Mechanical Design Engineer – New Product Development

Company Background:

TE Laboratories are a science-based SME based in Tullow Co Carlow. The company operates a number of divisions which includes an active R&D division.

R&D activities include participation in European and National collaborative funded projects. To date the company has participated in 8 FP7's, coordinated 1 FP7 project and 2 H2020. The company is actively looking to increase project participation under the Horizons 2020 program.

Outputs from these projects and other innovation processes within the company produce initial prototypes that then need to be taken down a commercialisation path. The commercialisation of selected products is driven by the company's New Product Development group.

Role:

A cross-discipline product development engineer is required capable of evolving a design from early-stage prototype through to full commercialisation. The successful candidate should be capable of interfacing to the various disciplines within the company – primarily R&D, but also Operations, Quality, Purchasing and Sales and Marketing. The core design and development areas include sensor development, electromechanical systems design and verification and validation. Experience in working well independently, within a team, managing team projects, and meeting strict deadlines is an advantage.

Reporting to the Technical Director, the successful candidate will work closely on a day-to-day basis with the other functions to deliver a truly multidisciplinary group effort.

Duties and Responsibilities:

Reporting to the Technical Director, the successful candidate will:

- Draft/develop requirement specifications for the discipline based on high-level market requirements input.
- Deliver/support with any Proof of Concept work, focusing on any uncertain design aspects/features.
- Develop product concepts taking inputs from the multidisciplinary team.
- Develop detailed design outputs, including mechanical drawings, bills of materials, fluidic diagrams/circuits and system assembly drawings, in accordance with relevant industry standards.
- Draft test protocols as part of design verification activities, execute any testing as necessary, and produce test reports.
- Interface to and support the R&D division as & when necessary.
- Support with Transfer to Production activities, e.g. test and inspection plans, equipment validation, SOP/work instruction development.
- Manage change control within the product lifecycle.
- Identify design improvements and value engineering opportunities.

- Participate in field deployments of prototype/pilot devices.
- Attend design reviews and project technical progress meetings.
- Liaise with both internal and external stakeholders, including key suppliers, test houses, industry and academic partners/collaborators.
- Engage in appropriate training and development opportunities as required by T.E. Laboratories.

Experience and Qualifications:

Candidates must have a primary degree in which mechanical or mechatronic engineering is a significant component. Proven mechanical product design experience is required, from incorporation of conceptual industrial design inputs to final detailed packaging of the product. The candidate must have prior experience in the development of electromechanical systems for industrial/outdoor environments, addressing design aspects such as heat transfer, EMC shielding, cable management, etc. Additionally, experience with drive systems and fluidic systems (pumps, valves) will be a strong advantage. The candidate shall also have experience in delivery of design outputs such as detailed manufacturing drawings and BOMs to industry standards, and interfacing to ERP systems (SAP preferable). Demonstrated capability in areas such as DfX (Design for Manufacture, Assembly, Test, Maintainability, Reliability, etc.) as well strong familiarity with product compliance requirements (CE, UL, EMC, FCC) within product design is highly desirable.

Experience in Sensor system design and fabrication would be an advantage, as would experience in environmental analysis, particularly in-situ monitoring.

Candidates will be assessed on the following competencies:

- **Discipline knowledge and design skills** – Demonstrates product development knowledge of electromechanical systems and the ability to deliver design outputs to a suitable standard using the company's existing in-house design tools such as Autodesk Fusion and simulation tools, with previous exposure to Eagle EDA also desired.

- **Understanding the NPD Environment** – Demonstrates the ability to take a product concept or prototype to full commercialisation (transfer to production), including verification of design outputs and validation to market requirements.

- **Communicating** – Demonstrates the ability to communicate project status updates and actively participate in design reviews.

- **Managing & Leadership skills** – Demonstrates the potential to manage development projects.

Salary: Competitive

Appointment will be commensurate with qualifications and experience.

Closing Date:

Applications can be emailed to Human Resource's Manager, to include cover letter and a full CV to hr@tellab.ie