ULEMCo
ULTRA LOW EMISSION

JOB DESCRIPTION: DESIGN ENGINEER

SUMMARY

Reporting to the Engineering Design Manager, the Design Engineer will join ULEMCo's design team, supporting both commercial vehicle conversion programmes and research and development activities. The company has experienced growth driven by increasing demand for Net Zero solutions, particularly within heavy-duty road transport, and the role its hydrogen dual-fuel technology plays in enabling this transition.

The role involves delivering high-quality, production-ready design solutions, ensuring project outputs are completed on schedule and in line with industry standards. In addition to core mechanical design responsibilities, the position includes exposure to electrical system integration and early-stage product development, including support for the design, prototyping, and validation of hydrogen fuel systems.

The successful candidate will demonstrate strong technical competence, the ability to work independently on assigned tasks, and a proactive approach to driving work through to completion. The role is based at ULEMCo's facility in Liverpool, with occasional travel to customer sites within the UK and internationally.

TYPICAL DUTIES AND RESPONSIBILITIES

- Develop and maintain a strong understanding of the hydrogen industry, applying this knowledge across research, design, and development activities.
- Contribute to the specification and design of hydrogen dual-fuel and hydrogen fuel cell systems for a range of commercial vehicle applications, ensuring compliance with relevant industry standards.
- Produce detailed 3D models and engineering drawings using SolidWorks, ensuring designs align with cost targets and Design for Manufacture (DfM) principles.
- Support the integration of electrical systems, including component packaging, routing considerations, and mechanical-electrical interfaces.
- Assist in prototype build, development, and validation activities, working closely with development engineers and workshop technicians.
- Contribute to testing and iterative design improvements, supporting the transition from concept through to production-ready solutions.
- Maintain compliance with relevant health and safety and engineering standards.
- Ensure high-quality design through material selection, surface treatments, and fatigue considerations.
- Create and maintain accurate BOMs within the company's MRP system in a timely manner.
- Support supplier selection activities and maintain effective working relationships with external partners.
- Collaborate across departments to ensure effective communication and smooth project delivery.
- Apply product lifecycle perspective, from concept development to production and in-service support.
- Maintain awareness of emerging design tools, technologies, and industry best practices.
- Apply practical workshop knowledge to support assembly, commissioning, and development activities.

FUNCTIONAL SKILLS

- Apply creative and practical engineering solutions to a range of design challenges, ensuring timely and high-quality project delivery.

- Demonstrate strong capability in CAD (SolidWorks), producing technically robust designs that support efficient review and approval processes.
- Demonstrate strong capability in Finite Element Analysis (FEA) using Ansys to validate designs, identify potential failure modes, and drive optimization of components for performance and durability.
- Communicate effectively with internal and external stakeholders, providing regular progress updates and presenting technical solutions.
- Understanding of the product lifecycle, recognizing potential risks and their impact on project delivery.
- Manage time effectively across multiple projects, understanding interdependencies and the impact on wider team and program timelines.
- Demonstrate a working awareness of mechanical and electrical system integration within a multidisciplinary environment.

QUALIFICATIONS, EDUCATION, SKILLS, AND EXPERIENCE

- Bachelor's degree in engineering or related discipline OR extensive experience as a Design Engineer.
- Previous experience as a Design Engineer or a similar role.
- Strong background in mechanical design and development, with exposure to electrical system design.
- Ability to read, understand and create technical drawings.
- Knowledge of manufacturing processes such as machining and fabrication.
- Competent working knowledge of SolidWorks and FEA analysis of fabricated components.
- Experience of component design for on-road commercial vehicles, trailers, plant equipment and similar.
- Knowledge of design methodology, drawing standards (BS8888), BOMs and change control.
- Hands-on experience supporting prototype builds or development testing is advantageous.
- Be able to work well individually as well as part of a team.
- Ability to maintain focus on the delivery of requests from multiple internal customers.
- Strong technical and problem-solving skills.
- Ability to maintain confidentiality.

WORKING CONDITIONS/BENEFITS

- **Location:** Primarily based at our Aintree, Liverpool facility, with occasional travel to partners, suppliers, and customer sites in the UK and abroad.
- **Hands-on R&D Environment:** Work directly with prototype vehicles and cutting-edge hydrogen-electric technologies in a fast-paced, impact-driven setting.
- **Flexible Working:** While much of the role is workshop-based, we offer flexibility where appropriate to support work-life balance.
- **Professional Development:** Opportunities to grow your skills through exposure to innovative technologies, collaborative projects, and industry-leading partners.
- **Team Culture:** Join a close-knit, multidisciplinary engineering team passionate about driving decarbonisation in heavy-duty transport.
- **Competitive Package:** Includes salary commensurate with experience and 25 days of annual leave (plus public holidays). Company pension scheme, medical scheme, death in service and employee benefit scheme eligible after probationary period.

Send your CV to HR@ulemco.com with the subject line "Design Engineer Application".