

FUNCTIONAL JOB DESCRIPTION

**JOB TITLE:** Fixture Builder

**DEPARTMENT:** Operations

# REPORTS TO: Manufacturing Engineer

**FLSA STATUS:** Non-Exempt

**PREPARED DATE:** November 2014

**JOB OBJECTIVE:** Responsible for improving the productivity of the welding department by building jigs and fixtures.

**ESSENTIAL DUTIES AND RESPONSIBILITIES** include the following. Other duties may be assigned.

* Studies blueprint, drawings, or sketches, and computes dimensions for laying out materials and planning model production.
* Aligns, fits, and joins parts by welding.
* Determines fixtures, machines, tooling, and sequence of operations to fabricate parts according to drawings and sketches.
* Records specifications, production operations, and final dimensions of model for use in establishing operating standards and machinery procedures.
* Consults and confers with engineering personnel to discuss developmental problems and recommend modifications to correct or improve performance of product.
* Devises and constructs jigs, and fixtures, or modifies existing tools and equipment.
* Positions and attaches stops and drills holes to facilitate welding, using drill press and hand tools.
* Inspects and tests model or other product to verify conformance to specifications, using precision measuring instruments.
* Reworks or alters component model or parts as required to ensure performance of equipment or that the parts meet standards.
* Lays out and marks reference points and dimension on materials, using measuring instruments and drawing or scribing tools.
* Follow blueprint specification and writing and requesting ECR to correct or improve process.

**EDUCATION:** One year certificate from college or technical school; or three to six months related experience and/or training; or equivalent combination of education and experience.

**LICENSES OR CERTIFICATIONS:** Certified welder to WASP, Inc. requirements.

**SKILLS/KNOWLEDGE/ABILITIES REQUIRED:**

* Be able to read and interpret blueprints and machine drawings to determine specific welding requirements.
* Should be familiar with most tools and equipment in shop and basic office equipment.
* Personal protection equipment needs to be worn when necessary.
* Ability to read and interpret documents such as safety rules, operating and maintenance instructions, and procedure manuals.
* Ability to speak effectively before customers or employees.
* Strong interpersonal skills requiring the ability to resolve conflicting interests and obtain cooperation.
* Ability to apply common sense understanding to carry out instructions furnished in written, oral, or diagram form.
* Be able to work with other employees.
* Be able to make decisions to improve production and product quality.
* Use and be familiar with welding equipment and measuring tools, interpret visual aids and must be able to perform simple shop math.

**CRITICAL 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.

* Day shift is 8 hours; night shift is 10 hours
* Stand-continuously (8-10 hours)
* Walk-occasionally (2 hours)
* Sit-rarely, very seldom may sit the entire shift
* Lift to/from floor-up to 50 lbs. occasionally (components), up to 25 lbs. frequent (components)
* Lift overhead-up to 20 lbs. rarely (components), 10 lbs. occasionally (components)
* Lift waist level-up to 50 lbs. occasionally (components), 25 lbs. frequent (components)
* Two hand carry-up to 30 lbs. for 5 feet, occasionally (components), heavier items are moved with a hoist
* One hand carry-2 lbs. for 5 feet occasionally (welding gun)
* Push/pull-up to 53 lbs. force (total 105 lbs. force) with two employees to initiate movement of large A-frame carts with two employees, rarely, 50 lbs. force (total 92 lbs. force) with two employees to initiate movement of large cart rarely, up to 38 lbs. force (total 75 lbs. force) with two employees to initiate movement of loaded carts occasionally, may move the carts into ovens a distance of 30 feet
* Elevated work (reaching)-frequently (to work on main frames)
* Twist-rarely (to reach areas on frames)
* Bend-frequently (to reach areas on frames during welding, grinding, working on components on saw horses or tables)
* Squat-occasionally (working around frames)
* Kneel or crouch-frequently (welding frames, grinding)
* Crawl-rarely (to get under frames)
* Stair climb-occasionally (rolling stairs)
* Ladder climb-occasionally (to reach upper parts of frames for welding or grinding)
* Balance-frequently (walking or standing around welding equipment, machines and components)
* Manual dexterity-rarely (writing, handling small items)
* Firm grasp-continuously (handling equipment and components, holding gun all shift with dominant hand)
* Foot pedal operation-occasionally (to operate tig welding unit)

Lifting more than 50 lbs. is performed by two employees or mechanical assistance is required.

KEY:

Rarely 1-5% of day

Occasionally 6-33% of day

Frequent 34-66% of day

Continuously 67-100% of day

**ENVIRONMENTAL EXPOSURE:**

* May be inside 95% of day, outside 5% of day to get material or place finished product outside, temperature exposure may be 70-100 degrees inside near ovens, and outside varies between -20 to 100 degrees + with high humidity in summer
* Confined spaces-slight
* High elevations-slight
* Moving objects-moderate (forklifts, carts)
* Noise level-severe (equipment)
* Slippery surface-moderate (floor sweats in summer, outside may be slippery in winter)
* Vibration-moderate (equipment, tools)
* Air pollution-moderate (dust, welding smoke)

**VISION AND HEARING REQUIRED:**

* Near vision and depth perception-significant
* Far vision-minimal
* Hearing sensitivity-minimal

**PROTECTIVE EQUIPMENT**: hard hat when using bridge crane, welding helmet when welding, eye protection, safety shoes, protective clothing, and ear plugs.

**EQUIPMENT USED TO PERFORM JOB:** Measuring equipment, mig welder, plasma cutter, cutting torch, hand grinders, hand tools, belt sander, forklift, overhead hoist, welding helmet, ear plugs, eye protection, safety shoes, and protective clothing.

\*Each employee should be aware that changes in this job description could occur at any time. Also this job description is not to be considered or construed to be a contract of employment.

**APPROVAL DATE**

Employee Signature Date

Manufacturing Engineer Signature Date