

ELECTRICAL AND INSTRUMENTATION MECHANIC I

Code No: 4-14-221

COMPETITIVE

DISTINGUISHING FEATURES OF THE CLASS: This is skilled position in the electrical and instrumentation group of the Monroe County Water Authority's Production Department Maintenance section responsible for installing, calibrating and repairing electrical and instrumentation equipment utilized in the treatment plant and offsite locations. This position troubleshoots programmable control based control logic and makes program changes. This position differs from Electrical and Instrumentation Mechanic II in that it orders and purchases large equipment, implements small projects and may supervise employees. The employee reports directly to, and works under the general supervision of a higher level staff member. General supervision may be exercised over Electrical and Instrumentation Mechanic III's and other lower level staff members. Employees are required to ascend heights, enter confined or restricted spaces including sub-grade facilities, and maneuver or work in tight quarters around machinery. Employees must be available for emergency duty twenty-four (24) hours per day. Does related work as required.

TYPICAL WORK ACTIVITIES: (All need not be performed in a given position. Other related activities may be performed, although not listed)

Troubleshoots and makes logic changes on Programmable Logic Controller based systems;

Specifies and orders large equipment, such as electrical motor starters, variable frequency drives, programmable controller equipment, instruments and analyzers, as well as parts and stock supplies;

Calibrates and repairs instruments and analyzers;

Inspects, repairs and performs preventative maintenance tasks on electrical power distribution equipment including variable frequency drives, motor starters, generators, switches and Medium Voltage switchgear;

Selects, sizes and installs rigid, thin wall and PVC conduit and wiring in accordance with the requirements outlined in the National Electrical Code;

Fabricates instrument and electrical control panels;

Installs and makes repairs to lighting and 120 VAC power circuits

Plans and implements small projects or preventative maintenance tasks.

FULL PERFORMANCE KNOWLEDGE, SKILLS, ABILITIES AND PERSONAL CHARACTERISTICS: Good knowledge of the electrical safety principles and wiring methods as outlined in the National Electrical Code; good knowledge of basic programmable controller instructions; good knowledge of the control logic schemes that are implemented at various locations throughout the system; ability to solve electrical and control issues; ability to install, setup, calibrate and troubleshoot electrical and instrumentation equipment; ability to specify and purchase equipment; ability to design, program and troubleshoot more complex PLC-based control logic schemes; ability to communicate orally and in writing; ability to work independently; ability to work well with others; ability to plan and implement small scale projects; mechanical aptitude and

manual dexterity, good judgment; physical condition commensurate with the demands of the position.

MINIMUM QUALIFICATIONS: Graduation from high school or possession of an equivalency diploma, plus EITHER:

- (A) Five (5) years of paid full-time or its part-time equivalent experience in electrical or instrumentation fields; OR,
- (B) Graduation from a technical high school or trade school with a major in the electrical or instrumentation trades plus four (4) years of paid full-time or its part-time equivalent experience as described in (A) above; OR,
- (C) Graduation from a regionally accredited or New York State registered college or university with an Associate's degree in Electrical Technology or Instrumentation Technology, plus three (3) years paid full-time or its part-time equivalent experience as defined in (A) above; OR,
- (D) An equivalent combination of education and experience as defined by the limits of (A) and (B) above.

SPECIAL REQUIREMENTS:

If you are appointed, you will be required to have a valid license to operate a motor vehicle in New York State or otherwise demonstrate your ability to meet the transportation needs of the job.

ADOPTED: June 3, 2010