



Job Title: I&E Technician
Reports to: Maintenance Manager
Location: San Diego Facilities

Overview

The purpose of this position is to provide technical assistance and engage in the performance of delegated projects, procedures or tasks, involving the installation, testing, repair and maintenance of all types of electronic, pneumatic, hydraulic or electrical equipment, associated with the instrumentation and the power plant control systems. Provide services that will maximize the reliability and efficiency of the generating stations control systems and auxiliary equipment.

Job Duties

Installs troubleshoots, and repairs electrical systems, electrical and electronic control components of Heat Recovery Steam Generators, Steam Turbines, Gas Turbines, Air Compressors, Motors, Pumps, Compressors, Electrical Switch Gear, Loaders, and small utility equipment used to provide utilities with power by performing the following:

- Diagnoses cause of electrical malfunction or failure of operational equipment such as transformers, motors relays, switches, and control and monitoring devices.
- Installs wire and conduit for newly installed equipment.
- Replaces faulty wiring and electrical components such as relays, switches, motors, and position sensing devices.
- Aligns, adjusts, and calibrate equipment according to specification.
- Reads Dials or digital displays that indicate electronic characteristics such as voltage, frequency, distortion, inductance, and capacity.
- Diagnoses, tests and repairs or replaces faulty electronic components such as circuit boards.
- Terminates wiring to electrical equipment.
- Maintains DCS systems.
- Maintains Plant PLC systems.
- Maintains CEM System.
- Maintain equipment by tightening fittings, replacing valve packing, gaskets, valves, gauges, and cleaning or replacing other component parts as required.
- Adjust manual controls or overrides to bring equipment into recommended or prescribed operating ranges, switch to backup equipment or systems, or to shut down equipment.
- Visually inspects and listens 'to equipment at periodic intervals to detect malfunctions or need for repair, adjustment or lubrication.
- Performs scheduled, unscheduled, and preventative maintenance tasks as assigned by maintenance supervisor.
- Dismantles devices to gain access to and remove defective parts.
- Start devices to test their performance.

- Performs preventative and corrective maintenance in accordance with technical manual procedures.
- Reads and understands technical manuals and systems piping and instrumentation diagrams.
- Reads, understands, and complies with all plant safety and regulatory procedures

Skills Necessary

- Possess all skills and aptitudes required for the I&E Technician position.
- Comprehension of electrical wiring diagrams and control schematics.
- Comprehensive understanding of electrical system and motor control centers.
- Ability to use required electrical testing equipment.
- Working knowledge of cable pulling techniques, conduit installation practices, and high voltage cable termination methods.
- Conceptual understanding of plant systems.
- Conceptual understanding of electrical theory.
- Working knowledge of water treatment system.
- Comprehensive understanding of electrical system and motor control centers.
- Working knowledge of high voltage switchgear and switchyard equipment operation and maintenance.
- Knowledge of plant clearance procedures
- Fundamental knowledge of computer hardware system-electric application.
- Cognition of software system utilized by plant.
- Comprehension of complex electrical wiring diagrams and control schematics.
- Communication and human relation skills.
- Ability to use light duty equipment.

Physical Requirements

Performance of essential functions in the I&E Technician Classification require the following:

- Ability to perform manual tasks including but not limited to:
 - Shoveling
 - Operation of hand tools
 - Manipulation of valves.
- Ability to lift at least 80 lbs.
- Ability to bend and maneuver in tight, cramped quarters.
- Ability to work in hot, noisy and dark environments. Ability to work in high places.
- Ability to work with and wear respiratory protection.
- Ability to communicate clearly with plant personnel. Ability to give and receive instructions over a radio and P.A.
- Ability to see clearly; safely and readily identifying the labels, gauges, dials and indicators typically encountered in performing job duties.
- Ability to read, write and understand instructions and procedures.

Education & Experience

- High School graduate or equivalent plus Associate Degree in I&E or Electrical Maintenance or equivalent experience.
- Minimum of (5) years' experience in steam and electrical power plants at a journeyman I&E Technician level, and equivalent training.
- Preferred specific plant equipment experience:



- GE Woodward 301/501 Controls
- GE Mark IV Controls
- Woodward Micronet + Controls
- Plant Metso (or similar) DCS
- Allen Bradley PLC software
- Both GE Aero and GE Frame Gas Turbines
- Vibration Controls
- Boiler Controls