**Class Summary**

The responsibilities of this classification include performing advanced-level mechanical duties, conducting complex maintenance, overhauling, and installing heavy mechanical equipment, and providing leadership and direction to mechanical and other skilled craft personnel. Incumbents in this classification act as liaisons with wastewater operations staff, engineering, project managers, and vendors regarding assigned mechanical work assignments.

**Distinguishing Characteristics**

This is the third level within a three-level classification series. This classification is distinguished from the Industrial Machinist/Mechanic Lead in that the Industrial Maintenance Mechanic-Master classification is primarily responsible for repairing, overhauling, and maintaining complex industrial machinery.

**Examples of Duties**

*In addition to the duties of the Industrial Maintenance Mechanic classification, the Industrial Maintenance Master Mechanic will:*

1. Provide direction and training in the performance of significant repairs to heavy equipment, such as but not limited to pumps, motors, gearboxes, bearings, drive lines, hydraulic and pneumatic pump systems and equipment, compressors, large aeration blowers, and gas scrubbers. Replace bearings as determined through vibration analysis or other established techniques. Replace pump volutes, shafts, and impellers. Maintain and repair oxygen generation and distribution equipment—salvage equipment for reuse.
2. Evaluate, test, and troubleshoot complex malfunctions in pumps, gearboxes, air compressors, gas compressors, evaporators, scrubbers, blowers, bar screens, augers, gravity belt thickeners, belt presses, disinfection equipment, chemical handling equipment, hydraulic systems, and power generation gas turbines. (Co-Gen) , complex centrifuges, and other related equipment in a large industrial environment. Perform precision maintenance on equipment to extend life and reduce costs, including laser alignment vibration analysis and root cause failure analysis techniques. Develop preventative and repair procedures. Use current operating and maintenance cost measurements and historical data from internal and external sources to calculate dollar savings on an annualized basis for an estimate of return on precision maintenance.
3. Provide direction and training in machine shop assignments, including milling, drilling, and using a lathe, radial drill press, band saws, blueprints, engineering drawings, operations and maintenance manuals, vendor data, and input based on prior experience. Provide leadership and training to mechanical staff in state-of-the-art welding. Fabricate parts for piping systems, frames, fixtures, special tools, pump bases, and repairs to machine housings, volutes, shafts, and impellers.
4. Develop, replace, or modify existing systems to provide more reliable service and reduce maintenance costs, working with internal and external staff, vendors, and consultants. Recommend and develop new ideas to improve wastewater treatment equipment, systems, and processes. Review and evaluate engineering work and make recommendations on design modifications and/or changes.
5. Lead projects and direct the work of assigned crew involved in the repair, overhaul, installation, and maintenance of equipment as determined by the supervisor, including ensuring that industrial safety regulations, standards, and procedures are being followed.
6. Review and enforce job-specific safety protocol before job commencement. Plan and review confined space entry procedures; complete documentation for confined space entry before performing mechanical maintenance.
7. Perform other duties as assigned.

**Knowledge/Skills**

Knowledge of industrial mechanical maintenance practices and techniques

Knowledge of carpentry techniques and principles to build supports for the repair, overhaul, and maintenance of industrial equipment

Knowledge of fabrication techniques and principles

Knowledge of safety practices and procedures associated with hazardous chemicals such as epoxies, polymer, organic solvents, hypo chloride, and pressurized systems such as pneumatics, boilers, steam systems, and high-pressure water and hydraulic systems

Knowledge of procedures for confined space entry

Skill in oral and written communication

Ability to enter vaults and wet wells via multiple levels of stairs or ladders while using fall arrest equipment, personal gas monitors, and other safety gear

Ability to work all shift schedules and to report to work during adverse and inclement weather conditions

Ability to lift and carry equipment weighing up to 50 pounds, work in confined spaces, climb in and out of tanks using ladders, and work around noxious odors and high noise levels

Ability to effectively engage in and sustain relationships with people from diverse cultures and socio-economic backgrounds

Ability to work independently and as a team member

Demonstrated proficiency with business applications, such as Microsoft Office suite

**Education and Experience Requirements**

Any combination of education and experience that clearly demonstrates the ability to perform the job duties of the position

**Licensing, Certification and Other Requirements**

Washington State Driver’s License

Some licenses, certifications and other requirements determined to be necessary to meet the business needs of the employing unit may be required

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| **FLSA Designation** | Non-Exempt  |
| **Service Status** | Career Service  |
| **EEO Code** | 7 |
| **Levels within same series** | Industrial Maintenance Worker, Industrial Maintenance Mechanic, and Industrial Maintenance Mechanic Master |
| **Class History** | 09/2006 – Created07/2007 – Updated font and format10/2008 – Updated03/2010 – Updated03/2025 – Updated content |