

ILLINOIS DEPARTMENT OF CENTRAL MANAGEMENT SERVICES
CLASS SPECIFICATION

BOILER SAFETY AUDIT SPECIALIST

POSITION CODE: 04900
Effective: 4-1-16

DISTINGUISHING FEATURES OF WORK:

Under general direction, performs complex technical duties of an inspectional and consultative nature in the administration and enforcement of the Illinois Boiler and Pressure Vessel Safety Act and the Illinois Boiler and Pressure Vessel Repairer Regulation Act. Performs technical inspections to ascertain safe operating conditions of boilers, pressure vessels, flame safeguard equipment, pressure vessels, and ancillary equipment. Performs audits and reviews of manufacturers, assemblers, owner users, and repair firms for compliance with statutes, regulations and rules promulgated by the Illinois Board of Boiler and Pressure Vessel Safety Rules. Schedules audits and inspections and travels within a designated region of the state to perform the audit or inspection.

ILLUSTRATIVE EXAMPLES OF WORK:

1. Schedules and performs inspections of boilers, pressure vessels and flame safeguard equipment in a designated area of the State to ascertain safe construction, installation and operating conditions; performs and/or supervises hydrostatic testing of boilers and pressure vessels; utilizing mathematical formulae calculates allowable working pressure in relation to amount of metal deterioration; tests boiler safety appliances and appurtenances such as safety relief valves, blowoff valves, feed water controls, low water fuel cut-offs, pressure temperature controls and combustion controls relating to flame safeguard equipment; certifies boilers for operation and condemns boilers found to be in an unsafe condition.
2. As may be assigned by the Chief Inspector, performs audits and reviews of companies that are authorized to repair safety valve and safety relief valves on boilers and pressure vessels in accordance with the Illinois Boiler and Pressure Vessel Safety Act and the Board of Boiler and Pressure Vessel Safety Rules. Evaluates the operations of organizations, companies (e.g., owner users, repair firms) or individuals in possession of valid American Society of Mechanical Engineers (ASME) code symbol stamps, product certification marks and state authorizations.
3. Conducts inspection of boiler and pressure vessel manufacturing facilities and inspects boilers and pressure vessels in the process of manufacture; assures compliance with specifications for construction and fabrication as set forth by the ASME Code and the Illinois Boiler Safety Act; reviews manufacturer's quality control program and reviews and approves manufacturer's welding procedures and the welder's qualification test.
4. Consults with owners, users, operators, manufacturers, installers, and repair firms of boilers and pressure vessels to assist them with interpretation and application of various laws and codes. Provides advice and consultation related to plans for installation repairs and modification of boilers and related equipment.

BOILER SAFETY AUDIT SPECIALIST (continued)

5. Prepares regular reports of inspections, condition of units inspected and other activities. Maintains records of boilers and pressure vessels in assigned area, and inputs inspection data in computerized processing system.
6. Performs first time inspections of newly installed equipment.
7. Performs other duties as required or assigned which are reasonably within the scope of the duties enumerated above.

DESIRABLE REQUIREMENTS:

Education and Experience

Requires knowledge, skill and mental development equivalent to completion of four years of high school.

Requires five years of practical experience in the construction, maintenance, repair and operation of high pressure boilers as a mechanical engineer, operating engineer, or boilermaker. A mechanical engineering degree from a recognized accredited college of engineering may be substituted for two years of experience.

Requires current Inservice Commission by the National Board of Boiler and Pressure Vessel Inspectors. The possessor of this Commission may also be identified as a National Board Inservice Commissioned Inspector.

Requires current certificate as a National Board Review Team Leader by the National Board of Boiler and Pressure Vessel Inspectors. The possessor of this certification may also be identified as a National Board Team Leader.

Must have attained the age of 25 years.

Knowledges, Skills and Abilities

Requires thorough knowledge of the Illinois Boiler and Pressure Vessel Safety Act.

Requires thorough knowledge of the Illinois Boiler and Pressure Vessel Repairer Regulation Act.

Requires thorough knowledge of the strength and stress potential of metals used in the fabrication of boilers and pressure vessels.

Requires thorough knowledge of all ASME code specifications concerning power boilers, material specifications, heating boilers and nondestructive examination, recommended rules for care and operation of heating boilers, recommended rules for care of power boilers, pressure vessels, welding and brazing qualifications, and fiberglass reinforced plastic pressure vessels.

Requires extensive knowledge of the safety factors involved in the design, construction, installation and operation of high pressure boilers, heating boilers, and pressure vessels.

Requires extensive knowledge of steam engineering, operating engineering, boilermaking, steamfitting, and fluid transmission systems.

Requires extensive knowledge of flame safeguard equipment, of nondestructive examination methods; including liquid penetrant examination, radiography, ultra-sonic examination, and magnetic particle examination.

Requires working knowledge of routine practices of mechanical engineering.

BOILER SAFETY AUDIT SPECIALIST (continued)

Requires working knowledge of word processing and computer applications.

Requires ability to determine quality of materials, metals and equipment and degree of conformity with plans and specifications.

Requires ability to create and maintain satisfactory working relationships with the general public.

Requires ability to prepare clear, concise and factual complex reports.

Requires ability to apply seasoned judgment in arriving at difficult technical decisions.

Requires ability to visually inspect and perceive causes of malfunctioning in high and low pressure steam systems and pressure vessels.

Requires ability to analyze complex facts and draw conclusions for proper recommendations from these facts.

Requires skill and ability to input above information in provided computer systems.

Requires skill and ability to physically climb ladders and stairs, crawl, walk, egress through manways and small openings, and wear personal protective equipment as necessary.

Requires a current Illinois driver's license and the skill and ability to drive a vehicle and navigate to remote locations.