

San Diego Community College District

CLASSIFICATION DESCRIPTION

Title: HVAC Mechanic

Unit: Maintenance & Operations

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Job Code: E1318
Original Date: 08/1983
Last Revision: 01/2016
Staff Type: Classified
FLSA status: Non-exempt
Salary Range: 31

DEFINITION

Under the direction of the Energy Management Computing Systems Operator or the District Facilities Supervisor-HVAC/Electric or the HVAC Technician, perform semi-skilled work in the installation, repair, maintenance, and operation of the District's heating, ventilation, refrigeration, and air conditioning equipment and related energy management and control systems.

DISTINGUISHING CHARACTERISTICS

This is a journey level job class of the heating and air conditioning mechanic series. Incumbents perform semi-skilled to skilled work independently and assist the HVAC Technician in the performance of skilled work as assigned. The HVAC Mechanic is able to perform all aspects of the HVAC trade, including but not limited to installation, repair, servicing, maintenance, and operation of all HVAC equipment and related energy management and control systems (EMS) independently with little guidance. The more difficult or complex work may be assigned to the HVAC Technician who would function as the lead on the project providing technical direction and guidance.

EXAMPLE OF DUTIES

1. Inspect, disassemble, repair, maintain, service, and operate heating, ventilation, air conditioning, and refrigeration equipment; recover and properly dispose of refrigerant and oil.
2. Operate the various HVAC energy management and control systems (EMS). Modify system programming and scheduling; use EMS to trouble-shoot for the service, repair, and maintenance of HVAC equipment. Using the latest technology, operate a wide range of complex testing devices to locate technical problems of HVAC equipment.
3. Maintain ongoing training and certifications for electrical safety, material handling, installation practices, components, replacement refrigerants and oils.
4. Maintain district-wide equipment database to schedule maintenance and repairs, track refrigerants, track equipment to schedule upgrades, replacement, and maintenance.
5. Coordinate and schedule repairs and equipment upgrades of HVAC equipment. Act as liaison for HVAC and mechanical contractors during the installation of HVAC and mechanical equipment.
6. Train and assist other HVAC workers/staff in a wide variety of complex, modern equipment and systems. Schedule and coordinate Maintenance Workers-HVAC/Electrical in performance of preventative maintenance on equipment.
7. Work on high voltage electrical systems that interface with energy management and HVAC control systems.
8. Install electrical conduits and perform electrical repairs pertaining to HVAC equipment.
9. Adjust and install valves, switches, gauges, thermostats, fans, and controllers. Maintain, repair, and service pneumatic systems and controls as well as EMS interfaces. Monitor temperatures, pressures, and differentials.

10. Cut and thread pipes; weld, braze and silver solder copper and brass pipe, tubing, fittings, and valves. Replace or repair fans, motors, and compressors; change belts and air filters.
11. Perform and provide water treatment for boilers, chilled water loops, and cooling towers. Clean and service pumps, strainers, flush boilers, and chilled water systems.
12. Maintain logs and records on refrigerants, co-generation equipment, HVAC equipment repair, and performance or malfunction of all chillers and chilled water systems.
13. Order parts; maintain liaison with vendors.
14. Operate vehicles, equipment, machinery, and tools as appropriate in area of specialty.
15. Perform related duties as assigned.

DESIRABLE QUALIFICATIONS

Knowledge:

- Basic file maintenance and reporting.
- Basic scheduling and coordination techniques.
- Complex electrical and plumbing equipment and systems.
- Computer programs related to HVAC, including a variety of microprocessors, programming language, communication protocols, topology, and networking.
- EPA requirements, Title 24 (State of California), and LEED Certified Buildings, and expansion of EMS.
- Health and safety regulations.
- High voltage circuits and components.
- Internal combustion engines.
- Mechanical codes pertaining to HVAC equipment.
- Operation of modern testing devices.
- Operation of vehicles, equipment, and machinery related to area of specialty.
- Proper operation of heating, air conditioning, ventilation, and energy systems.
- Proper repair procedures and safety practices.
- Reading and writing communications skills.
- Record-keeping techniques.
- Repair and maintenance of HVAC equipment and machinery.
- Safe work practices.
- SDGE low voltage safety training.
- State guidelines for the deferred maintenance schedule of equipment.
- Technical aspects of field of specialty.
- Tools, materials, methods, and terminology used in the maintenance and repair of a wide variety of complex heating, air conditioning, and ventilation equipment and systems using the latest technology.

Skills and Abilities:

- Effective communication skills.
- Establish and maintain effective working relationships with others, including coworkers, contracted employees, and vendors.
- Estimate the scope and cost of work assignments and select necessary tools and equipment.
- Install HVAC and electrical equipment and power systems.
- Maintain and repair heating, refrigeration, and ventilation equipment at the trades level.
- Maintain current knowledge of new technology in the HVAC field.
- Maintain logs, reports, and files.

Maintain, test, and repair a wide variety of HVAC, refrigeration, and electrical equipment.
Operate vehicles, equipment, machinery, and tools as appropriate in area of specialty.
Prepare and maintain records.
Provide work direction and training.
Schedule and coordinate others in proper procedures and practices.
Troubleshoot High Voltage Circuits and components.
Understand and follow oral and written directions.
Use required tools and equipment skillfully and safely.
Work from sketches, drawings, and blueprints.
Work independently with little direction.
Work safely.

License:

Valid California driver's license.
As required by Clean Air Act, Refrigerant transition and recovery Type II Certification.

Training and Experience:

Any combination of training and experience equivalent to: five years in the trade, including one year of journey level experience in HVAC, Plumbing, and Electrical.

WORKING CONDITIONS

Physical Requirements:

Category I, may require considerable physical exertion, stamina, and flexibility.

Environment:

May include less desirable extremes including some hazardous installations and service areas.

Work Day:

Persons in this class may be required to accommodate a flexible work schedule, including night work, call back, and weekends as necessary.