

## **WELDER - FABRICATOR**

### **JOB DESCRIPTION**

**Classification Responsibilities:** A Welder - Fabricator is responsible for performing specialized welding and fabricating duties related to Mobile vehicle and equipment repair and maintenance. This classification will also be responsible for specific job-shop welding and fabrication assignments related to the custom operational requests and requirements of all City departments. The welding and fabrication responsibilities are journey-level and include being proficient in multiple welding processes, such as: arc welding (SMAW), metal inert gas (MIG) welding, tungsten inert gas (TIG) welding, flux-core welding (FCAW), plastic welding, hard facing, oxygen/acetylene welding, and brazing. The welder must also be proficient in plasma cutting, oxygen/acetylene cutting, tempering, flame straightening, air carbon-arc cutting, sheet metal cutting/bending, iron worker use, and pipe bending. The types of metals used in the welding process vary due to application and may consist of the following: mild steel, pipe (specialty and galvanized), high carbon steel (AR-400, AR500, and T-1), aluminum, stainless steel, brass, and plastic. Due to the majority of the work being performed on various types of City vehicles and equipment, there is a high potential for exposure to hazardous conditions; proper precautions and safety equipment (including fall protection equipment) must be used. The Welder - Fabricator must be able to operate a wide variety of City equipment to be able to complete repairs. The Welder - Fabricator may be required to develop time and material estimates for custom fabrication, new vehicle up-fitting, and modifications to City equipment as required. The Welder - Fabricator must be able to calculate time and material required to complete custom fabrications. The Welder - Fabricator must be able to properly interpret welding symbols and complete welding tasks as per blueprint specifications. The equipment being fabricated or repaired shall be completed in accordance with the best known current manufacturing practices relative to design, materials, strength, quality, durability, safety, and workmanship. This work must be completed in accordance with the latest codes, standards, and practices of the industry. This class is responsible for performing related duties as required.

**Distinguishing Features:** The Welder - Fabricator is supervised by a Shop Foreman or Shop Supervisor who reviews work through spot check observation, conferences, problems encountered, and overall results achieved. This position requires the use of independent judgment in selecting the repair methods, equipment, and materials used to accomplish assignments. Employee may be required to work days other than Monday through Friday and are subject to night and swing shift assignments. Incumbents must wear specialized safety equipment, such as respirators and protective clothing in performing duties. Special attention must be used when completing repairs due to potential fire/explosion hazards, including fuels, oils, and compressed natural gas (CNG), and unknown hazards found in the repair of solid waste trucks. This class is FLSA nonexempt.

### **QUALIFICATIONS**

**Employee Values:** All employees of the City of Mesa are expected to uphold and exhibit the City's shared employee values of Knowledge, Respect, and Integrity.

**Minimum Qualifications Required.** Any combination of training, education, or experience equivalent to considerable (3 - 5 years) journey-level experience in fabrication and welding processes, such as MIG, TIG, SMAW, oxygen/acetylene, and brazing processes.

**Special Requirements.** Employees must provide their own hand tools and rollaway box. Must meet the qualifications to wear a tight fitting respirator by passing a medical evaluation in accordance with Code of Federal Regulations (CFR) 1910.134 by hire or promotion date and must maintain certification. Must be able to obtain an AWS welding certification on 1G, 2G, and 3G within the first year of employment, and must maintain certification.

**Substance Abuse Testing.** Due to the safety and/or security sensitive nature of this classification, individuals shall be subject to pre-employment or pre-placement alcohol, drug and/or controlled substance testing as outlined in City policy and procedures. Certain positions within this class are subject to Department of Transportation (DOT) Federal Motor Carrier Safety Administration (FMCSA) drug and alcohol testing as outlined in 49 Code of Federal Regulations Part 382 (*by assignment*).

**Preferred/Desirable Qualifications.** Completion of an approved welding trade school program and welding certification in AWS 1G, 2G, 3G, 4G, FCAW, and SMAW. Automotive Service Excellence (ASE) Truck Equipment Installation and Repair (E3). CNG vehicle system design and operation training. National Fire Protection Association (NFPA) 52 familiarization training or classes. Welding safety training or courses, forklift certified, industrial rigging procedure class, fall equipment training, and load securement training or classes.

## **ESSENTIAL FUNCTIONS**

**Communication:** Communicates with coworkers, vendors, supervisors, and representatives from other City departments to establish and maintain effective working relationships, and accept information to develop repair procedures, or perform welding and fabrication functions. The form of communication may require multiple styles, including orally, written, or electronically (e-mail), or at times a combination of several forms. Requires the ability to provide accurate written repair estimates, including labor, material, and estimated time of arrival (ETA's). Assists in training coworkers in equipment repair and/or metal fabrication. Enters repair order comments, maintenance concerns, and other work-related information into the database. Due to several shifts completing one project, specific job detail information must be passed along at shift change.

**Manual/Physical:** Performs welding duties using ARC welding, MIG welding, TIG welding, flux-core welding, plastic welding, hard facing, and oxygen/acetylene welding and brazing. Weld ferrous and non-ferrous components with welding equipment as specified by layouts, engineering drawings, work orders, or verbal instructions. Wears respirator protection equipment when using welding equipment. Operates forklifts, hoists, slings, grinders, cutting torch, plasma cutter, oxygen/acetylene torches, air carbon-arc cutting equipment, sheet metal cutting/bending equipment, iron worker, pipe bender, 20-ton press, porta-power, milling machine, and other hand or power tools related to the equipment repairs or fabrication. Must be physically able to safely lift a minimum of 50 pounds. For heavier or unstable loads, the use or assistance of forklifts, cranes, jacks, slings, carts, and co-workers may be needed. All work completed must be documented and recorded on the proper assigned work order, which is retained in the Fleet Management database. Performs inspections and preventative maintenance regarding weld integrity on a variety of City equipment assigned to various departments. Identifies issues and initiates the repair or replacement of items. May be required to respond to emergency calls and take appropriate actions. Operates and/or maintains a variety of medium and/or heavy equipment, utility vehicles, tools, diagnostics and measuring devices, and/or other specialized equipment. Performs journey-level math skills and the use of measuring devices, such as depth gauge, calipers, micrometer, dial-indicators, etc. Operates specialized welding and fabrication equipment to weld or fabricate broken or cracked metal

parts and assemblies and makes new or modifies existing assemblies. Uses a cutting torch to remove damaged metal sections and parts. Operates machine shop equipment, such as a lathe, drill press, band saw, chop saw, grinder, and milling machine. Creates a variety of specialized metal parts and equipment. Grinds, sharpens, and retempers broken tools and brazes and solders nonferrous metals. Welding may require confined space conditions and entry permits may be required. Awkward body positions may result when accessing repair areas. Due to much of the work being close to potentially hazardous conditions and materials such as fuel tanks, hydraulic tanks, natural gas pressure vessels, etc. the training and use of specialized equipment and safety precautions is mandatory. Trains and assists employees in areas of welding repairs or fabrication. May be required to work at elevated levels of 13 feet while performing welding and fabrication repairs on the top of refuse equipment.

**Mental:** Reads, understands, and follows job order specifications, engineering drawings, hand sketches, and fabrication requests. Initiates, receives, reviews, and maintains various work orders, forms, schematics, reports, correspondence, records, databases, and/or other documents. Reviews work to ensure compliance with federal and state regulations, safety standards, etc. Ensures maintenance of documentation per state, federal, or industry regulatory requirements. Plans, lays out, and prioritizes work projects, and estimates the type, cost, and quantities of materials and labor required to complete work assignments. Performs mathematical calculations and cost analysis. Coordinates work activities with other City departments. Resolves work-related problems by researching and using appropriate repair practices. Comprehends and makes inferences from written material, including the interpretation of blueprints, plans, schematics, and rough sketches. Learns job-related material through on-the-job training and in classroom settings. Notifies supervisor, foreman, or lead welder of any equipment that needs repaired. Monitors and ensures availability of adequate supplies, equipment, and/or materials. Initiates requests for inventory replacement.

**Knowledge/Skill/Abilities:**

Knowledge of:

the work hazards and safety requirements of the welding and metal fabrication trade, including the proper use and care of tools and equipment; and  
the techniques, materials, and tools of the welding trade (example: gas, MIG, and arc welding, and the techniques of brazing and soldering nonferrous metals).

Skill in:

the use of a cutting torch; and  
repairing and fabricating ferrous and nonferrous metals and assemblies utilizing MIG, TIG, and gas welding techniques.

Ability to:

read and interpret blueprints, schematics, and rough sketches;  
complete new vehicle up-fitting projects and/or equipment modifications in the time estimated and budget allowed;  
use necessary shop equipment to complete tasks, such as appropriate welding equipment (selected to address work requirements), drill press, band saw, chop saw, machine lathe, horizontal milling machine, and a variety of grinders; and  
perform all the physical requirements of the class.

The duties listed above are intended only as general illustrations of the various types of work that may be performed. Specific statements of duties not included does not exclude them from the position if the work is similar, related, or a logical assignment to the position. Job descriptions are subject to change by the City as the needs of the City and requirements of the job change.

Revised 9/23

CDP/sb/th

CS4395.DOCX

EEO-SCW

JOB FCTN-MEC

Non-DOT Safety and Security-Y

CDL-N

RESP-Y

PAY GRADE: 49

IND-9410

SWORN-N

Non-DOT Random-N

DOT-Y (*By Assignment*)

INCREMENTS 82-200