mechanical design data, ensuring all mechanical and structural aspects of the product meet design intent. This includes consideration of tolerancing and specification of welding and structural fastener use.
- Analysis of structural and mechanical performance through toolsets such as FEA analysis
- Checking of drawings, models and analysis results generated by other team-members for accuracy and consistency with regulations and internal and industry best-practice
- Collaborating across the NanoSUN team, in particular with Project Engineers, EC&I Engineers and Technicians to complete detailed design of revolutionary products
- Liaising with clients, suppliers, contractors, and relevant authorities to determine the most appropriate design methodologies and decisions
- Understanding and ensuring compliance with relevant regulatory, health and safety and quality standards
- Sourcing and purchasing of equipment, materials and services
- Producing design documentation, including schematics, drawings, 3D models and BOMs using industry standard software packages – Primarily AutoCAD Inventor, ANSYS and Mathworks packages
- Developing the structural and mechanical verification and validation (V&V) plan alongside the Development Engineering team.
- Reporting on progress and presenting of key decisions to the Senior Mechanical Design Engineer and Leadership Team

About You

- Minimum of BEng level qualification in a relevant Engineering or Science discipline
- Chartered Engineer with a recognised industry body, or actively working towards chartership
- Relevant and successful experience of working within small teams
- Independent approach to assigned work, good at working in highly ambiguous conditions
- Strong analytical and numeracy skills
- Strong problem-solving skills with high attention to detail
- A strong grasp of mechanical and structural engineering principles, particularly as applied to process pipework and equipment
- A sound knowledge of computer aided design (CAD) software, 2D technical drawings and 3D modelling
- Experience with completion of FEA modelling – AutoCAD Inventor and Nastran preferable, but other packages acceptable (e.g. ANSYS Workbench, Abacus)
- Experience in robust version control and management of documents, drawings and models
- Excellent written and verbal communication skills
- An understanding of manufacturing processes and construction methods
- Ability to plan and organise through several project stages
- An appreciation of wider business demands

What we Offer

- Salary Range: £32,000-£35,000 depending on experience
- Pension Scheme
- 27.5 days annual leave, plus bank holidays
- Flexible working
- Free on-site parking
- Opportunities for professional development
- Cycle to work scheme
- Discounted staff membership to onsite gym
- Tree planted for every new employee

How to Apply

To apply please email the following to recruitment@nanosun.co.uk stating the job title in the subject line.

- A full CV
- Current remuneration details
- Confirmation of your eligibility to work in the UK

We are an equal opportunities employer and welcome applications for all suitably qualified persons regardless of their race, sex, disability religion/belief, sexual orientation, or age.