

THE CITY OF LOS ANGELES



CIVIL SERVICE COMMISSION

CLASS SPECIFICATION**6/26/87****MACHINIST, 3763**

Summary of Duties: Cuts and shapes metals and other materials using precision hand and machine tools in the construction assembly, installation, or repair of various types of machinery, equipment, tools, and dies; disassembles, repairs, and reassembles machinery where fine alignment and close tolerances are required.

Distinguishing Features: A Machinist is a journey-level worker who normally fabricates and repairs a wide variety of mechanical components with little close supervision. An employee of this class receives written job orders and verbal assignments and works from prints, rough sketches and ideas developed through discussion of assignments with supervisors, engineers and others. A Machinist interprets instructions, determines the proper sequence of metal cutting operations, lays out the work, selects the proper jigs, fixtures and tools, sets up the machines and performs necessary operations. An employee of this class either does only a single or limited number of operations on a particular job or lays out the entire job, establishes reference points, does all necessary operations on one or more machines and hand finishes and assembles the parts. A Machinist assembles and installs mechanical equipment during some maintenance operations but not on new construction projects.

Example of Duties:

- Sets up and operates lathes, shapers, planners, milling machines, drill presses, grinders and other precision power machines and shop equipment with the aid of precision hand tools to cut, turn, shape, mill, bore, drill, tap, thread, groove, broach, slot and work cast iron, steel, brass, aluminum, copper and bronze, and occasionally plastics and other materials;
- Fabricates, repairs, and modifies shafts, glands, gears, sprockets, valve stems and seats, pulleys, hubs, brake drums, bearings, keyways, spindles, pistons, studs, nuts, thrust plates, switches, bushings and packing sleeves and other parts of equipment such as refuse collection trucks, water valves and meters, hydraulic and steam turbines, electric generators, marine diesel engines and appurtenant equipment and fire fighting, sewer maintenance, asphalt plant, container crane and cargo handling, recreational, water distribution and power generating equipment;
- Finishes, scrapes and laps parts to .001-inch and occasionally .0005-inch tolerance;
- Works from detailed plans, rough sketches, samples or verbal instructions;
- Makes and files rough shop drawings;
- Dismantles, repairs, level, aligns and reassembles steam and hydraulic turbines, steam, water and oil circulating pumps, compressors, pneumatic tools and other machinery and mechanical equipment when fine alignments and close tolerances are required;
- Makes magnaflux, managlow and dye-penetrant tests of bearings, webbings and other critical areas on equipment;
- Rebabbits and machines cylindrical and flat bearings;
- Fabricates jigs, tools and dies needed for repair and fabrication work;

- Does bench and floor repair and assembly of machine parts;
- Does rigging according to accepted practices;
- Does hand forging and head treating;
- Operates metal spraying equipment;
- Cleans or retubes steam boilers, condensers, and heat exchangers;
- May occasionally be assigned to other duties for training purposes or to meet technological changes or emergencies.

Qualifications

Knowledge of:

- Standard practices, processes, terminology, and tools of the machinist trade;
- Working properties and uses of a variety of metal alloys, spray metal and other materials;
- Principles and practices of safety in machine shop and field work including safe rigging practices in the lifting of heavy equipment;
- Dismantling, repair and assembly of gas, diesel, steam and marine engines, steam and hydraulic turbines, fireboat engines, fire apparatus and pumps, automotive systems, construction equipment and a variety of mechanical, hydraulic, pneumatic and electrical assemblies;
- Disassembly, repair and modification of plant equipment;
- Shop mathematics and the charts and tables commonly used in machine shop work.

Ability to:

- Use precision machine shop equipment and hand tools of the trade;
- Interpret and apply blueprints, drawings, sketches, specifications and written and verbal instructions;
- Make working and reference shop drawings.

Requirements: Completion of a four-year apprenticeship or the attainment of journey-level rank as a machinist, or six years of experience as a helper performing machine shop work is required.

License: A valid California driver's license and good driving record may be required.

Physical Requirements: Strength to perform average lifting of up to 35 pounds and occasionally over 70 pounds; arm, hand and finger dexterity with both hands as required to manipulate machine tools and controls and to handle equipment components; back and leg coordination involved in activities such as bending and stooping; good speaking and hearing ability; and good eyesight, including good depth perception.

Persons with disabilities may be able to perform the essential duties of this class with reasonable accommodation. Reasonable accommodation will be evaluated on an individual basis and depend, in part, on the specific requirements for the job, the limitations related to the disability, and the ability of the hiring department to reasonably accommodate the limitations.

As provided in Civil Service Commission Rule 2.5 and Section 4.55 of the Administrative Code, this specification is descriptive, explanatory and not restrictive. It is not intended to declare what all of the duties, responsibilities, and required qualifications of any position shall be.