



For the future of every student

CLASS TITLE: HVAC-REFRIGERATION TECHNICIAN

BASIC FUNCTION:

Under the direction of the Maintenance Manager, perform a variety of skilled tasks and operations in the inspection, servicing, installation, maintenance and repair of heating, ventilation, air conditioning and refrigeration systems in District buildings and facilities; operate, configure and maintain the Energy Management System (EMS).

REPRESENTATIVE DUTIES:

ESSENTIAL DUTIES:

Install, service, maintain, troubleshoot and repair heating, ventilation, air conditioning and refrigeration systems; diagnose malfunctions and determine repair needs; inspect and perform electrical and mechanical tests on systems and equipment to identify defective parts; assure systems are maintained in safe and proper operating condition in compliance with applicable codes.

Operate, configure and maintain the EMS; utilize EMS to troubleshoot and diagnose HVAC & R malfunctions; utilize system controls to adjust temperatures, time schedules, energy use and other settings; adjust the EMS to assure smooth, efficient and effective energy use and allocation; respond to requests for system adjustments as appropriate; generate reports concerning equipment use.

Install, replace, service and repair various HVAC & R parts, components, devices and equipment such as thermostats, controls, boilers, heaters, generators, gauges, compressors, pumps, coils, chillers, relays, switches, valves, fans, motors, gaskets, filters and belts; cut, bend and join tubing, pipes and wiring as needed; lubricate and adjust various system components.

Adjust, maintain and repair ducting, air conditioning, cooling and refrigeration systems and units; detect and repair leaks as needed; replenish various refrigerants and oils in accordance with established regulations and procedures as needed.

Service, maintain and repair washers, dryers and a variety of kitchen equipment and appliances such as walk-ins, ovens, ice machines, electric ranges, coolers and hot storage units; troubleshoot, diagnose and resolve related malfunctions; replace appliance components and devices as needed.

Operate and maintain specialized equipment including testers, meters, gauges, pumps and a variety of hand and power tools; utilize computers and related hardware and software applications to diagnose system malfunctions and operate EMS; drive a vehicle to conduct work.

Estimate labor, material and equipment needed for assigned projects; prepare cost estimates; monitor inventory levels of materials and equipment; order, receive and maintain adequate inventory of materials and equipment.

Plan, organize and lay out assigned tasks; interpret HVAC & R plans, diagrams, blue prints, drawings, sketches, specifications and blueprints; work from verbal and written instructions and work orders; respond to emergency situations.

Schedule and perform preventive maintenance inspections and servicing on heating, refrigeration and air

conditioning equipment.

Store, remove and dispose of oils, refrigerants and other hazardous materials in accordance with established laws, regulations and procedures; perform calculations to determine proper boiling point for refrigerants.

Inspect and determine source of sewer, gas and other fumes as required; implement corrective actions to eliminate fumes.

Participate in Department-wide projects and assist other trades workers with maintenance and repair projects as needed.

Communicate with District personnel and various outside agencies to exchange information and resolve issues or concerns.

Maintain various records related to refrigerants, projects, EMS and assigned activities.

Maintain work areas, equipment and tools in a safe, clean and orderly condition.

OTHER DUTIES:

Perform related duties as assigned.

KNOWLEDGE AND ABILITIES:

KNOWLEDGE OF:

Methods, procedures, equipment and materials used in the installation, maintenance and repair of ventilation, heating, air conditioning and refrigeration equipment.

Operation, maintenance and adjustment of energy management systems.

Ventilation, heating, air conditioning and refrigeration systems utilized by the District.

Appropriate safety precautions and procedures.

Operation and maintenance of tools, equipment and machinery used in the HVAC & R trade.

Building codes related to the HVAC & R trade.

Proper methods of storing equipment, materials and supplies.

Operation of a computer and assigned software.

Shop math applicable to the building trades.

Technical aspects of the HVAC & R trade.

Mechanics of refrigerant flow control and pneumatic, electrical and electronic control systems.

Oral and written communication skills.

Proper lifting techniques.

Record-keeping techniques.

ABILITY TO:

Perform a variety of skilled tasks and operations in the inspection, servicing, installation, maintenance and repair of heating, ventilation, air conditioning and refrigeration systems.

Operate and maintain the EMS to assure smooth, efficient and effective energy use and allocation.

Troubleshoot and diagnose HVAC & R device, system and equipment malfunctions.

Read and work from blueprints, shop drawings, sketches, manuals and diagrams.

Plan and lay out HVAC & R work.

Operate and maintain tools, equipment and machinery used in the HVAC & R trade.

Observe health and safety regulations and procedures.

Estimate material, equipment and supply needs.

Replace defective parts and components as necessary.

Operate a computer and assigned software.

Communicate effectively both orally and in writing.
Work cooperatively with others.
Meet schedules and time lines.
Understand and follow oral and written instructions.
Work independently with little direction.
Establish and maintain cooperative and effective working relationships with others.
Maintain various records related to work performed.

EDUCATION AND EXPERIENCE:

Requires any combination equivalent to an Associate's degree in HVAC, Energy Management, Industrial Technology or related field and four years of diversified journeyman level HVAC & R experience; additional applicable experience may substitute for higher education on a year-for-year basis. Alternatively, may require graduation from high school or equivalent supplemented by completion of a formal apprenticeship (which is 4 years, leading to journey-level credentials) in a specialized trade (HVAC Service/Controls, Industrial Electrical or Energy Management controls) and four years of diversified journeyman level HVAC & R experience.

LICENSES AND OTHER REQUIREMENTS:

Valid California driver's license.
Valid EPA Retrieval and Recovery certification.

WORKING CONDITIONS:

ENVIRONMENT:

Indoor and outdoor work environment.
Regular exposure to fumes, dust, dirt, oil and grease.
Driving a vehicle to conduct work.

PHYSICAL DEMANDS:

Dexterity of hands and fingers to operate specialized equipment and tools.
Hearing and speaking to exchange information.
Seeing to read and perform HVAC & R functions.
Lifting, carrying, pushing or pulling heavy objects as assigned by the position.
Reaching overhead, above the shoulders and horizontally.
Bending at the waist, kneeling or crouching.
Climbing ladders and working from heights.
Sitting or standing for extended periods of time.
Heavy physical labor.

HAZARDS:

Working around and with machinery having moving parts.
Hazardous chemicals.
Working at heights.
Electrical power supply and high voltage.
Working in a cramped or restrictive work chamber.