

# 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

<b>Name:</b>	<b>Date:</b> September, 2010
<b>Job Title:</b> Electrical Engineer	<b>Department:</b>
<b>Reports To (Position) :</b> Manager of Electrical Engineering	<b>Supervises (Positions):</b> None
<b>Status:</b> Exempt	
<b>Completed By (Name):</b>	

### Part II – Position Objective

Plan, develop and execute automation control systems for thermal processing equipment.

### Part III – Job Responsibilities

Typical Duties
<ol style="list-style-type: none"> <li>1. Design electrical and electronic hardware systems for machine control.</li> <li>2. Developing power schematics, calculating power consumption and heat dissipation for machine controls.</li> <li>3. Develop I/O list, BOM, and schematics used to build thermal processing equipment controls.</li> <li>4. Defining, requesting and coordinating the purchase of electrical materials, components, equipment, and support services for the construction, assembly, and conditioning of prototype parts and machines.</li> <li>5. Provide training support to Operations personnel in the proper setup, function and control of automated manufacturing equipment.</li> <li>6. Programming of PLC applications and HMI interfaces.</li> <li>7. Programming discrete controls for motion and temperature control.</li> <li>8. Performing start-up services.</li> <li>9. Assure technical accuracy of project deliverables within predetermined timeline.</li> <li>10. Collaborate with cross-functional teams for project success</li> <li>11. Direct the use of design systems and tools</li> <li>12. Mentor a strong and responsible team.</li> </ol>

### IV – Knowledge, Skills, Education

Required Qualifications:
<ol style="list-style-type: none"> <li>1. BS EE</li> <li>2. Minimum 5+ years experience as a controls system engineer</li> </ol>

3. Experience with process and motor controls systems i.e. food & beverage, material handling, water/wastewater
4. General knowledge of applicable electrical standards such as, IEC, UL, and the National Electric Code
5. Extensive knowledge and hands on experience in developing complex control architectures.
6. PLC programming/troubleshooting experience with AB, and others..
7. HMI configuration experience including graphical screen development using AB, Siemens, Wonderware and others..
8. Experience with industry standard communication protocols such as Modbus, ModbusTCP, Profibus, Devicenet, Ethernet /IP.
9. Knowledgeable in computer networking architectures, topologies and hardware.
10. P&ID Knowledge
11. Excellent verbal and written communication skills
12. Strong interpersonal and communication skills
13. Must be willing to travel-both domestic & international (international travel could extend for periods of 5 weeks or more)

Desired qualifications:

1. ACAD Electrical experience in creating and maintaining electrical schematics and/or component layout diagrams.
2. Experience with high temperature equipment.
3. Knowledgeable in computer programming languages (VB, C#, C++, Java script), database design (SQL), HTML development.
4. Experience with integrating devices from multiple vendors into packaged solution.