

MACHINIST

DEFINITION

Designs, constructs, moves, installs, aligns, levels, anchors, rebuilds, repairs and inspects machines, tools, power transmissions, hydraulic systems, and mechanical building devices or equipment.

TYPICAL DUTIES

Performs layout work and uses precision measuring devices, hand tools, and machine tools, such as lathes, planers, shapers, milling machines, and precision grinders, to fabricate or repair metal parts to tolerances of .0002 inch.

Moves, installs, levels, aligns, and anchors machines, mechanical equipment, and power units to foundations, using rigging, hoists, lift trucks, dollies, rollers, and slings.

Inspects, tests, and repairs the malfunctioning of manual, automatic, and hydraulic machinery, such as pumps, compressors, fuel station equipment, monitoring systems, food-processing machines, and woodworking and machine tools, and makes field and shop repairs.

Dismantles and rebuilds various machines and machine tools.

Designs, develops, and constructs or improves safety attachments and modifications for machinery and equipment, such as machine tools, woodworking machines, ventilating systems, pumps, compressors, conveyors, overhead doors, window controls, backstop hoists, and mechanical power transmissions.

Recommends repair or purchase of parts or complete machines and determines methods and availability of parts and materials for making repairs.

Estimates costs, initiates job requests, orders stock and nonstock parts and materials, and inspects for compliance with specifications.

May design, construct, and erect metal foundations for drive units and machines.

Performs related duties as assigned.

DISTINGUISHING CHARACTERISTICS AMONG RELATED CLASSES

A Machinist sets up and operates a variety of metal working machines; fabricates machine parts to tolerances of .0002 inch; and installs, maintains, inspects, and repairs parts, machines, tools, and equipment.

The Machinist Supervisor plans, assigns, coordinates, and inspects the work of Machinists, Mill Filers, and Toolsharpeners at the Central Maintenance Shops, and exercises technical supervision over the work of Machinists and Toolsharpeners assigned to Maintenance Areas.

A Mill Filer sharpens large cutting elements from machines; regrinds circular saws using heavy stationary grinding equipment; repairs, sharpens, and straightens band saws; and sharpens hand tools.

SUPERVISION

General supervision is received from the Machinist Supervisor, Area Metal Work Supervisor, or Senior Metal Worker; technical supervision on machining techniques is received from the Machinist Supervisor. Work direction may be exercised over a Maintenance Worker.

CLASS QUALIFICATIONS

Knowledge of:

- Design and operation of a wide variety of machinery, tools, and equipment
- Practices, processes, tools, techniques, terminology, and materials of the machinist, millwright, and rigging trades
- Properties of metals and alloys
- Machinery installation, leveling, and alignment
- Mechanical drawing, mechanical design, and shop mathematics
- Sources of information on costs and availability of machinery parts
- Safe procedures for arc and acetylene welding
- Heat treating
- Numerical control machinery
- California Industrial Safety Codes

Ability to:

- Diagnose and correct malfunctioning of mechanical equipment, including automatic and hydraulic systems
- Work effectively without close supervision
- Recommend design modifications for machinery
- Use tools of the machinist, millwright, and rigging trades

Special Physical Requirements:

- Ability to stand, walk, bend, crawl, climb, reach overhead, crouch, kneel, balance, push, and pull
- Safely lift up to 75 pounds of equipment and material
- Visual acuity to read measuring tools, dial indicators, and blueprints

ENTRANCE QUALIFICATIONS

Education:

Graduation from high school or evidence of equivalent educational proficiency, preferably supplemented by courses at the adult school or college level in blueprint reading, metallurgy, and mechanical drawing.

Experience:

One year of journey-level machinist or millwright experience or completion of a recognized apprenticeship in the Machinist trade.

Special:

- A valid California Driver License.
- Use of an automobile.

This class description is not a complete statement of essential functions, responsibilities or requirements. Requirements are representative of the minimum level of knowledge, skill and/or abilities. Management retains the discretion to add or to change typical duties of a position at any time.