Jurisdictional Class: Competitive
EEO Category: Skilled Craft
Revised: 01/10/2025

INSTRUMENTATION TECHNICIAN

DISTINGUISHING FEATURES OF THE CLASS: This is technical work in the inspection, maintenance, repair, and replacement of electric instrumentation and electronic devices used in a modern water treatment plant and distribution system. Work is performed under the general supervision of the Principal Engineer, with leeway allowed for independent judgment in carrying out the duties of the position. Supervision is not exercised in this class. The incumbent does related work as required.

TYPICAL WORK ACTIVITIES: (Illustrative Only)

Repairs, maintains and installs process control, monitoring, recording and indicating instruments, such as flow meters, level sensors, variable frequency drives, programmable logic controllers, radio, telemetry devices and other types of transducers that measure pressure, flow, or liquid levels within water and chemical feed systems;

Calibrates, troubleshoots, and maintains electronic instruments such as flow measuring devices, level and pressure sensors, transmitting and receiving devices, indicators, recorders and chemical feed equipment, alarm systems, Supervisory Control and Data Acquisition (SCADA) systems, programmable logic controllers (PLCs) and switches;

Maintains, calibrates and repairs instrumentation and tests equipment such as volt and ohm meters and water quality and flow instrumentation;

Maintains and repairs digital computer equipment such as analog to digital converters, and contact input/output boar;

Maintains comprehensive and accurate records of maintenance work performed and as built documentation;

Troubleshoots, repairs, maintains and installs water pumps and motors along with valve actuators;

Consults with supervisors and or manufacturers' representatives on difficult repairs and installation of new or modified equipment;

Assists maintenance staff at the water treatment plant with electronic equipment and instrumentation, including assistance with troubleshooting, calibrating, repairing, installing and testing equipment, devices and instruments;

Installs water quality instrumentation and connections to PLCs in coordination with the Water Quality Department;

May direct the work of a small number of skilled, semi-skilled and relatively unskilled workers in installation, maintenance, and repair of instrumentation and controls equipment.

Continued…

FULL PERFORMANCE KNOWLEDGE, SKILLS, ABILITIES AND PERSONAL CHARACTERISTICS: Thorough knowledge of the operation and function of instrumentation, communication and electrical/electronic devices; thorough knowledge of the principles, practices and theories of low voltage electrical and control systems; good knowledge of operation and theory of transducers and other technologies for the measurement of physical properties, such as pressure, flow, and liquid level in process piping and structures; working knowledge of theory and operation of digital computer logic, equipment and SCADA systems; skill in the use of tools and test equipment used in installation, maintenance and repair of industrial instrumentation equipment; proficiency in the reading of blueprints, electrical and instrumentation schematics, and schedules; ability to follow oral and written instructions; ability to troubleshoot various electrical/electronic devices, including relay/electronic controls and monitoring systems; initiative and resourcefulness in solving mechanical, electrical and electronic problems; ability to plan and layout instrumentation work; ability to get along well with others.

MINIMUM QUALIFICATIONS:

(A) Possession of Bachelor's Degree in electrical engineering technology, computer engineering technology, electrical technology, industrial automation engineering technology, industrial instrumentation and control, or a closely related field **AND** one (1) years of experience in industrial instrumentation installation, maintenance and repair work or installation, maintenance, and/or repair of electronic equipment, control systems and/or instrumentation in a public or private setting; **OR**

(B) Possession of Associate's Degree in electrical engineering technology, computer engineering technology, electrical technology, industrial automation engineering technology, industrial instrumentation and control, or a closely related field **AND** three (3) years of experience in industrial instrumentation installation, maintenance and repair work or installation, maintenance, and/or repair of electronic equipment, control systems and/or instrumentation in a public or private setting; **OR**

(C) Graduation from high school or possession of a high school equivalency diploma **AND** five (5) years of experience in industrial instrumentation installation, maintenance and repair work or installation, maintenance, and/or repair of electronic equipment, control systems and/or instrumentation in a public or private setting.

SPECIAL REQUIREMENTS:

1. Possession of a valid New York State driver's license at time of application. License must remain valid throughout appointment.
2. Successful completion of a confined space entry supervisor course within one year of appointment. Course must be completed on an annual basis throughout appointment.

Continued…

NOTES:

1. Degree(s) must have been awarded by a college or university accredited by a regional, national, or specialized agency recognized as an accrediting agency by the U.S. Department of Education/U.S. Secretary of Education. If the degree was awarded by an educational institution outside the United States and its territories, the candidate must provide independent verification of equivalency. A list of acceptable companies who provide this service can be found on the Internet at http://www.cs.ny.gov/jobseeker/degrees.cfm. Candidates will be required to pay the evaluation fee.
2. Verifiable part-time experience as described above will be pro-rated toward meeting full-time experience requirements.

Adopted: 11/01/2024
Revised: 01/10/2025