

THE CITY OF LOS ANGELES



CIVIL SERVICE COMMISSION

CLASS SPECIFICATION

11-22-85

SAFETY ENGINEER PRESSURE VESSELS, 4261
SENIOR SAFETY ENGINEER PRESSURE VESSELS, 4262
CHIEF SAFETY ENGINEER PRESSURE VESSELS, 4260

Summary of Duties: Inspects steam and other boilers, unfired pressure vessels, and appurtenances for conformance to State laws and City ordinances regulating their design, fabrication, installation, and operation; or participates in and supervises such work; or plans, directs, reviews and approves the work of a group of Senior Safety Engineer Pressure Vessels and Safety Engineer Pressure Vessels engaged in such work; and does related work.

Distinguishing Features: A Safety Engineer Pressure Vessels is responsible for safeguarding the public by enforcing the provisions of the Municipal Code, State laws, and the codes of the American Society of Mechanical Engineers pertaining to boilers and unfired pressure vessels. Employees of this class make original installation inspections and periodic reinspections of boilers and other pressure vessels, and may inspect such equipment during manufacture at plants outside the City. A Safety Engineer Pressure Vessels works without close supervision and must be able to enforce provisions of the law without arousing antagonism. The work requires considerable physical exertion and contact with heated air, dust, and dirt. There are also hazards from explosions, falling, or being burned.

A Senior Safety Engineer Pressure Vessels supervises Safety Engineer Pressure Vessels in the proper application and interpretation of the law and engineering principles; makes field inspections when difficult problems or public relations situations arise; and sees that inspections and investigations are made promptly, accurately, and uniformly.

A Chief Safety Engineer Pressure Vessels directs the activities of a group of Safety Engineer Pressure Vessels and Senior Safety Engineer Pressure Vessels. An employee in this class must use good judgment in making decisions on controversial questions pertaining to interpretation of laws and the application of engineering principles pertaining to boilers and other pressure vessels. A Chief Safety Engineer Pressure Vessels is responsible for inspection of fired and unfired pressure vessels made by insurance inspectors deputized by the Department of Building and Safety.

Safety Engineer Pressure Vessels

Senior Safety Engineer Pressure Vessels

Chief Safety Engineer Pressure Vessels - 2

Examples of Duties: Safety Engineer Pressure Vessels: Inspects steam boilers, air tanks, liquefied petroleum gas tanks, and other pressure vessels for materials used, riveting, welding, brace and rivet tension, safety valve operation, pitting, quality of work, corrosion, cracking and other factors affecting operation and condition of equipment; test boilers and other pressure vessels, using hammer, accumulation, hydrostatic, and other standard tests; determines that required safety devices and regulators are used; recommends changes to correct unsafe conditions; investigates accidents involving pressure vessels to determine the causes and recommends methods of preventing recurrences; confers with engineers, manufacturers, contractors, owners and operators concerning problems in the construction, operation and repair of pressure vessels and accessories; secures the correction of conditions which violate legal requirements; may inspect other structural steel fabrication, rotating equipment and pumping machinery; assists in training other inspectional employees as required.

Checks drawings, designs and specifications of steam boilers and unfired pressure vessels for conformance to legal provisions; calculates allowable limits of pressure, strength and stresses of boilers and other pressure vessels; witnesses acceptance and installation tests; orders correction of faulty work or material; checks permits and checks methods of operation for steam boiler and other pressure vessel installations; checks radiographic film for welding defects; and prepares reports of inspections and investigations.

May travel to manufacturing plants outside the City to inspect the manufacturing of boilers and other pressure vessels being made for the Department of Water and Power; and may estimate monthly progress payments to be paid to contractors.

Senior Safety Engineer Pressure Vessels: Supervises Safety Engineer Pressure Vessels engaged in the enforcement of legal provisions and recognized safety practices related to the design, fabrication, installation and operation of boilers and unfired pressure vessels; instructs subordinates in proper inspection procedures, methods of investigation of violations of laws and recognized safety practices, and in the application of changes in and interpretations of laws; makes investigations and inspections of difficult or controversial installations.

Confers with manufacturers' representatives, contractors, and operators concerning design and installation problems and legal requirements; reviews the inspection reports made by Deputy City Boiler Inspectors; assists in the preparation of technical reports and correspondence on complaints and requests for deviation from legal requirements; acts as a member of and participates in the work of code revision committees working on changes to City Codes

Safety Engineer Pressure Vessels

Senior Safety Engineer Pressure Vessels

Chief Safety Engineer Pressure Vessels - 3

pertaining to boilers and unfired pressure vessels; assists the City Attorney's Office in the prosecution of violators; may act for the Chief Safety Engineer Pressure Vessels in the latter's absence; and fulfills supervisory affirmative action duties as set forth in the City's Administrative Action Plan.

Chief Safety Engineer Pressure Vessels: Plans, directs, reviews and approves the work of a group of Senior Safety Engineer Pressure Vessels and Safety Engineer Pressure Vessels engaged in inspecting the manufacture, installation, repair and operation of steam boilers, unfired pressure vessels, and appurtenances for conformance to legal requirements and approved safety practices; reviews and makes recommendations regarding changes in designs, plans and specifications for such equipment.

Instructs and supervises the instruction of employees in appropriate methods of making investigations and inspections; explains technical principles and methods of designs, construction and materials of steam boilers, unfired pressure vessels, and appurtenances; assists subordinates in the proper application of specification data standards and regulations established by the American Society of Mechanical Engineers and the State; personally makes the more technical and difficult field inspections of large and complicated steam boilers, unfired pressure vessels, appurtenances and systems; approves or disapproves plans for the fabrication, alteration, installation and repair of boilers based upon code and safety order requirements for allowable types of materials, fabricating processes, designs and calculated pressures; reviews inspection reports of Deputy City Boiler Inspector and makes field investigations of their work as necessary; confers with engineers representing manufacturers of steam boilers and unfired pressure vessels and makes technical suggestions as to materials, designs and construction processes necessary to conform to applicable codes and safety orders; fulfills supervisory affirmative action duties as set forth in the City's Administrative Action Plan.

Prepares technical reports and correspondence on complaints, requirements for various steam boilers and unfired pressure vessels and violations of specific legal provisions and safety orders; and acts as an expert witness in court cases involving steam boilers and unfired pressure vessels.

Safety Engineer Pressure Vessels
 Senior Safety Engineer Pressure Vessels
 Chief Safety Engineer Pressure Vessels - 4

All Classes: May occasionally be assigned other duties for training purposes or to meet technological changes or emergencies.

Qualifications:

<u>Knowledges:</u>	<u>Safety Engr. Pressure Vessels</u>	<u>Senior Safety Engr. Pressure Vessels</u>	<u>Chief Safety Engr. Pressure Vessels</u>
Methods and techniques of detecting unsafe conditions and determining corrective measures in connection with boilers and pressure vessels;	Good	Good	Good
Boilers and pressure vessel manufacture, installation, operation and maintenance;	Good	Good	Good
State laws, City ordinances, and the American Society of Mechanical Engineers codes governing the fabrication, installation, operation and maintenance of boilers and pressure vessels;	Working	Good	Good
Principles and practices of engineering as applied to the design and construction of boilers and other pressure vessels;	Working	Good	Good
Welding and riveting related to the manufacture and installation of boilers and pressure vessels;	Working	Good	Good
Safety principles and practices;	Working	Good	Good
Administrative and legal interpretations of the laws and regulations concerning boilers and pressure vessels;		Working	Good

Safety Engineer Pressure Vessels
 Senior Safety Engineer Pressure Vessels
 Chief Safety Engineer Pressure Vessels - 5

	Safety Engr. Pressure Vessels	Senior Safety Engr. Pressure Vessels	Chief Safety Engr. Pressure Vessels
<u>Knowledges:</u>			
Laws and regulations related to equal employment opportunity and affirmative action;		Working	Working
Principles of organization, management, and supervision;		General	Good
City personnel rules, policies and procedures;		General	Good
Memoranda of understanding as they apply to subordinate personnel;		General	General
<u>Abilities:</u>			
Detect unsafe conditions and practices in boiler and pressure vessel installations;	X	X	X
Interpret plans and specifications;	X	X	X
Prepare clear and concise reports;	X	X	X
Deal tactfully and effectively with the public and other employees;	X	X	X
Analyze difficult problems and to adopt an effective course of action;		X	X
Handle administrative detail;		X	X
Supervise and review the work of a group of Safety Engineer Pressure Vessels;		X	X
Plan, supervise, coordinate and review the work of an inspection unit.			X

Safety Engineer Pressure Vessels
Senior Safety Engineer Pressure Vessels
Chief Safety Engineer Pressure Vessels - 6

Three years of experience in the inspection, repair or construction of fired or unfired pressure vessels, or in the operation or maintenance of high pressure marine or stationary steam installation of over 500 horsepower; or graduation from a school of engineering in a recognized four-year college or university with a degree in mechanical engineering, marine technology, or industrial technology, and one year of the above experience; or completion of an associate degree in mechanical or inspection technology at a recognized college, and two years of full-time paid experience in the inspection, repair, construction, or operation of high pressure boilers and pressure vessels; or one year of experience as an Assistant Inspector III with the City of Los Angeles inspecting fired and unfired pressure vessels is required for Safety Engineer Pressure Vessels.

Two years of experience as a Safety Engineer Pressure Vessels is required for Senior Safety Engineer Pressure Vessels.

Three years of experience as a Senior Safety Engineer Pressure Vessels or four years of experience as a Safety Engineer Pressure Vessels is required for Chief Safety Engineer Pressure Vessels.

Licenses and Certificates: All Classes: A valid Certificate of Competency to inspect boilers and pressure vessels issued by the California Division of Industrial Safety and a valid California driver's license are required.

Physical Requirements: Safety Engineer Pressure Vessels and Senior Safety Engineer Pressure Vessels: Strength to perform average lifting of less than 5 pounds and occasionally over 15 pounds; back and leg coordination involved in activities such as crawling, kneeling, crouching; good speaking and hearing ability; and good eyesight.

Chief Safety Engineer Pressure Vessels: Strength to perform average lifting of less than 5 pounds and occasionally over 15 pounds; good speaking and hearing ability; and good eyesight.

Persons with handicaps maybe capable of performing the duties of some of the positions in these classes. Such determination must be made by the medical examiner on an individual basis.

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 the duties and responsibilities of any position shall.