

STEAM PLANT MAINTENANCE MECHANIC, 5630

Summary of Duties : Repairs, overhauls, and maintains high-pressure, high-temperature boiler, steam turbine, and auxiliary equipment at a fossil or nuclear-fueled steam electric generating plant or at a fuel oil facility; and does related work.

Distinguishing Features : A Steam Plant Maintenance Mechanic performs a wide range of repair and maintenance tasks which vary both in scope and difficulty. An employee of this class is responsible for detecting and reporting the need for repair and maintenance work and for troubleshooting equipment disorders to determine the cause and the repairs required. The employee works under general supervision and is responsible for the performance and quality of the work. Employees of this class routinely work around high-pressure, high temperature, and energized equipment. They are frequently exposed to hazardous materials and work in high places and on scaffolding and rigging.

Examples of Duties : Repairs, maintains and overhauls high-pressure, high-temperature boilers, steam and gas turbines, diesel driven generators and auxiliary equipment at a fossil or nuclear-fueled steam electric generating plant or at a fuel oil facility; cleans equipment, parts, lines, tubes, valves, drums, and other fixtures; replaces and repairs air heaters, fans, ducts, dampers, economizers, fasteners and soot blowers; replaces boiler tubes; repairs and replaces parts and lubricates pumps, fans, compressors, tanks, traps, sumps, circulating water systems, blowers, oil systems, auxiliary equipment, and steam lines; repacks and replaces gaskets and parts in valves; rebuilds and repairs safety valves; refaces and grinds valve discs and seats if machine operation is not involved; locates and makes repairs to eliminate boiler leaks; fabricates, repairs and replaces insulation on boilers, pipes and equipment; repairs and replaces boiler refractories; replaces boiler gauge glasses; tests and maintains fire-fighting equipment; obtains clearances to work on equipment and systems; disassembles and assembles equipment; builds scaffolding; sets up rigging; operates hoists, block and tackle, jacks and occasionally overhead traveling cranes, self-propelled cranes, skip loaders and fork lifts; cleans floors, walls, insulators and outside of mechanical equipment;

Repairs and replaces structural steel; forges and shapes metal steps, brackets, parts, tools and hangers; installs steps and brackets; sandblasts piping, boilers, interior and exterior of stacks and other equipment; does maintenance painting on equipment and structures and applies protective coating to structural steel, equipment, walls and roofs; builds boxes, crates and shelving; replaces worn and damaged sections of flumes, troughs and stairway supports and braces on cooling towers; makes repairs to building facilities and cooling tower reservoirs; cuts and fits piping; prepares work progress reports

including sketches; and may occasionally be assigned to other duties for training purposes or to meet technological changes or emergencies.

Qualifications : A good knowledge of the principles of operation of the equipment and machinery found in steam electric generating plants; a good knowledge of the hazards involved in and safety precautions required in working near operating steam plant equipment, including energized circuits; a good knowledge of the materials, tools and methods used in the maintenance and repair of steam electric generating plant equipment, buildings and machinery; a good knowledge of the dismantling and reassembly of turbines, pumps and other types of auxiliary equipment; a good knowledge of the characteristics of steam and water under high-pressure and high-temperature; a good knowledge of the Department of Water and Power regulations and procedures governing plant operation and the securing of clearances; a good knowledge of arithmetic, shop mathematics and precision measurement; a good knowledge of pertinent provisions of California Safety Orders and the use of safety equipment; a working knowledge of safe rigging practices; a working knowledge of the erection of scaffolding; the ability to inspect and detect irregularities in the operation and functioning of machinery and equipment; the ability to analyze emergency situations and to adopt quick, effective and reasonable courses of action; the ability to use an oxyacetylene cutting torch; the ability to perform manual work and use hand tools associated with maintenance activities at a steam electric generating plant or fuel oil facility; the ability to read and interpret blueprints, work orders and sketches and to follow oral instructions and established procedures; the ability to direct and instruct helpers; and the ability to prepare clear and concise work reports.

Three years of full-time paid experience as a Steam Plant Assistant, one year of which shall be as an assistant maintenance mechanic in the actual repair and overhaul of equipment at a steam generating plant.

License : Some positions may require a valid California driver's license and a good driving record.

Physical Requirements : Strength to perform average lifting up to 70 pounds and occasionally over 70 pounds; back and leg coordination involved in activities such as stooping, kneeling, crouching and crawling to an unusual extent; and good eyesight.

Persons with medical limitations may, with reasonable accommodations, be capable of performing the duties of some of the positions in this class. Such determination must be made on an individual basis in light of the person's limitations, the requirements of the position, and the appointing authority's ability to effect reasonable accommodations to the person's 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 and responsibilities of any position shall be.