

**ESSENTIAL DUTIES**

**Mechanical Technologist Grade II**

200. Essential duties identified on the Test Content Specifications for Plant Maintenance Grade I.

201. Repairs, maintains, installs, inspects, troubleshoots, assists with and adjusts a variety of mechanical equipment at treatment facilities. Equipment includes: sluice gates, compressors, and flights; hydraulic controls; mechanical structural, and plumbing apparatus; belt, chain, and conveyors; diesel and or gas engines and related co-generation equipment.

202. From work orders, drawings, specifications, schematics, sketches, verbal and written instructions, performs complex mechanical maintenance, repairs, fabrication, and rebuilding of shop, field, and plant equipment used in wastewater plants, pump stations, and collection systems.

203. Maintains, installs, inspects, and repairs a variety of pumps, such as centrifugal, positive displacement, and screw; services, lubricates, and adjusts chemical feed and processing equipment; determines excess wear and pump efficiencies; and follows preventive and predictive maintenance practices.

204. Performs horizontal and vertical welding, fabricating; makes specialized cuts and complex angles using a band saw; and performs blacksmithing and parts fabrication.

205. Maintains, installs, inspects, and repairs piping systems.

206. Performs complex maintenance and repair tasks on a wide variety of internal combustion engines; adjusts valves and carburetors to meet emission standards; and repairs and maintains exhaust systems.

207. Performs regularly scheduled maintenance, inspection, and repair tasks on comminuting and grinding devices; overhauls equipment, such as cutters, bearings, chains, mechanical seals, gear reducers; performs close tolerance checking and testing.

208. Performs basic to complex maintenance, inspection, and repair or overhauling tasks on drive components, such as right angle drive gears, reduction drives, variable speed and belt and chain drives.

209. Overhauls, maintains, installs, adjusts, inspects, and repairs a variety of hydraulic and pneumatic systems and compressors.

210. Properly uses and cares for hand and power tools such as grinders, saws, jacks, hydraulic presses and pullers, and pipe threaders, inspects, tests, and measures equipment and material using precision instruments such as scales, height and depth gauges, calipers, verniers, and micrometers of various types.

211. Plans tasks, keeps records of work performed and makes estimates of labor and identifies materials necessary for the performance of the work.

212. Follows proper safety practices, precautions, and procedures, such as confined space entry, storing, handling, and transporting gases, using correct lockout and tagout procedures, using flash protection when welding, and performs safe rigging and welding practices.

213. Trains personnel in the proper operation of tools and equipment, chemical and confined space procedures, and safety practices.

214. Responsible for adherence to safety orders and compliance with federal and CAL-OSHA regulations in all aspects of work.

**ESSENTIAL DUTIES**

**Mechanical Technologist Grade III**

300. Essential duties identified on the Test Content Specifications for Plant Maintenance Grade I, and Mechanical Technology Grade II.
301. Prepares, receives and reviews assignments for the mechanical maintenance wastewater facilities.
302. Supervises and participates in and reviews the work of staff responsible for maintenance of wastewater facilities.
303. Participates in the development of policies and procedures; monitors work activities to ensure compliance with established policies and procedures and makes recommendations for changes and improvements to existing policies and procedures.
304. Performs complex preventive and predictive mechanical maintenance tasks.
305. Performs complex corrective mechanical maintenance by troubleshooting cause of malfunction using visual inspection and precision measuring and testing instruments and replacing or repairing broken parts.
306. Rebuilds equipment by disassembling, cleaning, ordering replacement parts, repairing mechanical malfunctions, reassembling and testing.
307. Plans or assists in the planning and implementation of computer based maintenance programs.
308. Identifies and procures materials and equipment, and schedules personnel necessary to complete scheduled and emergency repairs.
309. Prepares and is responsible for maintenance reports.
310. Trains personnel in the proper operation of tools, equipment, mechanical systems, safety practices and procedures.
311. Responsible for adherence to safety orders and compliance with federal and CAL-OSHA regulations in all aspects of work.
312. Performs worksite inspections, inspects work in progress and verifies completion.
313. Coordinates work with other departments or agencies.
314. Responsible for the administration of outside contract work.
315. Assists in the planning, developing and implementing safety and training programs.