

JOB DESCRIPTION
Mechanical Maintenance Technician I (Flex)
Mechanical Maintenance Technician II
Code Number: 50004, 50005

GENERAL PURPOSE

Under general supervision, performs a wide variety of skilled, journey-level duties in the installation, modification, design, maintenance, and repair of mechanical equipment and machinery used in the operation of large state-of-the-art micro-filtration water treatment plants, reverse osmosis desalination facilities, sewer lift station and reclaimed water pump stations, potable booster stations; operation/maintenance, including: production, storage and distribution facilities, power generation, UV disinfection, and chlorine generation equipment; and performs related duties as assigned.

DISTINGUISHING CHARACTERISTICS

Mechanical Maintenance Technician I is the skilled entry level class in the Mechanical Maintenance Technician series. Initially under close supervision, incumbents perform the more routine duties while learning District policies and procedures and becoming familiar with the variety of departmental systems and practices. As experience is gained, duties become more diversified and are performed under more general supervision. This class is alternately staffed with Mechanical Maintenance Technician II, and incumbents may advance to the higher level after gaining experience and demonstrating proficiency which meet the qualifications of the higher level.

Mechanical Maintenance Technician II is the experienced/journey level class in the series, fully competent to independently perform duties. This class is distinguished from the lower classification of Mechanical Maintenance Technician I by the relative independence with which duties are performed.

Employees in this classification are subject to on-call, which may include rotating-duty schedule, weekends and 24-hour emergency call out with little or no notice. Any employee designated to serve on-call who repeatedly refuses to serve on-call, or report for emergencies, shall be subject to disciplinary action up to and including discharge.

ESSENTIAL DUTIES AND RESPONSIBILITIES

The duties listed below are intended only as illustrations of the various types of work that may be performed. The omission of specific statements of duties does not exclude them from the position if the work is similar, related or a logical assignment to the class.

Performs a variety of skilled, journey-level duties involved in the inspection, diagnosis, troubleshooting, maintenance, repair and servicing of field and shop equipment, components, facilities and machinery associated with the production, collection, treatment, storage, and distribution of potable water, raw water, wastewater, and reclaimed water and in the collection and transmission of wastewater, such as pipes, tubes, rods, seals, shafts, stuffing boxes, gears, motors, bearings, couplings, chemical production, chemical storage and feed systems, flow stations, pumping stations, sewage lift stations, valves, deep wells and pumps from fractional to 1000 hp (vertical turbine, submersible, split case horizontal, right angle, gears, etc.); tests and monitors equipment and machinery for vibration, bearing temperature and output capacity.

Repairs and maintains settling basin machinery, cross-connections, mixers and hydraulic gates.

Organizes and conducts with outside utilities pump testing using various head and flow instruments for well, horizontal, centrifugal and vertical turbine pumps; plots and evaluates test results and calculates performance data; determines ground water levels using electrical sounders, air lines or transducers.

Installs, maintains, and repairs equipment, including natural gas compressors and microturbines used for power generation, hydraulic and pneumatic systems, booster pumps, disinfection equipment, hydro mechanical systems and related equipment and apparatus used in the production, treatment, storage and distribution of potable, reclaimed water and the collection and transmission of raw sewage and wastewater.

Operates and maintains sewer lift station facilities, equipment, and machinery by using manual, electronic and computer control systems (i.e. float, ultrasonic level, or pressurized air control systems).

Maintains and services air compressors; maintains, installs, pulls, services, and aligns all electric motors.

Inspects vehicles in preparation for transit to plants and facilities including preparing class A vehicles, equipment transports and cranes for their respective duties/assignments.

Operates shop bridge, cranes, dump trucks, forklifts, compressors, jackhammers, portable and stationary generators, steam cleaners, pneumatic, hydraulic and electric tools, shop machinery and related tools and equipment.

Operates mobile truck hydraulic (Telescopic) cranes up to 17.5 tons; utilizes lifting/load handling devices (e.g. slings, cable, and spreader bars).

Installs, replaces and repairs chemical storage, feed and distribution system components such as storage tanks, generators, analyzers, evaporators, chlorinators, distribution lines and valves, and eductor or injector pumps.

Responds to emergency leaks in chemical feed systems and makes emergency repairs to storage tanks and feeders; supplies emergency generators for power outages; supplies portable pump stations and fab piping.

Maintains, repairs, and services valves and surge tanks at reservoirs, pumping and flow stations; install and/or replace large water meters and backflows.

Schedules and coordinates activities with other sections and divisions, including construction crews on valve repairs.

Ensures the timely and accurate completion of preventive maintenance activities, utilizing computerized maintenance management systems; maintains detailed record keeping in support of computerized maintenance management system.

Requisitions necessary tools, equipment and supplies.

Researches new operational methods, techniques and equipment and recommends their application.

Plans and lays out jobs from blueprints, drawings, sketches or verbal instructions; maintains records in the form of blueprints, plans and specifications for industrial and waterworks equipment and machinery; makes suggestions for system design and operational improvements.

Designs and fabricates a variety of brackets, supports and other metal structures, using torches, welding equipment and other fabricating equipment; fabricate and install exhaust piping, mufflers, catalytic converters, heat exchangers and associated piping for industrial engines and generators.

Rebuilds existing pumps and valves at lift stations, wells, pumping plants and water process facilities.

Fabricates and installs piping for new pump installations which may include plumbing, pipe fitting, welding and machine tool operations.

Responds to emergency situations as necessary; extended duties may include confined space entries.

Uses lockout/blockout procedures to block electrical and other energy sources and operates equipment at panel for maintenance purposes.

May assist in training or instructing others in the trade; may lead the work of others as a project leader.

Performs related duties as assigned.

DESIRED MINIMUM QUALIFICATIONS

Knowledge of:

Principles, methods, techniques, tools and equipment used in the installation, maintenance and repair of industrial/mechanical equipment and machinery common to large state-of-the-art micro-filtration water treatment plants, reverse osmosis desalination facilities, waterworks systems, lift stations, and production wells; machine shop procedures and practices; safety practices, safe work methods and safety regulations pertaining to the trade; application of lockout/blockout procedures; shop mathematics; water hydraulics; use and operation of oxyacetylene and electric arc and TIG welding equipment and materials; basic electrical safety, confined space entry procedures, basic first aid, asbestos removal; Safe Drinking Water Act and relevant state and federal regulations; cost estimating and basic techniques of engineering and drafting as they apply to assigned responsibilities; computer applications related to the work; codes, ordinances and regulations pertaining to the trade; mechanical maintenance, crane operation, metals identification and welding.

Ability to:

Diagnose and repair a wide variety of industrial/mechanical equipment, systems and machinery, such as valves, motors, pumps and other equipment common to the waterworks field; use precision and diagnostic instruments to measure required tolerances of mechanical parts; operate a pump installing rig; arc and TIG weld and oxygen-acetylene cut; identify and implement effective courses of action to complete assigned work; read and interpret plans, specifications, manuals and blueprints; use hand tools, pipe-threaders, taps, dies, measuring instruments and lazer alignment equipment; exercise independent judgment within established guidelines; establish

and maintain effective working relationships with those contacted in the course of the work; coordinate work assignments with other sections, divisions or departments; operate class A vehicles in accordance with DOT regulations; follow and apply written and oral work instructions.

Training and Experience:

A typical way of obtaining the knowledge, skills and abilities outlined above is graduation from high school, or G.E.D. equivalent; and two years of journey-level experience in the installation, maintenance and repair of pumping equipment, including valves, pumps and motors; or an equivalent combination of training and experience.

A Mechanical Maintenance Technician I may be considered for advancement to Mechanical Maintenance Technician II after demonstrating proficiency to perform the full range of duties of the latter class.

Typically, a Mechanical Maintenance Technician I is expected to meet the proficiency criteria within a 6-24 month period, depending on an individual's prior experience and progression in performing the full range of Mechanical Maintenance Technician II duties.

Licenses; Certificates; Special Requirements:

A valid Class A California driver's license, with tank and hazmat endorsements or the ability to obtain one within six months of date of hire, and the ability to maintain insurability under the District's Vehicle Insurance Policy. All District employees required to possess a valid Class A driver's license for the performance of their duties shall be subject to random drug and alcohol testing pursuant to District policy and federal law. Certifications required include:

- Forklift Operator's License
- California State Distribution Operator I is required in order to flex to Mechanical Maintenance Technician II for employees hired into this classification after 01/01/2010 (for those assigned to potable water).
- Mechanical Technologist I certification is required in order to flex to Mechanical Maintenance Technician II for employees hired into this classification after 01/01/2010 (for those assigned to lift stations).

PHYSICAL AND MENTAL DEMANDS

The physical and mental demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this class. Reasonable

accommodations may be made to enable individuals with disabilities to perform the essential functions.

Physical Demands

While performing the duties of this job, the employee is regularly required to use hands to finger, handle, feel or operate objects, tools or controls; and reach with hands and arms. The employee frequently is required to stand and talk or hear; and walk or sit. The employee is frequently required to climb or balance; stoop, kneel, crouch or crawl; and smell.

The employee must regularly lift and/or move up to 50 pounds and frequently over 100 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception and the ability to adjust focus.

Mental Demands

While performing the duties of this class, the incumbent is regularly required to use written and oral communication skills; read and interpret data, information and documents; analyze and solve problems; use shop mathematics; observe and interpret situations; deal with changing, intensive deadlines; and interact with officials and the public.

WORK ENVIRONMENT

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this class. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

The incumbent is frequently exposed to toxic chemical, fumes, gases and liquids, including but not limited to sodium bisulfate, methane, chlorine, caustic soda, hydrogen sulfide, carbon monoxide, aqueous ammonia, industrial and residential waste, and airborne particles. The incumbent works near moving mechanical parts; on slippery and uneven surfaces; in extreme outside weather conditions in wet or humid conditions; open pits, vaults and heavy traffic areas; and the risk of electric shock. The noise level in the work environment is frequently loud.

Employees may, at times, be required to wear confined space breathing apparatus.

Eastern Municipal Water District

Date Adopted: **04/16/97**

Date Revised: **10/09**

FLEX REQUIREMENTS
Mechanical Maintenance Technician I (Flex)
Mechanical Maintenance Technician II

LENGTH OF TIME REQUIRED

A Mechanical Maintenance Technician I may advance or flex to the Mechanical Maintenance Technician II class after **6-24 months** of experience in the Mechanical Maintenance Technician I class.

PERFORMANCE RATING

The incumbents must receive an overall performance rating of good or better on their most recent annual performance evaluation in order to flex to the higher class.

COMMENTS

The Mechanical Maintenance Technician I must also demonstrate proficiency to perform the full range of duties as described in the Mechanical Maintenance Technician I/II job description. This includes demonstrating proficiency in the overhaul of pumps, shaft alignments, pump seal maintenance, troubleshooting/repair of lift station operational rotating equipment, use of hot tank and solvent cleaning tank, working with disinfection equipment and chemicals, and working in confined spaces.

Possession of a Class A drivers license with tank permit, hazardous materials permit., and a fork lift operators license is also required.

Possession of a Mechanical Technologist Grade I certification (lift stations) or a California State Distribution Operator I certification (potable water) is also required to flex for all employees hired into this classification after 01/01/2010.