

## **JD -Project Manager**

### **A. Knowledge required**

1. Having knowledge of power electronics topologies, AC-DC converter, DC to AC Inverter, single phase to three phase converter, Battery charger etc.
2. Simulation power circuits, MATLAB, PSIM, PSPICE etc.
3. Knowledge of Power diodes, thyristors, IGBT, SiC etc.
4. Knowledge of PCB schematic/wiring diagram
5. Control hardware design & firmware understanding.
6. Knowledge of system testing/ integration.
7. Knowledge of design of magnetics, ie – power inductors, Transformers, high frequency inductors etc.
8. Knowledge of all kinds of instruments used in Power electronics design/testing.
9. Knowledge of various communication used in rolling stock
10. Knowledge of EMI/EMC
11. Knowledge of Vibration & thermal
12. Knowledge of IEC, EN standards

### **B. Hands-on experience required**

1. Power electronics Design in High power for Railway rolling stock
2. System integration & testing knowledge of system & sub system.
3. System design & firmware understanding
4. Simulation Tools knowledge MATLAB, PSIM etc
5. Failure analysis
6. EMI/EMC of PCB level & system level
7. Project management
8. Thermal management of electronic system
9. Good communication skills
10. Documentation of system design & design output
11. Deep knowledge of IEC, EN standards to design system
12. Team handling

### **C. Experience required:**

10-20 years of experience in power electronics with a minimum of 8 years in Rolling stock

