

# HARPER INTERNATIONAL

## POSITION DESCRIPTION

The Position Description is the tool used by Harper International to communicate and clarify the essential job functions, establish the basis for performance expectations, and identify training needs for each position. Completing the details of the Position Description is a joint effort between the employee and the supervisor.

### **Part I - Reporting Structure**

**Date or most recent revision:** December, 2011

**Job Title:** Electrical Engineer

**Department:** Engineering

**Reports To (Position) :** Director of Project Management

**Supervises (Positions):**NA

**Status:** Exempt

**Completed By:** HR

### **Part II – Position Objective**

Perform system design and installations in the equipment manufacturing industry utilizing knowledge of instrument and power control systems and how they all communicate together.

### **Part III – Job Responsibilities**

Typical Duties

1. Design and implement control and power circuits with line voltages up to 600 VAC and currents as high as 3000 amps.
2. Design power control circuits with SCR's for electrical heating systems.
3. Design and implement electrical instruments, equipment, facilities, components, products, and systems for industrial purposes.
4. Work with motor control centers, industrial circuit breakers, and transformers.
5. Utilize Autocad Electrical to generate electric circuit drawings, various wiring diagrams, power-system schematics and single line drawings for customer sub-station purposes.
6. Analyze system component requirements and prepare specs for purchase of suitable material and equipment.
7. Ensure electrical designs meet requirements for UL508A, NEC and NFPA 79.
8. Perform various detailed calculations to properly size and select components including wire, fusing, transformers, power controllers, circuit breakers and enclosures.
9. Develop I/O list, BOM, and schematics used to build thermal processing equipment controls.
10. Coordinate manufacturing, installation, support, documentation, and testing activities to ensure compliance with specs, codes, and customer requirements.
11. Layout proper control and power cubicle configurations.

12. Interface with other departments and subcontractors to ensure projects are completed according to customer specifications, within budget, and on-time.
13. Must be able to travel for system start-up and troubleshooting, both domestic and abroad.

#### **IV – Knowledge, Skills, Education**

1. BS EE or 2-yr Electrical Technology degree
2. Minimum 5 years power circuit design experience required. High current applications a plus.
3. Must possess working knowledge of automation control including practical understanding of mechanical systems, motion, gas handling, gas flow, pressure, stress, temperature, combustion control systems and various analyzing instrumentation.
4. Must possess the ability to read electrical schematics and P & ID's.
5. Must be familiar with NEC & ISA standards and symbology, with knowledge of IEEE & CE standards a plus.
6. Field Service or start-up experience a plus.
7. Up to 15% travel required-both domestic & international

#### **VI - Physical Demands**

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly required to stand, walk, hear and talk. The employee is frequently required to sit and use hands. The employee is occasionally required to reach with hands or arms, climb or balance, stoop, kneel, crouch or crawl.