



Utility Mechanic I/II

Class Code:
706,707

ALAMEDA COUNTY WATER DISTRICT
Revision Date: July 2012, July 2019

DEFINITION

Under supervision of the Facilities Maintenance Supervisor, uses a variety of hand and shop tools and welding and rigging equipment to perform a wide range of mechanical maintenance and repair work at the water production, distribution, water supply and groundwater recharge facilities.

The journey-level Utility Mechanic II may also direct the work of sub-journey level helpers and assist the Utility Mechanic I in developing journey- level knowledge and competencies

DISTINGUISHING CHARACTERISTICS

Utility Mechanic I is the semi-skilled sub-journey level classification in the Utility Mechanic series. Under close to general supervision within a framework of established policies and procedures, incumbents perform routine mechanical maintenance work, assist with the more complex maintenance and repair work and will not generally be subject to standby duty or emergency call outs, except when other on-duty personnel require assistance.

This classification is distinguished from the journey -level Utility Mechanic II which receives less supervision and performs a full range of skilled mechanical maintenance and repair duties, requiring a higher degree of trade knowledge and competencies. The Utility Mechanic I and II classifications are flexibly staffed. Incumbents in this classification normally advance to a Utility Mechanic II after two years at sub-journey level and with a performance rating of "meets requirements" overall on the most recent evaluation and demonstrated proficiency in the job requirements of the journey level classification

Utility Mechanic II is the journey level classification in the Utility Mechanic series. Under general supervision within a framework of established policies and procedures, incumbents may direct sub-journey level helpers; assist the Utility Mechanic I in developing journey-level knowledge and competencies and perform a full range of responsible repair and maintenance work at the water treatment plant and facilities. Assignments are given in general terms and are subject to periodic review while in progress and upon completion. There is some latitude for independent judgment and action in well-defined areas of work.

This classification is distinguished from the sub-journey level Utility Mechanic I by the complexity of work assignments, the potential impact of error, the level of independence with which assignments are performed and the limited level of supervision received. This classification is distinguished from the Facilities Maintenance Supervisor which supervises emergency and preventive maintenance activities including the repair and installation of equipment and materials used in the production, treatment and distribution of water.

TYPICAL DUTIES

TYPICAL EXAMPLES OF DUTIES MAY INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

Utility Mechanic I:

- Assists in the maintenance of all mechanical systems, and in the repair and maintenance of mechanical facilities located within regulator stations, San Francisco Water Department take-offs, well fields, booster stations, actuator valve vaults, and water production and storage facilities.
- Performs less complex repairs, maintenance, installation, and adjustment work on a variety of water production equipment that includes large and small industrial pumps, motors, valves, hydraulic and pneumatic controls and regulators of various types, and associated piping systems; chemical systems and processing equipment; compressors, and ozone production and distribution equipment.
- Learns to safely perform more complex tasks; fabricates less complex parts and fittings; makes assemblies and repairs units used in maintenance work from work orders, drawings, specifications, sketches, and verbal instructions. Keeps records of training progress.

Utility Mechanic II:

- Repairs and maintains all mechanical systems located within regulator stations, San Francisco Water Department take-offs, booster stations, actuator valve vaults and water production and storage facilities including: plant air compressors, after coolers, air receivers, desiccant dryers, centrifugal water chillers, de-ionized water systems, chemical feed systems, chemical injection stations and related equipment; and repairs, maintains and overhauls variable displacement piston, peristaltic, diaphragm, progressive cavity, gear, centrifugal and other types of pumps.
- Performs maintenance and repair on all mechanical systems.
- Overhauls variable speed drives, speed reduction, and angle drive gear.
- Performs skilled rigging in moving and installing heavy equipment, materials and machinery, levels, and aligns mechanical equipment and machine parts such as high speed couplings and shafts to tolerances as close as .001 inch.
- Measures, cuts, reams, threads, bends, and installs pipes of various size and tubing for conveying water, air, oil, chemicals, and other substances; lays out piping, measures length and angle for cuts to close tolerance and assembles pipe for close fit by use of threaded, bolted, flanged, and welded joints; flares tubing, installs fittings, solders joints, fashions and installs pipe hangers and fasteners; and performs rigging incidental to industrial pipe fitting.
- Participates in field testing, equipment startup, verification of operating performance, shutdown, and system troubleshooting.

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- Confers with engineers and personnel of other groups, and works from sketches, blueprints, diagrams, manufacturer bulletins and oral and written instructions.
- Requisitions materials, supplies, and equipment; and prepares reports concerning repairs, equipment condition and work time.
- Identifies and implements safety procedures; may direct the work of sub-journey level helpers and assists the Utility Mechanic I in developing journey-level knowledge and competencies.
- Assists other Trades and performs other related work as required.

REQUIREMENTS

Any combination of education and experience that would likely provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the knowledge, skills, and abilities would be the equivalent of:

Education and Experience:

High school diploma or its equivalent; and

Utility Mechanic I: At least three years of experience in the maintenance and repair of water distribution systems, water treatment plants, food processing plants, refineries, or similar facilities. Two years experience as a Utility Worker II at the District can substitute for one year of required experience up to a maximum of two years.

Certification: Must obtain Service Truck Crane (STC) certification within 12 months of appointment to the position as required by CAL/OSHA and FED/OSHA.

Utility Mechanic II: Five years of recent experience in the maintenance and repair of water distribution facilities, water treatment plants, food processing plants, refineries or similar facilities, including two years experience equivalent to the District's Utility Mechanic I. Welding experience is desirable.

Certification: Must obtain within 12 months of appointment and maintain STC Crane certification as required by CAL/OSHA and FED/OSHA.

Knowledge, Skills and Abilities:

Utility Mechanic I:

General knowledge of: Standard methods, practices, procedures and tools of the mechanical maintenance trade; general mechanical equipment repair and maintenance techniques; safety regulations and practices relative to work activities; shop mathematics; the operation and use of electric arc and gas welding and cutting equipment.

Skill and Ability to: Perform semi-skilled maintenance and repair of shop, field and plant equipment and structures and learn to perform skilled mechanical repair, maintenance, and installation work involving the use of specialized tools, instruments, and equipment; learn to interpret mechanical and shop drawings, specifications and diagrams; acquire increased job knowledge and skills; proper and safe use of a variety of hand and power tools of the trade; apply safe work practices; keep records related to the work; establish and maintain effective

working relationships with those contacted in the course of the work; and perform the essential functions of the job without causing harm to self or others

Utility Mechanic II: (In addition to the above)

Working Knowledge of: electrical and hydraulic principles; principles of testing, diagnostic and repair procedures, including use and adjustment of computerized diagnostic equipment; functions and capabilities of common metals and alloys; rigging principles and techniques; diesel engines and related cogeneration equipment; and basic methods and procedures of carpentry and painting .

Skill and Ability to: Plan and independently perform skilled mechanical repair, maintenance, and installation work involving the use of specialized tools, instruments, and equipment; arc, MIG (gas metal arc), oxy-acetylene weld, hard and soft solder, oxy-acetylene cut, and fabricate in steel; effectively perform duties alone or with others; safely and skillfully operate hand and power tools and equipment common to the trade; train and direct the work of sub-journey level employees; effectively operate computer and work-related software;

Additional Requirements:


- Must possess a valid California driver's license and have a satisfactory driving record.
- A Distribution Operator (O2) license and/or Treatment Operator (T2) license from the State of California is desirable.

Working Conditions/Physical Requirements:

The essential duties of this classification require the ability to work outdoors 50% to 100% of the time under various climatic and geographic conditions; to work overtime as needed and subject to standby duty and emergency call-outs as required; to work in an environment with potential exposure to high frequency and constant noise, dust, allergens, chemicals, solvents, fumes, smoke, gases, grease, oil and sun exposure; in confined spaces; on ladders and/or scaffolding; and work around moving vehicles and hazardous equipment and machinery.

The essential duties of this classification require repetitive use of feet and hands to operate vehicles, equipment and tools; the ability to wear, on, and off a self-contained breathing apparatus; to feel the attributes of objects by touch; to verbally exchange ideas and information; to hear to receive verbal detailed information and instruction; to see at arm's length to twenty feet with a good field of vision; to maintain body equilibrium to prevent falling when walking, standing or crouching on narrow, slippery or moving surfaces; to climb stoop, kneel, crouch, reach, stand, and walk on a sustained basis; to lift and carry tools and equipment and to push and pull objects weighing between 25 to 75 pounds; and finger dexterity and hand strength to operate and grasp tools and equipment.

Revised: 07/12; 07/19

Approved: 
Human Resources/Risk Manager