

**INSTRUMENTATION SPECIALIST***Class Definition*

Under general supervision, installs, alters, maintains, repairs and calibrates a wide variety of process instrumentation equipment used in Water or Wastewater Treatment Facilities.

*Distinguishing Characteristics*

Instrumentation Specialist is a journey level class in which an incumbent performs a variety of specialized and skilled duties involving the installation, repair, maintenance, and calibration of water/wastewater related instrumentation. An incumbent works with minimum supervision and work is reviewed through periodic inspection and consultation.

*Typical Tasks*

(An incumbent may not be assigned all duties listed, nor do the examples cover all duties which may be assigned.)

Documents procedures and readings of process control instrumentation and related equipment such as recording calibration data, or sketching schematics of previously or newly installed pneumatic and/or electronic metering or control loops.

Trouble shoots, calibrates, and repairs process control instrumentation and related equipment, i.e. pressure and temperature gauges, pressure switches, differential pressure transmitters, magnetic flow meters, etc.

Conducts periodic preventive maintenance inspections of all process control instruments, diagnosing existing or potential trouble; cleans, lubricates, calibrates, and adjusts as conditions indicate.

Lays out, installs, aligns, and places into service new metering and recording devices, calibrating as required; may extend or connect related electrical circuits, i.e., 4 - 20 mA.

Reads and interprets wiring diagrams, mechanical drawings, manuals and specifications before and while installing or performing major repair work.

Makes recommendations for improvements to instrumentation systems.

Configures process and instrumentation diagrams, control loop parameters and discrete logic for programmable logic controllers and distributed control systems.

Ensures that proper safety precautions and safe work methods are followed.

Maintains accurate records; prepares oral and written reports of work performed; and prepares accurate purchase requisition forms for process control instrumentation and related equipment.

Uses and maintains a wide variety of hand and power tools and bench test equipment related to instrument installation and maintenance.

Documents and draws circuits as installed.

Performs related duties as required.

### *Knowledge, Abilities, and Skills*

Considerable knowledge of methods, practices, and equipment used in the maintenance, repair, testing and adjusting of a wide variety of process control and monitoring instruments.

Knowledge of the safety practices and procedures pertaining to process instrumentation equipment and water/wastewater treatment facilities.

Knowledge of codes, laws, and ordinances pertaining to process instrumentation equipment and water/wastewater treatment.

Ability to maintain and prepare accurate reports and make oral and written recommendations.

Ability to maintain an on-going preventive maintenance program for instrumentation.

Ability to establish and maintain effective working relationships.

Skill in diagnosing mechanical, hydraulic, pneumatic, electrical and electronic malfunctions in instrumentation and telemetry systems.

Skill in making extensive repairs and overhauls to metering and process control instrumentation and related equipment.

Skill in estimating necessary labor and materials.

### *Minimum Qualifications*

Two years of experience as a journey instrumentation technician; or three years of related experience in the application of pneumatic and electronic technical skills installing and/or maintaining process control instrumentation.

*Necessary Special Requirement*

Possession of a valid California Driver's License at time of appointment.

APPROVED: \_\_\_\_\_  
Director of Personnel

DATE: \_\_\_\_\_

MR/MPA/jl/12/20/90  
+269-SPEC4