



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

OPERATIONS AND MAINTENANCE TECHNICIAN I MACHINIST (Entry)

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| Group-Section: Water System Operations - Various | FLSA Status: Non-Exempt Bargaining Unit: AFSCME | Classification: Operations and Maintenance Technician Salary Grade: 28 Job #: S03 |
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JOB SUMMARY

Learns mechanical skills, experience and knowledge, in the practices, procedures, and methods of measuring, checking, fabricating, repairing and the disassembly and assembly of general and complex machined parts, equipment and tools. While being trained in the established trade, procedural and quality practices, learns to employ accuracy and precision in fabricating, repairing and improving a wide variety of water utility parts, appurtenances and equipment including pumps, valves, gates, pistons, shafts, bowls, impellers as well as varied motors, generators, compressors and other equipment associated with water movement, treatment and hydroelectric plant processes and facilities.

Assists in the operational core of water and power reliability by learning to effectively utilize all types of machine shop tools and equipment and apply basic skills in machining accuracy to tool varied metals, alloys and other materials into parts, equipment components, machinery and specialized tools.

Assists in providing quality machined and fabricated parts and equipment reliability through a mix of general preventive and corrective maintenance activities.

SUPERVISION:

Received:

Work is performed with clear and detailed instructions. Close supervision is given to ensure proper adherence to standards, procedures, rules, and practices; deviations are referred to a supervisor, lead person or journey level machinist. Direction is provided on the tasks to be undertaken including machining methods and operation sequences with minimal latitude to rearrange work sequences. Guidance on the approach to standard circumstances, tasks and activities is provided in procedures, manuals, rules, or common craft practice. A supervisor, lead person or journey level machinist provides guidance on the approach to tasks or activities encountered in non-standard or uncommon circumstances.

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

Given:

None

JOB DUTIES

Assists with the performance of machinist tasks to support the operational core of water and power reliability by effectively utilizing all types of machine shop tools and equipment and apply basic skills in machining accuracy to tool varied metals, alloys and other materials into parts, equipment components, machinery and specialized tools. Employees in this title assist in providing quality machined and fabricated parts and equipment reliability through a mix of general preventive and corrective maintenance activities.

1. Assists with fabrication, maintenance and repair of specialized utility equipment and very large parts (up to 40 tons), including impellers and pump shafts, through the operation of CNC and/or manual lathes, milling machines, drill presses, grinding and sandblasting tools, punches, taps and dies, hydraulic presses, specialized portable machine tools and related/similar machine shop equipment.
2. Assists with performing milling and lathe work on component parts and equipment such as pumps, valves, gates, pistons, shafts, bowls, impellers, motors, generators, compressors, and other water distribution, treatment and hydroelectric system parts and equipment for emergency and CM work.
3. Assists with ensuring accuracy of machined parts and tools through the use of traditional and advanced calculations, and precision measurement tools utilized in a large machine shop and production environment.
4. Assists with the accurate diagnosis and assessment of problems with worn or defective parts and equipment through troubleshooting to determine with assistance corrective actions for repairing, fabricating and/or machining new or improved end use part(s) to extend equipment reliability and life.
5. Assists with the repair of stationary equipment at field locations (MWD, Member Agency, and DWR locations) including a wide variety of water utility parts, appurtenances and equipment including pumps, valves, gates, pistons, shafts, bowls, impellers as well as varied motors, generators and compressors using portable machining equipment.
6. In accordance with district required training assists with safely operating cranes and rigging, forklifts and other equipment to move large parts and heavy equipment within a shop production environment.
7. Assists with accurate and appropriate programming to set-up and operate manual machinery and CNC equipment to effectively use materials.
8. Assists with routine and/or minor mechanical PMs and CMs on machining equipment utilized in a large machine and utility production shop.

EMPLOYMENT STANDARDS

MINIMUM QUALIFICATIONS

Education and Experience:

High school diploma or GED in addition to a minimal experience working in a large industrial machine shop using CNC and manual machines.

Experience and knowledge as demonstrated by practical application of basic techniques and practices specific to the inspection, operation, maintenance and repair of machining equipment.

Required Knowledge of: Employees in this title are at the entry-level and learn skills through classroom and on-the-job training or they are obtaining the necessary experience working with higher-level Machinist to competently demonstrate:

Theories, practices, tools and materials of machining practices and techniques, tools and material of fabrication and welding practices and techniques, safe operating techniques and the occupational hazards of motorized or pneumatic equipment operation, and electrically energized machining and fabrication tools, equipment and components, and safety practices and regulations for inspecting, maintaining, and repairing machining equipment.

Required Skills and Abilities to: Assist in developing a high degree of accuracy and precision in performing work according to instruction and quality specifications, use and maintain electrical/mechanical tools and equipment normally and traditionally utilized in machining operations and maintenance, assist with reading and interpreting blueprints, manufacturers' manuals and/or developing sketches, models, and diagrams to complete machining and fabrication, repair, or modification of repair of complex water utility parts and equipment of varied types and sizes to make fine, skillful and highly controlled muscular movements and manipulations to simultaneously and effectively operate complex equipment such as a milling table or other shop equipment vertically and horizontally, diagnose malfunctions of machine shop equipment and systems (visually and/or aurally) to reduce operator risk and downtime, and set-up and operate computerized numerical control (CNC) equipment, safe operating techniques and the occupational hazards of motorized or pneumatic equipment operation, and electrically energized machining and fabrication tools, equipment and components.

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 C
- Forklift Certification
- Manlift Certification

PHYSICAL DEMANDS/WORK ENVIRONMENT

Expectations of Hours of Service:

Employees in this position may be required to work off-shift hours to address operational needs and emergencies as required. May be required to work extended periods away from the normal reporting location.

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: Work is performed indoors and outdoors at large pumping, treatment, hydroelectric or control facilities or other locations 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. Work activity may be frequently conducted in close proximity to electrically energized equipment including high voltage systems. 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.