

### **Position – EV System**

**Qualification - Bachelor of Technology (B.Tech) / Bachelor of Engineering (B.E) or M.Tech or Ph.D in electrical or electronics engineering**

**Experience – 10+ Yrs**

**Location – Hosur**

**Company Name – India Nippon Electricals Ltd**

### **Job Responsibilities**

- To define system level product architecture interfacing control units with other vehicle components in Two/ Three wheeler EV
- Feasibility analysis of interface components ( sensor, Actuator) connected to main control unit.
- Defining terminal diagram/ wiring harness diagram with relevant safety mechanism( Fuse box, relay, etc)
- Conducting system level DFMEA & FTA
- Capturing system level requirement coming from customer and implementing it in-coordination with HW/SW
- Design, develop the hardware and software interfaces to integrate the system, instrumenting and troubleshooting system components for testing, analysing test data, and recommending solutions for test failures.
- Collaborate with mechanical engineers, firmware developers, product management and manufacturing operations for Develop and support integration of electronic and electrical systems.
- Work with approval agencies to achieve and/or maintain product approval.
- System level testing and validation of the product both on the test rig and the vehicle.
- Market research of different two and three wheeler available in the market. Analyse EV system and define a cost effective system solution.
- Writing and delivering technical documents and briefings to various audiences.
- EMC/EMI design practices and the relevant validation testing
- Thermal Design Of over all EV vehicle system.
- Definition of vehicle safety system as per customer safety requirement ( ISO 262262), Implement safety system in support of HW/SW team.
- System level cost control to keep the system cost within the target

### **Technical Skills:**

- Understanding of different types of electrical machine/motors used in EV/ Integrated starter generator(ISG) application & their control strategies
- Thermal management of electrical machines and power control modules
- Understanding of different interface components like sensor, actuator, communication interface used in EV/ISG application. For example Hall sensors, thermal sensor, speedsensors, electromechanical valves, electronic valves, etc.
- Power management system for EV / ISG application ( DC - DC converter & battery management system)
- Micro-controller design/algorithm
- Circuit design & Power Electronics design
- Knowledge of Automotive electronics or Mechatronics products
- Strong theoretical Knowledge In Electrical Machine Sizing & Design
- System FMEA/FTA/Safety standards ISO 262262
- Model Based Design and Validation
- System validation