

## CONTROL/INSTRUMENTATION TECHNICIAN

### NATURE OF WORK

This is complex technical work in electronic and electrical maintenance of utility control/instrument equipment rated to 480 volts.

Work involves responsibility for installation, alteration, maintenance, calibration and repair of electrical/electronic control and data acquisition equipment and related instruments rated to 480 volts. Work also involves troubleshooting of water/wastewater plant instrumentation and control systems. Work is usually performed independently with supervision received from and work inspected by an administrative or technical superior. Supervision may be exercised over subordinate employees.

### EXAMPLES OF WORK PERFORMED

Installs, removes, repairs, maintains, troubleshoots and calibrates data communications devices and control and instrumentation devices rated to 480 volts.

Furnishes data and information necessary to update the preventative maintenance program and document spare parts needs.

Programs and repairs PLCs, computers and other equipment used in SCADA systems, or other treatment process controllers.

Diagnoses malfunctions on various mechanical/electronic instruments and control systems by using standard measuring devices, specialized equipment and hand tools; repairs, overhauls and calibrates instrument and control devices and adjusts settings according to various charts and manufacturer's specifications.

Performs preventative maintenance and calibration program to ensure the accuracy of all plant instrumentation consistent with the preventative maintenance program; identifies spare parts and tools needed for improving the efficiency of the instrumentation and control maintenance section.

Installs and tests new electronic and instrumentation and control components.

Assigns tasks, outlines work and safety procedures and inspects work completed by subordinates when operating as lead technician.

Writes reports and compiles test data related to routine tasks and special assignments.

Prepares "as-built" diagrams, sketches, or print-outs of plant instrumentational and control devices, and electronic and electrical systems for inclusion with plant operations manuals and drawing files.

Performs clean-up of control/instrumentation work areas and areas where repair and maintenance tasks have occurred.

Performs related work as required.

#### DESIRABLE KNOWLEDGE, ABILITIES AND SKILLS

Considerable knowledge of test equipment used in repairs of electronic equipment and instruments.

Knowledge of the fundamentals of programmable controllers.

Knowledge of computers and their application to process control.

Knowledge of basic electronic, radio and control system circuit theory.

Knowledge of basic mathematics.

Knowledge of hazards involved with work and safety measures to be taken.

Ability to read equipment manuals and specifications and work from circuit diagrams.

Ability to communicate effectively, both orally and in writing.

Ability to follow oral and written instructions.

Ability to establish and maintain effective working relationships with co-workers.

Ability to solve problems logically.

Skill in the use of hand tools, shop and power equipment.

#### DESIRABLE TRAINING AND EXPERIENCE

Graduation from a senior high school or equivalent supplemented by completion of vocational/technical training or a two-year college degree in electronics or related field, and experience in electronic control and instrumentation maintenance preferably related to the control and telemetry of water/wastewater treatment or related equipment.

#### MINIMUM QUALIFICATIONS

Graduation from a senior high school or equivalent supplemented by completion of vocational/technical training or two-year college degree in electronics or related field plus experience in repair and maintenance of control and instrumentation equipment; or any equivalent combination of training and experience that provides the desirable knowledge, abilities and skills.

NECESSARY SPECIAL REQUIREMENT

Possession of a valid driver's license when operating a vehicle is necessary to the satisfactory completion of assigned duties.

Completion and certification in advanced Programmable Logic Controllers (PLC) or ability to acquire same within twelve (12) months.

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