

UTILITY ELECTRICAL TECHNICIAN

NATURE OF WORK

This is complex technical work in the maintenance of electronic and electrical equipment and of electrical power and control equipment operating at 120 volts to 15,000 volts.

Work involves responsibility for the repair, maintenance and servicing of a wide variety of both conventional and specialized electrical power and control equipment in a utility plant. Work is inspected while in progress and reviewed upon completion by a technical or an administrative superior for results obtained. Work is performed with general supervision. Supervision may be exercised over subordinate employees.

EXAMPLES OF WORK PERFORMED

Maintains and inspects all electronic, pneumatic, and gas-operated instrumentation systems and devices; ensures that recording and operating devices are accurate and that proper data and readings are used to efficiently operate a water or wastewater treatment facility, pumping station, or other appurtenances.

Repairs and maintains utility equipment; sketches diagrams for installation of wiring and controls in remote control panels; installs wiring and controls for utility equipment; acquires necessary electrical permits when required.

Conducts tests on utility equipment using ammeter, voltmeter, flow and pressure transmitter, volt-ohmmeter, tone control tester and related equipment; checks equipment at substations for defects and makes necessary repairs.

Develops and schedules preventive maintenance programs for electrical power and control systems in order to minimize breakdowns and downtimes; trains employees in the proper use of equipment and systems, and in safety procedures to follow including proper equipment tag-out procedures.

Supervises and assists in the inspection and maintenance of switching systems, motor contactors, drum controllers, collecting and slip rings, brushes and brush holders, VFD's, protective relays and associated equipment; meggers motors, samples transformer, G and W switches, LTC and voltage regulator oil for electrical power and control equipment rated 120 v to 15,000 v in accordance with work order instructions, O & M manuals, schematic diagrams and engineering drawings.

Maintains inventory of electrical and instrumentational tools, supplies and equipment; completes work orders, time records and repair records.

Checks, repairs and maintains battery chargers and batteries; inspects and maintains small and large motors.

Coordinates electrical power repair/maintenance with mechanical repair/maintenance and plant operations through supervisor as needed.

May supervise subordinate employees involved in the maintenance and repair of electronic and electrical equipment.

Performs related work as required.

DESIRABLE KNOWLEDGE, ABILITIES AND SKILLS

Considerable knowledge of methods, techniques and materials required in testing, inspecting and repairing motors, telemetering equipment, control devices and electrical power equipment.

Considerable knowledge of methods, techniques and materials required for isolating and grounding switch gears.

Considerable knowledge of National Electrical Code, Lincoln Municipal Code 23 and other related codes and their application to maintenance and repair work.

Some knowledge of solid state and conventional electronic component systems and equipment.

Ability to sketch and interpret diagrams and schematics and estimate costs for various maintenance repairs and activities.

Ability to operate electrical testing equipment including ammeter, flow and pressure transmitter, calibrator, station simulator, volt-ohmmeter and related equipment required in order to conduct tests on utility equipment.

Ability to communicate both orally and in writing.

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

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

MINIMUM QUALIFICATIONS

Graduation from high school or equivalent and two years of experience as an industrial electrician in the repair and maintenance of electrical power and control equipment; or any equivalent combination of training and experience that provides the desirable knowledge, abilities and skills.

NECESSARY SPECIAL REQUIREMENTS

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

Possession of a valid Contractor's License or Journeyman's License.