



**Position Purpose:**

Welds metal components together Layout, fit, and fabricate metal components to assemble structural forms, using knowledge of welding techniques(using brazing and variety of arc and gas welding equipment), metallurgy, and engineering requirements.

**Principal Duties and Responsibilities:**

1. Welds metal parts together, using both gas welding or brazing and any combination of arc welding processes. Ability to read, interpret and follow basic blueprints, engineering drawings, bill of materials, and other written instructions or procedures to accurately weld and fabricate
2. Performs related tasks, such as thermal cutting and grinding.
3. Repairs broken or cracked parts, fills holes, and increases size of metal parts.
4. May locate and repair cracks using inspection equipment and gas torch.
5. Positions and clamps together components of fabricated metal products preparatory to welding.
6. Lays out parts and assemblies according to specifications. Creates templates and other work aids to hold and align parts. Able rig (cranes) and fixture parts to be welded.
7. Welds components in flat, vertical, or overhead positions, and adjusts amperage, voltage, and speed during joining to assure required weld deposit
8. Inspects grooves, angles, gap allowances, and related aspects of assembly to ensure conformance to specifications, using micrometer, caliper, and related precision measuring instruments
9. Familiar with welding gases and appropriate uses Determines type of welding to be used, such as metallic arc, inert gas, electrode, and oven treatment, applying knowledge of metals to be joined, contours and angles to be formed, and specified stress tolerances.
- 10.Pre-heat parts for effective welding
- 11.Know how to set up welding machines. Must be proficient in using and adjusting MIG welders to the proper amperage and voltage for welding with various sizes of flux core wire.
- 12.Perform quality work checks to insure the product meets quality standards, using a variety of inspection tools and device.

**Education and Training, or Experience equivalent:**

- Have a High School diploma or equivalent
- Have 2-5 years of ,stick, tig and mig welding experience in a manufacturing environment

**Skills and abilities**

1. Ability to read, interpret and follow basic blueprints, engineering drawings, bill of materials, and other written instructions or procedures
2. Ability to work with typical shop equipment and power tools, Operate overhead cranes and fork trucks with proficiency.
3. Ability to inspect welded joints, grooves, angles, gap allowances, and related aspects of assembly to ensure conformance to specifications, using micrometer, caliper, and related precision measuring instruments.
4. Ability to check over engineering drawings and specifications to plan welding operations where procedural information is unavailable.
5. Must be proficient in using and adjusting MIG welders to the proper amperage and voltage for welding with various sizes of flux core wire.

6. Must be able to handle tasks involving moderate physical exertion, and must also be able to stoop, bend, twist, and climb while working in rather confined areas at times
7. Must be able to wear a respirator or a positive-pressure welding hood if or when required.
8. Must be able to proficiently achieve time and quality standards without compromising welding safety standards.
9. Must be capable of operating overhead crane to position or move work piece.
10. Must be able to demonstrate basic welding skills during initial test, which requires vertical and horizontal multiple-pass fillet welding on a small scale with 1/16 inch and 3/32 inch flux core and solid welding wire.
11. Must be able to interpret welding prints in regards to determining what type of weld the prints call for and where the weld is to be placed.
12. Must know what type of weld wire is used on different metals and what type of gas is used with the various welding wires.
13. Must be able to read a tape measure and read blue prints  
Must be able to use air, power and hand tools, especially a torch and grinder
14. Be mechanically inclined & able to gather and analyze relevant information, and coordinate work with other team members.
15. Be able to function independently within context of group's day-to-day activities
16. Operate overhead cranes to move component parts
17. Able to properly pre-heat parts for effective welding

#### **Other**

- Work in a safe manner at all times following established policies and procedures.
- Must provide own welder's tools and equipment of the trade to perform duties.
- May be required to pass employer performance tests or standard tests to meet certification standards of governmental agencies or professional and technical associations that include:
  - SMAW, arc welding
  - PAC, plasma torch cutting
  - CAC, carbon arc cutting
  - GMAW, mig
  - GTAW
  - Soldering
  - Surface buildup (padding) with SMAW, FCAW and GMAW
  - VEE welding with SMAW, FCAW and GMAW
  - SAW, submerged arc welding
  - Large and small scale fabricating
  - Cast iron welding with GMAW and Oxygen/Acetylene OAW brazing

#### **Reporting Relationship:**

Supervisor or department manager