

# 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**

**Job Title:** Mechanical Fabricator

**Department:** Manufacturing

**Reports To (Position):** Production Manager

**Supervises (Positions):** None

**Status:** Non-Exempt

**Pay Grade:** C or B

**Completed By (Name):** HR

**Last revision date:** January 2016

### **Part II – Position Objective**

To provide well rounded skilled trades work in an OEM environment. The ideal candidate will possess experience in both electrical and mechanical duties, but a strong candidate in one discipline would be considered. A critical element of the position is to travel up to 25% of the time.

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

Primary Duties:

1. Read & interpret assembly blueprints & perform intermediate-level assembly and fabrication functions as related to the manufacture of custom equipment.
2. Perform accurate layout & detail work to include the set up & operation of set up fabrication equipment, including shears, press brakes, drill presses, etc., (in addition to using own personal hand tools).
3. Perform various welding activities
4. Assemble & install mechanical and/or electrical components, structures, systems, etc...
5. Perform industrial painting functions, such as preparing/covering surfaces, wearing appropriate personal protective equipment, mixing paint, using paint guns, etc...
6. Perform basic pipefitting activities, such as selecting appropriate materials, cutting/bending/threading/connecting pipes.
7. Perform refractory detail & installation activities.
8. Perform inspection & quality checks to ensure compliance with customer specifications.
9. Assist with material handling activities if necessary.
10. Perform all job functions while complying with all safety requirements.
11. Perform other duties as assigned by Manager.

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

Knowledge, Skills, Education:

#### **Welding**

– Effective under supervision  
Process: MIG, FCAW, stick

Positions: Orientation and basic positions

Materials: Knowledge of basic materials

Tests/Certifications: None

**Key success factors:**

1. Machine set-up, metal prep.
1. Appearance – polishing/ finishing/grinding
2. Material handling – jib crane & forklift skills
3. Safety awareness
4. Mechanical aptitude
5. Math skills – geometry
6. Blueprint reading exposure; basic ability to read and understand procedures
7. Drug free
8. Verbal comm. (English)

**- Under Minimal supervision**

Process: TIG, Sub-arc (plus Level 1)

Positions: Positions 1-3, Flat board, horizontal, overhead

Tests/Certifications: AWS, ASME, Bend test, Leak test

Materials ▪ Mastery of basic materials

**Key success factors**

1. Enhanced cosmetics/aesthetics
2. Knows weld symbols
3. Dye check
4. Fabrication/fitting (beginning)
5. Can run one piece of equipment (e.g., Miller, Lincoln)
6. Understands metallurgy

**No supervision; possible mentoring of others; mastery of employer specific skills**

Positions: Mastery of all positions (1-6) (Harper needs only some)

Materials: Alloys, exotics; trainable on all materials

Tests/Certifications: Can pass any certification – AWS, ASME, PED, NQA (Harper needs only some)

**Key success factors**

1. Higher-level cosmetics/aesthetics
2. Fabrication/fitting
3. Produces documentation
4. Provide feedback to Engineering Dept.
5. Fluent in reading drawings
6. Strong vessel and pipe work

**Mechanical Skills**

Works under 100% supervision, perform basic mechanical maintenance

Process:

1. Basic knowledge of mechanical physics / basic machining fundamentals
2. Basic electricity / basic hydraulics
3. Basic blueprint reading/drawing/schematics
4. Basic knowledge of fasteners
5. Basic troubleshooting
6. Read tape measure
7. Read & understand equipment manuals

Key Success factors:

1. Own basic tools and know how to use
2. Standard safety oriented (OSHA)- forces, pressure, hazard
3. Basic math / shop math (know how to do conversion)
4. Ability to follow directions; basic computer skills
5. Mechanical aptitude (e.g. not afraid to change brakes or a tire)
6. Communication skills: Able to receive constructive criticism
7. Be able to work independently or in a team
8. Physical requirements (heavy lifting, tolerance of heights)
9. Dress appropriately

Education/Experience

1. High school (GED) w/BOCES vocational
2. Hands-on \$10-\$12 an hour

Performs functions related to the setup, installation, maintenance, safety and repair of plant machinery, structures, systems and basic electrical/electronic work.

Process:

1. Diagnostic & troubleshooting problems
2. Machining skills, experience (metal removal, deburring, grinding)
3. Power transmission
4. Ability to adjust parts
5. Learn instruments
6. Advance blueprints; use measuring tools
7. Check own work

Key Success Factors

1. Enhanced Level I Mentor to Level I
2. Advanced computer skills
3. Hydraulics, pneumatics, AC/DC knowledge
4. Transformers, motors, relay logic
5. Electronics / electrical schematics; Digital logic
6. Knowledge of lighting/HVAC
7. Basic sketching skills (ability to convey blueprint information to others)
8. Confident with working /communicating with other outside of company
9. Excellent customers service skills suppliers
10. Creative problem- solving
11. Maintains required records (electronic and/or hard copy).

Education/Experience

1. High school (GED) 3 – 5 years' experience
2. Some type of vocational tech 2 year

Associates degree + but not required \$16 - \$18 an hour

**Secondary Knowledge – not required, but would help**

Electrician

Process:

1. Able to read blueprint or read CAD printouts
2. Begin to read mechanical blueprint
3. Understand tool set (hand tools)
4. Understand safety concerns and knowledge
5. Understand Low voltage 120/240

6. Single phase and DC circuits

Key Success Factors:

1. Ability to communicate/reporting
2. Listening skills/ability to follow directions
3. Comfortable working in a team
4. Able to have insight and knowledge needed to carry out the job
5. Available to work 24/7 & overtime

Education/Experience

1. Read and write English
2. High school/GED, physics a plus
3. Documented work experience (2 years, need not be in the electrical field)
4. Knowledge of OSHA Vocational degree

Able to install, maintain and repair electrical wiring, equipment

Process:

1. Sketch a blue print and read · High voltage 480/600
2. Knowledge of NEC (code)
3. 3 phase power (industrial)
4. Knowledge of beginning machine control (CNC, PLC, DCS)
5. Use tool set including multi meter
6. Read instruction manuals in any language
7. Begin testing and troubleshooting (calibration verify work done)

Key Success Factors:

1. Enhanced Level I
2. Mentor Level I
3. Work independently

Education/Experience

1. Read and write English
2. Associates degree or higher
3. Electrical technology
4. 5 years' experience minimum
5. \$15 - \$20 an hour

Or Entry Level, under 100% supervision. Can perform basic electro mechanical maintenance of equipment

Electrical Skills:

1. Basic knowledge of AC/DC motor circuits (low voltage)
2. Understanding of panel building, motor controls, power distribution, conduits

Instrumentation/Mechanical Skills

1. Knowledge of automated valves, hydraulics, pneumatics, basic welding,
2. Flow, pressure/temperature measurement

Tools/Equipment:

1. Knowledgeable to basic hand tools, calipers, micrometers

Key success factors:

1. Schematic Reading
2. Knowledgeable of OSHA rules
3. Basic computer skills
4. Math skills (up to calculus)

5. Knowledge of Chemistry/Physics Oral & written communication skills
6. Team Player Attendance, willingness to work overtime
7. Ability to work outside

Education/Experience:

1. H.S./GED, Preferred Vocational Ed +

Tools/Equipment:

1. Electronic diagnostic meters, scopes, calibrating and test equipment, etc. Able to operate power tools including; drills, saws, grinder, jack/nail hammers, threading equipment, etc. Weld and burning equipment, lathes, mills, or other machinery as required

Key success factors:

1. Analysis all types of circuits, or wiring systems using wiring diagrams, drawings, specifications, etc., as required to install, troubleshoot, maintain, calibrate, modify or otherwise service all types of electronic devices, production machinery, plant wiring, or other systems as directed.

### **V – Working Conditions**

1. Fabrication shop environment.
2. Lifting and carrying up to 50 lbs.
3. Operating fork trucks, manual pallet jacks, hand trucks and dollies.

### **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.

The employee must regularly lift and/or move up to 50 pounds. While performing the duties of this job, the employee is regularly required to talk. The employee is frequently required to stand, walk, use hands, reach with hands and arms, climb or balance, stoop, kneel, crouch or crawl, and hear. The employee is occasionally required to sit.