



THE METROPOLITAN WATER DISTRICT  
OF SOUTHERN CALIFORNIA

## OPERATIONS AND MAINTENANCE TECHNICIAN IV WELDER-FABRICATOR/FIELD SERVICES (Journey)

<b>Group-Section:</b> Water System Operations - Various	<b>FLSA Status:</b> Non-Exempt <b>Bargaining Unit:</b> AFSCME	<b>Classification:</b> Operations and Maintenance Technician <b>Salary Grade:</b> 42 <b>Job #:</b> T03FS
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### **JOB SUMMARY**

Utilizes journey level skills, experience and knowledge in the practices, procedures, and methods of design and field welding/fabrication. Performs advanced welding-fabrication and repair of pipelines, feeders, equipment, assets, appurtenances and parts used in Metropolitan's large-scale water treatment, distribution, and hydroelectric systems, including design and layout, welding, metal smithing, pipefitting, and advanced knowledge of techniques used in conjunction with a variety of tools, machines and processes to complete welding/fabrication and repair projects.

Performs the practices and procedures of designing, laying out and completing welded/fabricated equipment and parts to repair and maintain a wide variety of water utility assemblies, parts and equipment ranging from large gates, valves, piping systems, pipelines, shafts, impellers and housings to structures, cabinets, vaults, catwalks, guard rails, drain covers, and similar equipment.

Builds, maintains, and improves a variety of equipment and fixtures composed of metal and metal alloys or other related and/or specialized materials including, but not limited to HDPE and PVC. Supports the operational core of water and power reliability by effectively meeting or exceeding internal and external customer expectations through advanced welding and fabrication practices applied to creating, maintaining repairing and improving equipment and parts essential to operating and supporting systems within the conveyance and distribution system, treatment and hydroelectric plants as well as other Metropolitan facilities.

### **SUPERVISION:**

#### **Received:**

Work is performed with minimal and at times intermittent on-site supervision. Broad direction is given in terms of operations and maintenance objectives that may require self-initiated work planning, sequencing and coordination of material and tool resources. Limited detailed guidance and advice is available which may result in the modification of work varied situations. Performance may be measured by the quantity and quality of work, operations and maintenance objectives and individual goals.

Receives oversight from the Team, Unit, Section, Assistant Group, or Group Manager.

#### **Given:**

As a lead may exercise technical and/or functional direction and/or training over assigned staff.

Specific attention is given to on-the-job training and development of O&M Technician Welder/Fabricator I, II, and III employees, in order that those employees attain specialized knowledge and skills to advance to O&M Technician Welder/Fabricator IV.

**JOB DUTIES**

1. Performs general and advanced welding/fabrication techniques, and specialized equipment/component installation and repairs to accomplish PM, CM, and improvements related to the rebuilding, repair and maintenance of water conveyance, treatment and hydroelectric equipment and parts to support operational reliability and system capacity.
2. Completes general and advanced welding/fabrication in both shop and/or field environments by safely utilizing traditional hand as well as power and fabrication tools such as drill presses, metal brakes and shears, plate-forming rolls, grinders, press brakes, punch presses and other similar tools and equipment to effectively weld/fabricate components from varied materials.
3. In accordance with District required training safely and effectively operates Computerized Numerical Controlled (CNC) cutting systems to complete projects with minimal material waste.
4. Performs advanced welding techniques on equipment and parts using plasma arc cutting, shielded metal arc, carbon arc, gas metal arc, flux-core arc, gas tungsten arc, submerged arc and oxygen acetylene processes on a variety of both ferrous and non-ferrous metals.
5. Utilizes journey level fabrication practices to effectively shape, cut, punch, drill and secure metal structures, parts, cages, pipes, steel decks, trusses, machinery foundations, brackets, hand and guardrails.
6. Performs and/or assists with improvements, PM and CM activities on a variety of welding/fabrication, and specialized construction tasks on system related components, equipment, and tools to ensure equipment life and uptime, as well as quality production and reliability.
7. Operates, in conjunction with large welding and field fabrication projects, necessary light equipment such as drills, saws, grinders, air compressors, trucks, overhead shop cranes and auto cranes below 5 tons, lifts or similar equipment to effectively complete work.
8. Assists with system outage operations for maintenance and repairs such as dewatering and refilling of pipelines.
9. Performs pipe threading, use of specialized torqueing tools and procedures, multiple fusion processes of HDPE, PMs and CMs of PVC systems, removing and installing valves of various sizes, and removing and installing couplings and meters.
10. Performs other Operations and Maintenance Technician IV Welder-Fabricator - Field Services-related job duties.

**EMPLOYMENT STANDARDS**

**MINIMUM QUALIFICATIONS**

**Education and Experience:**

A high school diploma or GED and 6 years of increasingly responsible relevant experience in a welder or fabricator position.

**OR**

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High school diploma or GED and attainment of journey level skills through a recognized welder/fabricator trade training program within an industrial environment.

Journey level experience as demonstrated by practical application of general and advanced techniques and practices specific to welding/fabrication, repair and maintenance of equipment and parts in a treatment or pump plant, conveyance and distribution, and/or power generation systems, and related apparatus.

**Required Knowledge of:** Advanced knowledge of theories, practices, tools and materials used for welding/fabrication related repair and improvement of water distribution, treatment and hydroelectric equipment and component parts; the techniques used to weld and fabricate a wide variety of water utility supporting systems and equipment such as vault and cover systems, guardrails, grates, and similar equipment; of the working characteristics of metals, metallurgy and alloys pertaining to fabrication of parts and equipment.

Knowledge of design and layout of complex welding and fabrication projects to ensure a high quality project or product is produced; and ability to apply and guide others in adhering to safety practices and regulations for operating mechanical and electrical equipment; practical application of techniques and practices specific to the welding/fabrication trades; skills necessary include welding and effective, safe operation of a variety of metal fabrication tools and equipment including light motorized equipment operation; journey-level skills in preventive and corrective maintenance practices related to welding and fabrication generally obtained through applicable training and experience; water distribution and treatment processes and practices to ensure compliance with public health and safety regulations as required.

**Required Skills and Abilities to:** Use and maintain mechanical, CNC, pneumatic and hydraulic tools and equipment normally and traditionally used in the welding and fabrication trade in a shop and field environment; Ability to interpret complex instructions, manuals, operating and maintenance procedures and specifications related to water utility welding and fabrication; understand, read and interpret blueprints, schematics and drawings of assets and systems, equipment, and parts necessary to effectively weld, fabricate, rebuild, and repair large-scale equipment, parts, structures or component parts typically found in a water treatment or pumping plant, conveyance and distribution system, or power generating facility.

### **CERTIFICATES, LICENSES and REGISTRATIONS REQUIREMENTS**

Employees in this position may be required to obtain and maintain the following certifications, licensing and registrations:

- Valid Drivers license from state of residency equivalent to a California Class A, B, and/or C with appropriate commercial license endorsements
- Forklift Certification
- Manlift Certification
- Respirator Certification
- Welding Certification
- SOOMS-Working Knowledge

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## **PHYSICAL DEMANDS/WORK ENVIRONMENT**

### **Expectations of Emergency and Stand-by Service:**

Employees in this position will be required to work stand-by, off-shift hours and/or report to different locations for shutdowns, emergencies or large-scale projects as needed.

### **Physical Demands:**

Heavy tasks may require lifting and carrying items weighing up to 50 pounds, with intermittent need to lift and carry materials and/or equipment weighing up to 100 pounds with assistance. Frequently requires pushing, pulling, turning and positioning parts, assemblies, equipment and tools weighing as much as 100 pounds with assistance. May be required to lift and move heavy items with the assistance of others and with lifting devices such as jacks, hoists and cranes of varied types and capacities. Physical effort includes frequent walking, stooping, bending, reaching, standing, kneeling and sitting for long periods of time. At times may be required to use respiratory filtration devices.

### **Work Environment:**

May travel to various sites requiring overnight stay; Work is performed indoors and outdoors at large pumping, treatment, hydroelectric or control facilities or other assets under all types of conditions, including extreme temperatures, open and confined spaces ranging from crawl spaces to sub-structures as well as varied types of terrains. Job tasks may require working from heights and functioning from lifts, hoists, scaffolds, and cranes over surfaces ranging from earthen materials to concrete, steel and water. The work environment frequently involves exposure to equipment and tools producing high levels of noise, as well as potentially dangerous materials and chemicals that require careful adherence to extensive safety precautions, rules and regulations.

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