



**PROTEAN**

## **Mechanical Design Engineer**

**Shanghai, China**

Protean Electric is an automotive technology firm. Our mission is to drive sustainable transport through innovation, and we are looking for the best people to join us and help stay ahead of the competition.

Working with us is your opportunity to become an expert in your field and to join us in setting world-class standards in design and production quality. Diversity and inclusion are fundamental to our approach. We know that teams who share one vision whilst drawing from a range of diverse backgrounds and experiences are the most innovative.

Working here means enjoying a fast paced, dynamic and collaborative environment. Our challenges require innovative solutions and provide a unique opportunity to shine and grow with the company.

We value and measure ourselves against these “Best Self” behaviours:

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

If you decide to apply for the role, please email your CV, cover letter and salary expectations to: [chinajobs@proteanelectric.com](mailto:chinajobs@proteanelectric.com). It is important that you **quote the full Job Title in the subject line.**

Thanks for taking an interest in joining us and please see the specific details below:

### **The Role**

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

### **Main Duties & Responsibilities**

The Mechanical Design Engineer will be responsible for product design and engineering of in-wheel motor systems include e-motor, motor controller as well as integration of motor & brake to vehicles, and will work closely with the UK engineering team to achieve local design and engineering capabilities with global common processes, Quality-Cost-Delivery target and mass production capabilities of in-wheel motors.



## Key Responsibilities

Include, although are not limited to the following:

- Be responsible for resolving outstanding engineering issues including, but not limited to motor level mechanical design/improvement, component level engineering changes with validation plans, design/prototype build/quality issues closure and motor integration to customer vehicles, by a clear design idea and good concept of following global engineering process
- Delivery of qualified mechanical design documentations (Simulation, Design Analysis Report, DFMEA Considerations, Safety Distance Analysis, Cost Study, DFM/DFA, Stack-Ups, Risk Assessment, Validation Plan, Design Review Report, 3D and 2D Modelling) based on global product development environment and drawing release process (Solidworks, EPDM and Syspro system) to minimize development time so that products can be launched to mass production according to master schedule
- Participant in innovations/patents generation and industrialization investigation
- Contribution to set up and enforce local mechanical development processes, engineering lab establishment, and develop design documents with good records and accumulation of lessons learns
- Work with UK development team for new motor design and localization study according to APQP standards
- To be technically support purchasing and quality team for supplier panel establishment and involved into supplier RFI, supplier capability development, technical review before tooling kick-off and OTS quality improvement
- Provide Engineering support and signoff for localization of required parts as well as prototype building
- Support application team to do vehicle integration with motor and brake systems, adaptor or knuckle design/modification, cable routine and coolant system assessment
- Work together with the product manufacturing team for the process development, quality control and design of operation jigs and fixtures in mass production line
- Support internal tests and work with third party vendors on outsourced projects as and when required



Relevant Skills	Relevant Knowledge & Experience
<ul style="list-style-type: none"> <li>• Ability to think out of the box, see the big picture as well as be hands on</li> <li>• Teamwork spirit, Customer-Focus, Analytical and Result-Oriented</li> <li>• To be able to go on a business trip with 25% travel frequency</li> <li>• Excellent communication skills</li> <li>• Fluent English is a must</li> </ul>	<ul style="list-style-type: none"> <li>• Master's degree or above in Mechanical Engineering, Mechatronics Engineering, Motor Engineering or Automotive Powertrain Engineering</li> <li>• Minimum 8 years' experience of Mechanical Design in mass production projects with well application of IATF16949 product development process and DFM/DFA design technologies of automotive industry</li> <li>• Proficient in and with hand-on experience of taking designs from requirements and concepts to mass productions</li> <li>• Solid and hand-on skills of Mechanical Design Theory, Engineering Analysis, FEA, Thermal Simulation, CFD, GD&amp;T, Tolerance Stack-Ups, Risk assessment, Cost Consideration, and Quality-Cost-Delivery Concept</li> <li>• Good knowledge of common engineering material and related manufacturing process (plastics/overmoulded injection, die-casting/low pressure casting, stamping welding/soldering, machining), sealing technologies, heat treatment process, surface treating methods and so on</li> <li>• Be familiar with DFMEA, IATF16949/ISO9001, Project Management, 8D methodologies or DFSS concept</li> <li>• Experience of powertrain or e-drive system in EV/HEV/PHEV field to be a plus</li> </ul>

