

# 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.

### Part I - Reporting Structure

<b>Name:</b>	<b>Date:</b> November, 2009
<b>Job Title:</b> Applications Engineer	<b>Department:</b> Applications Engineering
<b>Reports To (Position):</b> Applications Mgr	<b>Supervises (Positions):</b> NA
<b>Status:</b> Exempt	
<b>Completed By (Name):</b> Applications Mgr/HR Manager	

### Part II – Position Objective

Provide innovative process and technological solutions to support the sale, design and manufacturability of custom capital furnacing equipment and systems.

- ⇒ Translate customer requests into practical, cost effective solutions.
- ⇒ Work with internal engineering resources to develop technical solutions.
- ⇒ Develop technical solutions using Harper's pilot facility as a development platform.
- ⇒ Partner with customers to: 1) enhance existing processes and 2) develop new applications that require high temperature processing.

### Part III – Job Responsibilities

#### Primary Duties

1. Interact with Sales to understand & evaluate client specifications/requirements.
2. Coordinate with sales to prepare proposals inclusive of all necessary specifications / information.
3. Conceptualize designs and develop innovative solutions to enhance existing in-house technology.
4. Provide the coordination between Sales, Applications, and Engineering to accommodate customer specifications and provide technical solutions.
5. Use in-house design programs to define the mass throughput, thermal requirements, and overall equipment dimensions.
6. Perform heat and material balance calculations.
7. Create and adjust drawings as needed to ensure conformity with intended scopes of supply.
8. Support PFD and P&ID requirements for systems based projects.
9. Work with outside vendors to establish ancillary equipment requirements for systems based projects.
10. Understand client control requirements, and be capable of defining the PLC/DCS platform requirements to fully integrate a furnace based system.
11. Utilize ERP system and work with estimator to provide accurate budgetary estimates.

Collateral Duties
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| <ol style="list-style-type: none"> <li>1. Provide sales with the necessary support to secure contracts</li> <li>2. Interact with clients on a professional level to ensure customer specifications are met.</li> <li>3. Prepare the technical portion of sales contracts (SORM Preparation); this is required to ensure a smooth transition of project responsibilities between sales and engineering.</li> <li>4. Interact with Harper technology center to expand upon existing capabilities in order to meet emerging market demands.</li> <li>5. Interface with sales, engineering, and manufacturing to ensure that design concepts and sales contracts coincide with organizational capabilities.</li> </ol> |
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#### **IV – Knowledge, Skills, Education**

Knowledge, Skills, Education
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| <ol style="list-style-type: none"> <li>1. Requires general understanding of mass &amp; heat balance, heat transfer, high temperature materials, and equipment sizing principles.</li> <li>2. Knowledge of PFD and P&amp;ID principles.</li> <li>3. Bachelor's Degree in Chemical or Mechanical engineering required; Advanced degree or equivalent experience preferred</li> <li>4. 5 years experience preferred, but not mandatory.</li> <li>5. High degree of technical depth and creativity</li> <li>6. Good written and verbal presentation skills.</li> <li>7. Ability to work well under time constraints in order to meet deadlines and client expectations.</li> <li>8. Must be willing to travel both domestically &amp; internationally</li> </ol> |
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