



UNION JOB DESCRIPTION

TITLE: Mechanical Constructor

DEFINITION:

Responsible for troubleshooting, repairs, installation, and preventative maintenance of all mechanical and hydraulic equipment related to production of power at the District's hydroelectric projects and other generation facilities.

DISTINGUISHING CHARACTERISTICS:

This classification is a standalone classification and is a Journey level classification. Incumbents work independently and as part of a team. The Mechanical Constructor must be able to perform the duties of the Helper classifications and other similar and incidental duties. Incumbents may elect to participate in the on-the-job training program and then qualify to test for advancement to the Generation Constructor level.

Incumbents in this classification assigned to the Jackson Hydroelectric Project are required to establish their residence so they will be able to report to work within thirty (30) minutes after being called.

This is a bid classification subject to CBA articles 6.2.5 and 6.2.7 where the District will select the successful candidate based on ability and personal qualifications.

BASIC RESPONSIBILITIES:

1. Installs, modifies, services, and repairs mechanical equipment and machinery such as turbines, generators, governors, pumps, compressors, valves, cranes and hoists. Installs and maintains air, water, oil, heating and air conditioning systems.
2. Utilizes portable equipment and tools, such as drills, welders, grinders, and special tools, gauges, and instruments.
3. Performs maintenance activities such as oil purification, operates overhead cranes, hoists, winches, rigging, painting, welding, grinding, pipe fitting, gauge testing, lathe work, carpentry, concrete work and similar activities.
4. Assists Electrical Constructors, Technicians, and Engineers in programs of testing and research necessary for installation of new equipment, or to determine repairs or improvements to obsolete or defective equipment.
5. Records information and maintains accurate daily plant operating log including water flow and storage calculations.
6. Observes that operational changes occur, e.g., voltage levels, generation output to maintain generation schedules and to maintain water flows as required.
7. Performs non high voltage lockout/tag-out procedures.
8. Works from equipment instruction books, mechanical drawings or sketches as guides for equipment maintenance, modification, or installation.
9. Performs inspections and maintenance of plant structures, dam, spillways, fishways, and service installations. Performs routine inspections and services, and records equipment condition. Inspects generation power plant, dam, switchyard facilities and all associated equipment on a regular basis; perform housekeeping and adjustments to equipment as necessary requiring travel throughout various generation projects and project sites.
10. Starts and stops hydroelectric units when they are in auto or local manual control as directed, ensuring their work is in compliance with current FERC license and approved NERC/WECC standards.

11. Provides work direction to District personnel or contracted crews assigned to assist in the installation and maintenance of project mechanical equipment.

BASIC RESPONSIBILITIES: (continued)

12. Be well-informed on safe clearance procedures, safety practices, and regulations associated with operation and maintenance of a generation installation.
13. Provides assistance in supervising and training of Generation Maintenance Helper, Generation Utility Workers, and Summer Hires.
14. Rigs heavy machinery for moving; operates gantry cranes, motor vehicles including Snow Cat, Skid Steer/Forklift and bucket trucks.

OTHER RESPONSIBILITIES:

1. Performs other duties as assigned.

MINIMUM QUALIFICATIONS:

Knowledge of:

- Advanced mechanical concepts and theories.
- Standard mechanical drawing code numbers and basic mathematics.
- Safety procedures when working on or near generation equipment.

Ability to:

- Read blueprints and schematics.
- Install, troubleshoot, and repair generation plant equipment.
- Align shafts, operate micrometer, precision measuring equipment, oxy-acetylene and welding equipment to fabricate special equipment.
- Operate computer and laptop for and software programs such as database, spreadsheet, word processing, etc.
- Physically perform duties of job, including ability to climb stairs in excess of 200 feet; bend stoop, work in tight places, walk on varying terrain, work in varying weather environments and varying noise levels.
- Operate cranes and equipment/tools required to perform job duties.
- Work independently and communicate and work effective with plant personnel.
- Analyze situations accurately and adapt an effective course of action.
- Climb stairs in excess of 200 feet.
- Lift and carry equipment and materials up to 50 pounds.
- Work in elevated positions.
- Learn and apply FERC License and approved NERC/WECC standards of operations. (basic knowledge).
- Learn and apply District Accident Prevention Manual and WAC Electrical Safety Rules.
- Learn and apply District safety requirements; First Aid and CPR methods.
- Learn and apply Collective Bargaining Agreement.
- Learn and apply District Policies, Procedures and Directives.

Education/Experience:

- Four (4) years' experience as a Journeyman Hydroelectric Plant Mechanic or equivalent experience.

MINIMUM QUALIFICATIONS: (Continued)

License, Certification and/or Testing:

- Successful completion of an interview process.
- Valid Washington State Driver License, with a good driving record (immediately).
- Valid Washington State Class A Commercial Driver License required within six (6) months from start of job with maintenance thereafter.
- First Aid, CPR, and forklift certification required within six (6) months from start of job with maintenance thereafter.
- Be granted unrestricted respirator clearance within six (6) months from start of job with maintenance thereafter.

WORKING CONDITIONS:

- Duties are performed in a variety of environments both indoors and outdoors and in remote and rugged wilderness areas.
- Work is physical in nature.
- Must be able to operate tools and equipment outlined in the description.
- Work may be performed independently and alone, with infrequent face-to-face contact with other employees, and may only have contact with District staff via radio.
- Incumbent is exposed to varying weather conditions, varying noise levels and may be exposed to wild animals.
- Work will frequently occur in and around lakes and rivers. Incumbent must be able to: lift and carry equipment and materials up to 50 pounds; climb stairs in excess of 200 feet; and work in evaluated positions.
- Incumbent may be exposed to hazardous chemicals used in the cleaning and maintenance related hydroelectric components.
- This position may be required to work non-standard hours and respond to call-outs as emergency conditions dictate.
- Required driving to various generation projects, meetings and training sessions.
- Must be willing to work overtime, weekends and holidays.
- Subject to 24 hour call-out emergency conditions.