



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 Engineering Analyst

Farnham, UK

The Role

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

Main Duties & Responsibilities

Protean is looking for a Mechanical Engineering Analyst to perform professional technical work which is complex in nature and requires in-depth knowledge and diversified application of mechanical engineering principles, theories, concepts, practices and techniques generally used to solve problems within a defined field of technology.

The primary responsibility of the Mechanical Engineering Analyst is the design and analysis of electro mechanical systems for the in-wheel motor. They will perform structural analyses, document results, provide design guidance and inform validation testing.

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:

- Analyse mechanical components and subsystems using SolidWorks Simulation and more advanced programs as applicable

Cont/...

Key Responsibilities Cont/...

- To include kinematic, dynamic, heat transfer, shock, noise vibration and harshness analyses on complex materials, structural components and functional systems.
- To validate and verify these analyses
- Prepare design review packages and present data to both internal and external customers
- Maintain up-to-date knowledge of developments in the mechanical engineering discipline
- Specifying requirements for mechanical parts and assemblies to substantiate design intent through life
- Discussing and resolving technically complex problems with manufacturers, suppliers and customers
- Producing outline designs and determining feasibility giving consideration to implications such as cost, safety and time
- Evaluating and recommending modifications of prototypes and tooling after test results
- Liaising with suppliers with regard to specification and availability of materials and keeping abreast with latest technologies for electromagnetic/thermal design
- Producing engineering reports and presentations to management
- Providing technical support to other departments as and when required
- Supporting DFMEA activities
- Supporting the training, development and growth of mechanical engineering talent across the company

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:

- Extensive experience of hand calculations and FEA and their application and validation
- Extensive knowledge of physics and mechanical engineering theory
- Technical understanding of vehicle and suspension loading
- Experience using SolidWorks and SolidWorks Simulation
- Degree (BEng) in relevant engineering field



Cont/...

Essential (Cont/...):

- Application of product design process
- Knowledge of codes of conduct and ethical working
- Experience of component testing and design of tests
- Experience preparing and holding design reviews

Desirable:

- Masters' degree in relevant engineering field
- Chartered status with a recognised engineering body
- OEM/Tier 1 experience with vehicle systems/assemblies
- Experience working with high power electric & hybrid powertrains
- Experience of automotive traction batteries and motors
- Experience of component testing
- Experience in heat management, casting and mechanical techniques is desirable
- Previous design experience based on ISO26262 is desirable

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 a discretionary bonus of up to 15% of annual salary; this is paid annually and is subject to meeting set agreed 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, including the offer of learning Mandarin.
- **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.

