



Electrical/Mechanical Technician 1

Category: Classified
Pay Grade: C19
Job Code: 17232

To perform this job successfully, an individual must be able to perform the essential job functions satisfactorily. Reasonable accommodations may be made to enable individuals with disabilities to perform the primary job functions herein described. Since every duty associated with this position may not be described herein, employees may be required to perform duties not specifically spelled out in the job description, but which may be reasonably considered to be incidental in the performing of their duties just as though they were actually written out in this job description.

JOB SUMMARY

Performs full performance Electrical/Mechanical Technician work specializing in the installation, modification, fabrication, repair, and maintenance of electrical and/or heavy mechanical equipment and systems; utilizes knowledge in electrical, plumbing, welding, or other trades to locate and correct industrial systems malfunctions and heavy operating equipment improvements, as well as County properties, facilities, equipment, pumping systems, conveyor systems, and lines or devices, electrical and mechanical equipment used in production facility and plant operations, treatment and transmission of potable water, wastewater and distribution of reclaimed water, large conveyor systems, hydraulic transportation screening/passenger, and other industrial electrical/mechanical equipment.

ESSENTIAL JOB FUNCTIONS (examples, not all inclusive)

- Installs, modifies, fabricates, repairs, and maintains a broad range of electrical and/or heavy mechanical equipment and systems for one or more highly advanced electrical/mechanical assignment locations for utilities, public works, and other agencies or departments;
- Installs, maintains, modifies and repairs a variety of heavy mechanical machinery, equipment, and systems used in wastewater treatment plants or water treatment and distribution systems;
- Overhauls well pumping and lift station equipment through removal, repair, and replacement of pipes, pumps, and motors;
- Performs inspections and operational efficiency checks, conducting preventive maintenance service on the electrical and mechanical components of a variety of pumps and supportive equipment, machinery, facilities, security, and conveyor/transport systems;
- Detects causes of electrical failures, interprets and ensures compliance with established codes, calculates data necessary for wiring instrument systems, and requisitions supplies and materials needed to complete task;
- Disconnects, repairs, and reconnects, and/or replaces electric motors and may install electric wiring, conduit, and circuitry and repair switch gear equipment;
- Installs, maintains, and repairs chlorination systems, chemical feed pumps, and metering equipment;
- Maintains grit system and UV system;
- Replaces or repairs electronics in panels;
- Repairs and adjusts mechanical systems for vehicular equipment, hydraulic pump systems, and high-pressure line cleaning pumps and performs structural repairs on large cranes, pressure trucks, and backhoes;
- Repairs and adjusts mechanical and hydraulic systems on passenger loading bridges, baggage belt systems, and other Airport equipment and systems;
- Installs and reroutes pipes at wastewater treatment facilities and pumping stations, or water production and distribution stations;
- Performs fabrication and welding to make required repairs or enhancements;
- Maintains records of services and maintenance;
- Maintains cleanliness of pump stations;
- Performs other related job duties as assigned.

QUALIFICATIONS

Education and Experience:

Completion of a two-year technical or vocational program in mechanical skilled or electrical trades in the assigned electrical/mechanical field; or two (2) years of journeyman experience in the maintenance and repair of heavy mechanical equipment and machinery in the assigned electrical/mechanical field; or an equivalent combination of education, training, and/or experience.

Special Qualifications (May be required depending on area of assignment):

- Florida Driver's License or Florida Commercial Driver's License and endorsement, if any.
- Assignment to work a variety of work schedules including compulsory work periods in special, emergency, and/or disaster situations.
- Employee to acquire and maintain certification in designated areas according to area of assignment.
- Other knowledge, skills, abilities, and credentials required for a specific position.

Knowledge, Skills and Abilities:

- Knowledge of principles and practical application of electrical, plumbing, welding, and possibly other trades;
- Knowledge of site safety and security requirements, such as potable water production and wastewater treatment processes or other location or mission specific security policies applicable to assignments;
- Knowledge of installation, modification, fabrication, repair, and maintenance of electrical and/or heavy mechanical equipment used in water plant and/or wastewater plant or other assigned operations;
- Knowledge in controlling the production and distribution of potable water or collection of wastewater;
- Knowledge of types of potable water and wastewater handling equipment (motors, valves, pumps, electronic sensors, etc.);
- Knowledge in repair and operation of electrical monitoring equipment, pumps, chemical feeders, baggage conveyor systems boarding ramps, and other systems;
- Knowledge in the repair and operation of electrical monitoring equipment, computerized in-line baggage systems, passenger boarding bridges, and automated security systems/devices;
- Skill in applying knowledge of trade in assigned areas;
- Skill in using standard building trades tools and devices;
- Ability to apply computer applications and software;
- Ability to perform a combination of skilled trades tasks such as electrical, plumbing, mechanical, welding, and other skill required to maintain, repair, and improve potable water and wastewater operations;
- Ability to apply mechanical expertise for purpose of troubleshooting;
- Ability to understand and follow oral and/or written instructions;
- Ability to adjust and regulate a variety of automatic or manually controlled auxiliary equipment to ensure safe operations;
- Ability to repair and replace electrical and/or mechanical controls and parts, filters, pumps, chemical feeders, and related equipment;
- Ability to use or repair small, medium, and heavy equipment and machinery.

PHYSICAL/MENTAL DEMANDS

The work is heavy work which requires exerting up to 100 pounds of force occasionally, and/or up to 50 pounds of force frequently, and/or up to 20 pounds of force constantly to move objects. Additionally, the following physical abilities are required:

- **Balancing:** Maintaining body equilibrium to prevent falling while walking, standing or crouching on narrow, slippery, or erratically moving surfaces. The amount of balancing exceeds that needed for ordinary locomotion and maintenance of body equilibrium.
- **Climbing:** Ascending or descending ladders, stairs, scaffolding, ramps, poles and the like, using feet and legs and/or hands and arms. Body agility is emphasized.
- **Crawling:** Moving about on hands and knees or hands and feet.
- **Crouching:** Bending the body downward and forward by bending leg and spine.

- Feeling: Perceiving attributes of objects, such as size, shape, temperature or texture by touching with skin, particularly that of fingertips.
- Fingering: Picking, pinching, typing, or otherwise working, primarily with fingers rather than with the whole hand as in handling.
- Grasping: Applying pressure to an object with the fingers and palm.
- Handling: Picking, holding, or otherwise working, primarily with the whole hand.
- Kneeling: Bending legs at knee to come to a rest on knee or knees.
- Lifting: Raising objects from a lower to a higher position or moving objects horizontally from position to position. Occurs to a considerable degree and requires substantial use of upper extremities and back muscles.
- Pulling: Using upper extremities to exert force in order to draw, haul or tug objects in a sustained motion.
- Pushing: Using upper extremities to press against something with steady force in order to thrust forward, downward or outward.
- Reaching: Extending hand(s) and arm(s) in any direction.
- Visual ability: Sufficient to effectively operate office equipment including copier, computer, etc.; and to read and write reports, correspondence, instructions, etc.
- Hearing ability: Sufficient to hold a conversation with other individuals both in person and over a telephone; and to hear recording on transcription device.
- Speaking ability: Sufficient to communicate effectively with other individuals in person and over a telephone.
- Mental Acuity: Ability to make rational decisions through sound logic and deductive processes.
- Talking: Expressing or exchanging ideas by means of the spoken word including those activities in which they must convey detailed or important spoken instructions to other workers accurately, loudly, or quickly.
- Repetitive Motion: Substantial movements (motions) of the wrist, hands, and/or fingers.
- Standing: Particularly for sustained periods of time.
- Stooping: Bending body downward and forward by bending spine at the waist. Occurs to a considerable degree and requires full motion of the lower extremities and back muscles.
- Walking: Moving about on foot to accomplish tasks, particularly for long distances or moving from one work site to another.

WORKING CONDITIONS

Work is performed in an environment with heavy equipment and machinery that could result in bodily harm to co-workers or others.