



ADVANCED TECHNOLOGY.  
PROVEN PERFORMANCE.

## JOB DESCRIPTION

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**POSITION:** Structural Design Engineer

**DATE:** August 16, 2011

**DEPARTMENT:** Engineering

**P/R TYPE:** Salary/Exempt

**SUPERVISOR:** Engineering Manager

**BASIC FUNCTION:** Responsible to design, engineer, and detail industrial steel structures for use with the company's core product lines.

**EDUCATION/EXPERIENCE REQUIRED:** Minimum 4 year degree in Civil Engineering, plus a minimum of 5 years practical work experience in the field. PE, AISC, or similar certifications a plus.

**COMPUTER SKILLS NEEDED:** FEA, AutoCAD Inventor or equivalent solid modeling tools, ERP experience, and MS Office Experience.

**TRAVEL:** Up to 20%.

**WORK ENVIRONMENT:** 80% normal office work with 10% travel to include some heavy lifting, climbing ladders, and other physical type work at times.

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### SCOPE OF WORK

#### Product Design Engineering

- Utilize mastery of FEA and solid modeling skills to design, assemble, engineer, and detail structures for use in product line.
- Perform structural design and analysis calculations using governing codes and standards, engineering formulas, skills, and experience.
- Responsible to work with manufacturing department and sub-contractors to ensure design intent is understood and quality is met.
- Works with Project Management to ensure products are released and available in a timely matter to meet schedule.
- Produce high quality drawings to global industrial standards.
- Able to both create designs from scratch as well as repurpose existing design concepts into new ones.
- Leverage commonality and library components to minimize risk and maximize profitability.

#### Core Competencies

##### Financial:

- Strong understanding of costed bills of materials.
- DFM; design out cost while increasing value.
- Develop probable construction cost estimates.

- Understands basic MRP and ERP procedures as they pertain to manufacturing.

**Business Development:**

- Identifies business development and new product opportunities.
- Effectively supports and strengthens the company's positive brand image in both written and verbal communications with clients, colleagues, customers, and suppliers.

**Communication:**

- Facilitates and participates in team and client meetings effectively.
- Effectively communicates relevant product information to superiors.
- Resolves and/or escalates issues in a timely fashion.
- Understands the importance of timeliness and quality; willing to ask questions.
- Proficient in dealing with customers and suppliers in an effective, efficient, and professional manner.

**Technical:**

- High mechanical and apparatus aptitude.
- Strong analytical and mechanical instincts.
- Knowledge of manufacturing processes; welding, steel fabrication, plasma cutting, and machining.
- Strong drafting skills.
- Strong working knowledge of solid modeling, parametric modeling, and solid modeling data management.
- Expert ability to do engineering calculations for mass, static loading, dynamic loading, stress, strain, power transmission, and the like. FEA experience a must.

**Organizational Responsibilities**

- Conduct work in a highly professional level; represent oneself as a professional both internally and externally.
- Be an innovator; challenge process and technology to exceed company expectations and to achieve company's top position in the marketplace.
- Suggest areas for improvement in internal processes, suggest solutions, and volunteer to lead them as needed.