



Job Description

JOB TITLE: ENERGY MAINTENANCE SPECIALIST

PAY GRADE: CL 24

LAST REVISED: 06/01/2007

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job. Additional or different duties from the ones set forth below may be required to address changing business needs/practices.*

SUMMARY DESCRIPTION

Under general supervision, performs a variety of skilled journey level work in the design, fabrication, installation, and maintenance of mechanical or industrial electrical systems, electrical controls, ventilation, air conditioning, and heating systems; and performs a variety of tasks relative to assigned area of responsibility.

REPRESENTATIVE DUTIES - *The following duties are typical for this job classification. Incumbents may not perform all of the listed duties and/or may be required to perform additional or different duties from those set forth below to address business needs and changing business practices.*

1. Troubleshoots and repairs HVAC and related equipment with minimal interruption to District administrative and instructional activities.
2. Maintains air handlers at optimal levels; tightens, adjusts, repairs, replaces, calibrates, and maintains boilers, chillers, cooling towers, variable frequency drives, motor control contactors, and pumps; performs tune-ups and preventive maintenance on gas engines.
3. Designs and installs stand-alone LAN networks for HVAC equipment and controllers.
4. Designs, fabricates, and installs duct work, airflow systems, condensers, refrigeration to accommodate new and existing building and equipment requirements at all sites; removes old equipment and refrigerants according to applicable laws and safety standards; removes old ducts, plenums, and associated sheet metal.
5. Performs preventive maintenance on high voltage switch gear, irrigation pumps, walk-in freezers, and cafeteria equipment, as they relate to HVAC or related equipment.
6. Programs, monitors, and schedules multiple computerized energy management systems (EMS) at various District sites.
7. Installs connections to new or existing buildings for computerized EMS controllers; replaces pneumatic HVAC control systems with direct digital EMS controls.
8. Programs utility blocks in global control modules to control application-specific devices.
9. Modifies existing EMS programs to meet changing needs.
10. Establishes new communication connections at building sites to EMS central control consoles; installs fiber optic cabling and sub-cabling to connect District buildings to EMS dedicated servers, as directed; replaces, upgrades, or modifies existing modem connections to EMS network servers.
11. Installs variable frequency drive controllers, proportional controllers, and other direct digital EMS controls to existing HVAC equipment.



Job Description

12. Modifies existing HVAC equipment or components to change, enhance, or augment functions to conserve energy.
13. Designs, fabricates, and modifies old refrigeration units to accommodate new types of refrigerants, as necessary, safely discarding of old refrigerants in accordance with applicable laws and standards, measuring system pressures and capacity performance, and ensuring system compliance to applicable codes and standards.
14. Calculates load factors to ensure adequate cooling and heating of occupied space, including air distribution system plenums, economizers, electrical loads, and exhaust fans.
15. Installs new packages, split systems, chiller built-up systems, cooling towers, fan coil units, heating units, kitchen refrigeration appliances, ready power gas-driven chillers, heat pumps, boilers and associated pumps, piping, control flow valves, pneumatic and digital controls, and interface devices.
16. Maintains current knowledge of indoor air quality standards and compliance strategies.
17. Performs comparative carbon dioxide level testing, as needed, making adjustments to HVAC equipment to ensure optimal levels of fresh outside air per occupant.
18. Writes contractual bids for and/or inspects work performed by independent contractors/consultants retained under contract with the District to provide specialized products or services, as assigned.
19. Reads, interprets, and maintains current blueprints, maps, and schematic diagrams.
20. Operates forklifts to pick up and move equipment and supplies.
21. Trains and provides work direction to assigned student workers and temporary help as assigned.
22. Performs related duties as required.

QUALIFICATIONS - *The following generally describes the knowledge and ability required to enter the job and/or be learned within a short period of time in order to successfully perform the assigned duties.*

Knowledge of:

National, state, and local building/construction codes and standards.
HVAC systems and boiler operation.
Digital and pneumatic controls.
Basic record keeping principles and practices.
Safety practices and procedures.
Hand tool and power equipment operation.
Principles of electrical and electronic repair.
Truck and forklift operation.
Proper lifting and body movement techniques.
Equipment calibration techniques.
Practices and procedures for handling of hazardous materials.
Air balancing procedures and techniques.
Energy conservation concepts, practices and techniques
Procedures and protocols for safe handling and disposal of refrigerants.
Machining principles, practices and techniques.

Ability to:

Understand national, state, and local building/construction codes and standards.
Understand and operate HVAC systems and boilers.
Understand and operate electronic devices and components, including microprocessors.

Job Description

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Ability to continued:

Operate building construction, trades machinery, equipment, trucks and forklifts properly and safely.

Work independently and collaboratively.

Follow oral and/or written directions.

Read and write sufficiently to read instructions and product labels.

Read blueprints, schematics, and drawings.

Learn District policies and procedures.

Respond to emergency situations and follow proper safety procedures.

Train and supervise student and/or other temporary help.

Communicate clearly and concisely, both orally and in writing.

Establishes and maintains effective working relationships with those contacted in the course of work.

Education and Experience Guidelines: *Any combination of education and experience that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:*

Education/Training:

Equivalent to the completion of the twelfth grade supplemented by specialized training in heating, ventilation, refrigeration, and air conditioning repair and maintenance.

Experience:

Three years of training or experience at the journey level in the heating, ventilation, refrigeration, and air conditioning trade.

License or Certificate:

Possession of a valid California driver's license.

Possession of an EPA Refrigerant Handling certificate.

Possession of, or ability to obtain, a Forklift Certificate.

Possession of, or ability to obtain, a Hazardous Materials Awareness Training Card.

Possession of, or ability to obtain, an Asbestos Awareness Training Certificate.

PHYSICAL DEMANDS AND WORKING ENVIRONMENT - *The conditions herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential job functions.*

Environment: Work is performed in both indoor and outdoor environments; travel from site to site; exposure to noise, dust, electrical energy, grease, smoke, fumes, noxious odors and gases; work and/or walk on various types of surfaces including slippery or uneven surfaces. Positions may be required to work evenings, nights, and weekends.

Physical: Primary functions require sufficient physical ability and mobility to perform moderately strenuous manual labor; to stoop, bend, kneel, crouch, reach, and twist; to lift, carry, push, and/or pull moderate to heavy amounts of weight; dexterity of hands and fingers to operate specialized hand and power tools and equipment; operate assigned equipment; to stand and walk for extended periods of time; and to verbally communicate to exchange information.

Vision: See in the normal visual range with or without correction.



Job Description

Hearing: Hear in the normal audio range with or without correction.

Johnson & Associates

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