

City of Fort Worth, Texas

Job Description

Classification Title	Senior Instrumentation/Electrical Technician		
Job Code:	TC5451	Job Family:	Technical/Para-Professional
Pay Grade	510	Date Reviewed:	06/15/15
FLSA Status	Nonexempt	Date Revised:	08/07/23

GENERAL SUMMARY

Performs specialized technically skilled work associated with the installation, maintenance, operation, inspection and testing of water and wastewater plant instrumentation and electrical systems. Maintains the operational status of all electrical and instrumentation necessary to the treatment process and the control of water and wastewater facilities. Coordinates repairs to electrical and electro-mechanical equipment.

ESSENTIAL DUTIES & RESPONSIBILITIES

The intent of this job description is to provide a representative summary of the major duties and responsibilities performed by incumbents of this job. Incumbents may be requested to perform job-related tasks other than those specifically presented in this description.

1. Maintains and repairs electrical and instrumentation equipment by using the work maintenance management system.
2. Repairs and calibrates electric motors, gas pumps, blowers, ventilators, saws, generators, and other electrical equipment used in water and wastewater treatment.
3. Retrieves log information from the hazardous gas monitors and report findings to supervisors and safety personnel.
4. Coordinates new and rehab construction projects performed in-house.
5. Assigns work, trains, directs and evaluates work of assigned I&E Technicians and Interns.
6. Procures specialized equipment and supplies for repair and replacement of instruments and electrical system components. Coordinates with Purchasing staff to locate appropriate vendors and contracts. Manages distribution of needed parts to work crews.
7. Documents instrumentation programming to include multiple digital control systems, Supervisory Control and Data Acquisition (SCADA) and local stand-alone systems.
8. Gathers, compiles and analyzes data. Tracks repair costs.
9. Coordinates activities with other departments, divisions, customer cities and other outside entities.
10. Ensures efficiency of department equipment and maintenance schedules.
11. Performs other related duties as required.

12. Adheres to assigned work schedule as outlined in the Department and City attendance policies and procedures; ensures all behaviors comply with the City's Personnel Rules and Regulations.

KNOWLEDGE, SKILLS & ABILITIES

- **Knowledge of:**
 - Electronics, instrumentation, installation, maintenance, and repair of computer related water plant equipment.
 - ARC Flash protection, Lock Out/Tag Out, CPR/First Aid, Fire Protection, cable cleaning, splicing and terminating procedures.
 - Electronic Theory.
 - Process instrumentation such as pressure, flow, level and temperature.
 - Methods and techniques of calibration.
 - National electrical code and electrical schematics, blueprints or drawings.
 - Tools and equipment related to the installation and repair of instrumentation and high voltage electrical systems.
 - Common safety precautions and practices.
 - General City and departmental policies and practices.
 - Computer IT and network systems, assembly and support.
 - Contract Compliance.
 - Parts Acquisition.
- **Skill in:**
 - Observations.
 - Prioritization.
 - Time Management.
 - Troubleshooting.
 - Coordination.
 - Multitasking.
 - Organization & Scheduling.
 - Decision making.
 - Customer Service.
- **Ability to:**
 - Communicate clearly and effectively, both orally and in writing.
 - Interpret complex electrical schematics for installation and troubleshooting.
 - Test, diagnose, and repair complex motor controls, water process instrumentation, and electrical systems.
 - Test and verify calibration and operation through the use of digital process metering equipment, process modules, and comparison tests with certified test instruments.
 - Maintain and troubleshoot, repair and replace analytical instrumentation such as Ozone, Chlorine, etc. for process treatment and personal safety.
 - Configure instruments to measure water flow, level, and velocity.
 - Utilize appropriate tools in performing instrumentation repair and installation.
 - Read and have an understand blueprints, drawings and electrical wiring schematics.
 - Identify and differentiate between color-coded electrical components.

- Test and diagnose motor controls, water process instrumentation, and electrical systems.
- Maintain accurate records of all parts, labor, and maintenance schedules on assigned equipment.
- Follow written and verbal instructions.

MINIMUM JOB REQUIREMENTS

High school diploma/GED and four years of experience in the instrumentation or electrical fields of construction, motor control maintenance, or process control instrumentation.

OTHER REQUIREMENTS

Valid Texas Driver's License.

Possession of an appropriate valid journeyman electrical license.

WORKING CONDITIONS

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Depending on assignment, positions in this class typically require touching, talking, hearing, seeing, grasping, standing, stooping, kneeling, crouching, reaching, walking, repetitive motions, climbing, balancing, pushing, pulling and lifting; depending on assignment. Incumbents may be exposed to moving mechanical parts, odors, dusts, poor ventilation, chemicals, oils, extreme temperatures, inadequate lighting, intense noises, gases, vibrations, chemicals, oils and workspace restrictions.

PHYSICAL DEMANDS

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

Heavy Work – Depending on assignment, positions in this class typically exerting up to 100 pounds of force occasionally, up to 50 pounds of force frequently, and/or up to 20 pounds of force constantly having to move objects.