



DRIVING THE FUTURE OF ELECTRIC VEHICLES

We are the world leader of in-wheel motors for passenger cars, light commercial vehicles and future transport solutions.

Protean Electric is an automotive technology firm with over 100 talented people globally. Our mission is to drive sustainable transport through innovation, and we are the imagination behind vehicles that travel further, perform better and use fewer components.

We believe that freedom of ideas, integrity of response, desire to improve, and collaborative thinking drive innovation. Joining Protean means working with talented experts across the organisation who value your ideas, empower you to make a difference, and encourage you to challenge yourself and others.

Senior Mechanical Design Engineer

Farnham, UK

The Role

We are seeking the right individual to join our Mechanical Engineering team.

Main Duties & Responsibilities

The Senior Mechanical Design Engineers primary duty is the design, development and delivery of electro mechanical systems for the in-wheel motor. Additional duties include the design, development and delivery of prototype parts. As part of the Mechanical Design team, the Senior Mechanical Design Engineer will collaborate cross-functionally with the Engineering, Operations and Sourcing teams, to ensure delivery of Company Goals & Targets. They will support and guide the more junior design engineers.

Reporting, Location & Travel

This role reports to the Mechanical Design Manager, and has no direct reports. The role is based in Farnham, Surrey with occasional requirement for national and international travel, primarily to local suppliers / partners and China.

Key Responsibilities

Responsibilities include, although are not limited to the following:

- Creating and refining mechanical parts and assembly drawings which capture design intent and key characteristics
- Performing hand calculations and finite element analyses to validate a design

Cont/...

Key Responsibilities Cont/...

- Discussing and resolving technically complex problems with manufacturers, suppliers and customers
- Preparing and performing design reviews to pass through a gated design development process
- Producing outline designs and determining project feasibility giving consideration to implications such as cost, safety and time
- Managing tasks and small projects. Estimating required time for task / project completion
- Performing the interface between Electronics and Mechanical Design teams to integrate electronic packs into the mechanical envelope
- Liaising with suppliers with regard to cost, quality and availability of products
- Producing engineering reports and giving presentations to management
- Providing technical support to other departments as and when required
- Supporting DFMEA activities
- Checking Engineering drawings for conformance to BS8888
- Supporting training, development and growth of mechanical engineering talent across the company
- Supporting the production line during snagging when deploying a new design
- Supporting the validation team with design of tests and interpretation of results
- Providing regular updates to the engineering manager of progress and issues

Relevant Skills & Behaviours

We value and measure ourselves against the following 'Best-Self' Behaviours:

- Pioneering
- Driven
- Tenacious
- Collaborative
- High Integrity
- Responsible

Successful candidates should be able to demonstrate the following relevant skills and behaviours:

- Creative and innovative design
- Development and analysis of engineering solutions
- Ability to communicate verbally and through technical documentation in English
- Produce drawings to BS 8888
- Produce and manipulate complex CAD models
- Ability to work in an international environment
- Ability to self-motivate and work with minimal oversight
- Good computer skills (Microsoft Office, SolidWorks)
- Excellent personal and task organisation

Relevant Knowledge & Experience

Candidates should assess their suitability against the following essential and/or desirable relevant knowledge and experience:

Essential:

- Thorough understanding and experience of hand calculations and FEA
- Sound knowledge of physics and mechanical engineering theory
- Experience using SolidWorks, EPDM & SolidWorks Simulation
- Degree (BEng) in relevant engineering field (HND level + Experience will be considered)
- Application of product design process



Cont/...

Essential (Cont/...):

- Knowledge of codes of conduct and ethical working
- Experience of using technologies such as injection moulding, fretwork, PCB and flexible circuit design
- Relevant experience in electro-mechanical product engineering business
- Experience of component testing and design of tests
- Experience in heat management, casting and machining techniques
- Experience preparing and holding design reviews
- Sound knowledge in application of GD&T

Desirable:

- Masters' degree in relevant engineering field
- Knowledge and application of using advanced FEA/CFD simulation tools such as ANSYS/Fluent or similar
- Chartered status with a recognised engineering body
- OEM/Tier 1 experience with vehicle systems/assemblies
- Experience working with high power electric and hybrid powertrains
- Experience of automotive traction batteries and motors
- Design experience based on ISO26262
- Design experience based on ASPICE ME

Employee Benefits

In return for a rewarding and fulfilling career, all Employees can look forward to receiving a competitive salary, plus a number of additional employee benefits:

- **Core hours:** we offer a flexible approach to working hours, with core hours available to all Employees, requiring them to be in the office between 10:00 and 16:00 each day, from Monday to Friday. This provides Employees with the flexibility to start work, and finish work at a time that is convenient to them providing a little more freedom to take into account the journey to work and family commitments.
- **Discretionary Bonus:** Employees are eligible to receive discretionary bonus payments in connection with meeting certain targets.
- **Life Assurance:** Employees are automatically enrolled into the company's Life Assurance scheme; this provides the sum of four times annual basic salary in the event of death during employment.
- **Pension Scheme:** Employees are automatically enrolled into the Company's Group Personal Pension Scheme, with the company matching contributions from a minimum of 5% up to a maximum of 7%.
- **Private Healthcare:** subject to completion of probation, Employees, their partners and dependents, are able to join the company's private healthcare scheme with BUPA, in addition to an accompanying cash plan with BHSF.
- **Learning & Development:** Employees are encouraged to continue their career development with a variety of training courses and development opportunities available to them.
- **Relocation:** we are able to offer a relocation package to assist Employees and their families when relocating to within a designated distance/duration from the company's offices.

Full details of the Employee Benefits are available upon request, or will be made available on provision of an offer of employment.

Should you wish to apply for this role, please e-mail your CV, covering letter and salary expectations to: ukjobs@proteanelectric.com – please be sure to **quote the full Job Title in the subject line** and read our Privacy Notice.

Thank you for your interest, we wish you every success with your application.

