

CLASS SPECIFICATION

SAN DIEGO CITY CIVIL SERVICE COMMISSION

PLANT PROCESS CONTROL ELECTRICIAN - 1666

DEFINITION:

Under direction, to install, test, adjust, modify, and maintain the most complex electrical lighting, wiring and power systems, and electrical machinery and equipment; to design, modify, and make programming and software improvements on computerized electrical system control and data acquisition operations; to analyze problems and make necessary repairs on electrical control systems required to interface with process control computers; to instruct Electricians in the more difficult and complex aspects of their work assignments; to lead the work of lower-level staff; and to perform related work.

*** EXAMPLES OF DUTIES:**

- Designs, installs, test, adjusts, modifies, and maintains digital and logic circuitry and microprocessor controlled electrical and electronic devices and elements, such as programmable logic controllers, process control equipment, recorders, sensors, alarms, and controllers on a wide variety of electrical, electro-mechanical, pneumatic, and hydraulic equipment and devices;
- Operates computer terminals, portable programming units, and complex electrical test equipment, and analyzes and troubleshoots instrumentation and control systems, instrumentation interface with process control computers, and process control problems;
- Designs, modifies, and tests complex relay ladder logic instruction sequences in the form of computer programs which direct logic controllers to monitor and control all electrically related phases of the water or wastewater treatment processes;
- Designs, modifies, and makes programming and software improvements on computerized electrical system control and data acquisition operations;
- May lead and instruct Electricians and other lower-level staff in new and current procedures of maintenance and troubleshooting of a wide variety of electrical equipment, control systems, and components;
- Performs mathematical computations for calibrating instruments and determining values of inputs and outputs in computer programs;
- Works with vendors, control computer hardware and software specialists, and plant operating and engineering personnel in determining process parameters, technical specifications for new and existing installations, and other technical matters regarding digital unit process control systems;
- Maintains records of work performed.

* **EXAMPLES OF DUTIES** performed by employees in this class. The list may not include all required duties, nor are all listed tasks necessarily performed by everyone in this class.

MINIMUM QUALIFICATIONS:

Please note: the minimum qualifications stated below are a guide for determining the education, training, experience, special skills, and/or license which may be required for employment in the class. These are re-evaluated each time the position is opened for recruitment. Please refer to the most recent Job Description for updated minimum qualifications: <https://www.governmentjobs.com/careers/sandiego/classspecs>.

Successful completion of an accredited four-year Electrician Apprenticeship Program, **OR** four years of full-time experience in all phases of work as a journey-level electrician, of which two years must include installing, troubleshooting, and repairing a variety of electrical machinery and equipment in permanent building systems, power generation plants, water or wastewater treatment plants, or industrial production plants; **AND** one year of full-time experience in all phases of work as a journey-level electrician diagnosing, troubleshooting, repairing, and programming programmable logic controllers at a water or wastewater treatment plant or industrial production plant. Some positions may require a valid California crane operator certificate within a year from date of hire.