

HVAC TEST TECHNICIAN	3342
SENIOR HVAC TEST TECHNICIAN	3340

DEFINITION

Tests, adjusts, and repairs heating, ventilating, and air conditioning systems and related equipment; evaluates temperature control systems; and takes necessary corrective actions. The Senior HVAC Test Technician supervises and participates in the work, schedules and establishes work priorities, and provides technical direction in solving work-related problems.

TYPICAL DUTIES

Performs air and water balance tests on heating, ventilating, and air conditioning (HVAC) systems to check their conformity with original architectural and engineering design drawings and specifications and/or design modifications.

Determines the amount and type of material needed for repair or modification of air- and water-delivery and temperature-control systems, and prepares sketches.

Modifies and repairs air and water systems and temperature-control systems to correct design deficiencies.

Prepares reports of air and water balance data.

Investigates, trouble-shoots, and spot-checks HVAC systems with apparent design deficiencies, maintenance problems, or large energy consumption.

Recommends modifications that will improve system energy and performance characteristics.

Spot-checks and verifies contractors' air and water balance reports.

Investigates heat-vent and HVAC systems and prepares reports on equipment and system conditions and performance characteristics for use in evaluating air conditioning design and repair procedures.

Maintains air and water balance equipment and test instrumentation.

Performs air and water balance test for HVAC installations on new and remodeled District buildings when required by architectural and engineering construction specifications and contract documents.

Diagnose and monitor direct digital control systems.

In addition, a Senior HVAC Test Technician

Schedules and coordinates various testing activities related to heating, ventilation, air conditioning, and temperature control systems and related equipment.

Checks architectural and engineering design drawings and specifications for new and design modifications for HVAC installations.

Approves final test and balance reports prior to final acceptance and signatures.

Consults with and advises HVAC Test Technicians on unusual developments revealed during testing and corrective activities.

Coordinates HVAC systems repairs with appropriate personnel in the Facilities Services Division and the Energy Program Manager, as necessary.

Performs related duties as assigned.

DISTINGUISHING CHARACTERISTICS AMONG RELATED CLASSES

A HVAC Test Technician tests heating, ventilating, and air conditioning systems for appropriate energy flow; tests temperature control systems; and exercises initiative in taking necessary corrective action. This class is characterized by the independence exercised in contacting contractors, sales representatives, and school administrators to resolve heat reduction problems.

A Senior HVAC Test Technician supervises, participates in, and coordinates the testing, adjustment, and repair of heating, ventilating, and air conditioning systems, and schedules and inspects the work of subordinate HVAC Test Technicians.

A Heating and Air Conditioning Fitter installs, replaces, and repairs steam, hot water and gas-fired heating, chilled-water and direct-expansion cooling, and all related air conditioning equipment and controls.

SUPERVISION

A HVAC Test Technician receives general supervision from a Senior HVAC Test Technician and the Chief Construction Inspector or an Area Heating and Air Conditioning Supervisor. Functional supervision over design and repair procedures may be exercised by a Mechanical Engineer or Supervising Mechanical Engineer. General supervision may be exercised over lower-level maintenance employees as assigned.

A Senior HVAC Test Technician receives general supervision from the Chief Construction Inspector, an Area Heating and Air Conditioning Supervisor, or the Heating and Air Conditioning Supervisor or designated subordinate. General supervision is exercised over HVAC Test Technicians and other maintenance employees as assigned.

CLASS QUALIFICATIONS

Knowledge of:

- Balancing procedures for air distribution systems and hydronic systems balance
- Design, construction, and functions of mechanical, pneumatic, electrical, and electronic control systems
- Design fundamentals, construction, installation, maintenance, operation, and repair of hydronics, heating, air conditioning, exhaust, ventilation, sheet metal duct fabrication, and electricity as applied to heating, ventilating, and air conditioning systems and associated equipment
- Practices, processes, and materials used in heating, ventilation, and air conditioning construction
- Building laws and ordinances of the City and County of Los Angeles
- Pertinent regulations of the State Office of Architecture and Construction
- Pertinent safety orders issued by the State Division of Industrial Safety
- Requirements of the Office of the State Fire Marshall as they apply to heating, ventilation, and air conditioning work
- Direct digital control systems

Ability to:

- Read and interpret building plans and specifications
- Detect deviation and performance problems in heating and air conditioning installations and systems by inspection and investigation methods
- Prepare accurate records and reports

Compute air and water balance formulas
Prepare sketches and drawings for air balance data and control modifications
Write clear instructions and follow written directions and procedures
Work effectively with architects, engineers, contractors, representatives of other public jurisdictions, and District administrators and employees

Special Physical Requirement:

Physical strength to use and maneuver a 2' x 4' flow hood at full arm extension

ENTRANCE QUALIFICATIONS

Education:

Graduation from high school or evidence of equivalent educational proficiency. An Associate in Science degree from a recognized college with a major in refrigeration and air conditioning mechanics or a closely related major

or

A certificate of completion from a recognized college or trade school in refrigeration and air conditioning mechanics or closely related field

or

Completion of twenty-one units from a recognized college or the equivalent in a trade school or in the military service in closely related refrigeration and air conditioning courses that must include a course in the measurement of air flow, use of air flow measuring devices, and systems balancing.

Experience in air and water testing and balance work in addition to that listed below may be substituted on a year-for-year basis for the required education, provided the high school graduation requirement is met.

Experience:

HVAC Test Technician:

One year of experience in field testing and balance of air distribution systems or in the installation and maintenance of gas, steam, and chilled-water and direct-expansion air-conditioning systems.

Senior HVAC Test Technician:

Two years of experience in field testing and balance of air distribution systems that included installation and calibration of temperature control systems.

Special:

Possession of a certificate of competence of chlorofluorocarbon License type Universal in accordance with EPA Rule 608, Clean Air Act.

A valid California Driver License.

Use of an automobile or truck to carry District-supplied tools and equipment.