



## 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 around 150 talented people globally. Our purpose is to make electric vehicles better, for the people who use them and for a sustainable world.

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.

## Electromagnetic Design Engineer

**Farnham, UK**

### **The Role**

We are seeking the right individual to join our Advanced Motor Research (AMR) team.

### **Main Duties & Responsibilities**

The Electromagnetic Design Engineer will work across engineering and research activities to innovate, design, test and analyse with the goal of ensuring that Protean's products are the best on the market over the long term. The role will encompass looking at new technologies that enhance existing product KPIs and scheming new concepts at application level.

### **Reporting, Location & Travel**

This role reports to the AMR Manager.

The role is based in Farnham, Surrey with the occasional requirement for national and international travel to China, US & Europe.

### **Key Responsibilities**

Responsibilities include, although are not limited to the following:

- Generate ideas for improvements to the electromagnetic design of in-wheel electric motors
- Develop, test and analyse motor design improvements
- Develop high-level concept designs to support feasibility work with prospective customers
- Manage/participate in collaborative projects with Universities and other institutions
- Liaise with key suppliers, customers and Protean Engineering Centres worldwide on motor design and development

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### 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:

- Innovative with the ability to identify opportunities for technology improvement
- Excellence in conceiving and analysing innovative design solutions
- Inquisitive mindset
- Methodical
- Ability to prioritise activities
- Able to plan and meet deadlines
- Keen on self-development
- Good team player
- Good communicator
- Excellent reporting and presentation skills

### Relevant Knowledge & Experience

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

#### Essential:

- A Phd or excellent relevant degree
- Proven experience in modelling & designing permanent magnet machines
- Proficient in 2D & 3D FEA modelling for electrical machines (e.g. Motor-CAD, OPERA)
- Experience with programming (e.g. Matlab)
- Self-motivated and able to manage own workload
- Good written and verbal skills in English

#### Desirable:

- Minimum of 3 years relevant experience working in a team environment
- Experience in modelling and designing various types of electrical machine
- "Hands-on" experience of testing motors in a laboratory environment
- Experience of analysing machine losses and improving machine efficiency
- Knowledge of vehicle powertrain systems
- Appreciation of vehicle duty cycles and calculating vehicle energy consumption
- UK driving licence

### 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%



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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](mailto: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.

