

JOB DESCRIPTION - BOILERMAKER

JOB DUTIES AND RESPONSIBILITIES

Assembles, analyzes defects in, and repairs boilers, pressure vessels, tanks, and vats in field, following blueprints and using hand tools and portable power tools and equipment: Locates and marks reference points for columns and plates on foundation, using master straightedge, squares, transit, and measuring tape, and applying knowledge of geometry. Attaches rigging or signals crane operator to lift parts to specified position. Aligns structures or plate sections to assemble boiler frame, tanks, vessels, or vats using plumb bobs, levels, wedges, dogs, or turnbuckles. Hammers, flame-cuts, files, or grinds irregular edges of sections or structural parts to facilitate fitting edges together. Bolts or arc-welds structures and sections together. Positions drums and headers into supports and bolts or welds supports to frame. Aligns water tubes and connects and expands ends and drums and headers, using tube expander. Bells, beads with power hammer, or welds tube ends to ensure leak-proof joints. Bolts or welds casing sections, uptakes, stacks, baffles, and such fabricated parts as chutes, air heaters, fan stands, feeding tube, catwalks, ladders, coal hoppers, and safety hatch to frame, using wrench. Installs manholes, hand holes, valves gauges, and feed water connection in drums to complete assembly/repair of water tube boilers. Assists in testing assembled vessels by pumping water or gas under specified pressure into vessel using instruments for evidence of leakage. Repairs boilers or tanks in field by unbolting or flame cutting defective sections or tubes, straightening plates, using torch or jacks, installing new tubes, fitting and welding new sections and replacing worn lug on bolts. Rivets and caulks sections of vessels using pneumatic riveting and caulking hammers. Fabricates such parts as stacks, uptakes, and chutes to adapt boiler to premises in which it is installed. Uses pneumatic tools for grinding, brushing, or hammering in cleaning operations. Uses a pneumatic tool for tightening lugs, torqueing bolts, and tightening or loosening of flanges on vessels, tanks, or boilers. May be required to work while wearing respiratory protection, either air supplied or air purifying, depending upon atmospheric conditions and work location. May be required to work in confined spaces, above ground in excess of fifty feet, outdoors in direct sunlight and in seasonal temperature extremes. Some of these job duties are not full time; project size and organization of work determine whether workers spend their time on one duty or transfer from duty to duty as project progresses to completion.

TOOLS, EQUIPMENT AND DEVICES REQUIRED ON THE JOB

Channel Lock Pliers 9"	6' Rule	Ball Pein Hammer 16 oz.
Combination Wrench 7/8"	Combination Wrench 1-1/16" 18"	Pry Bar
Combination Wrench 1-1/4"	Flange Scraper	Striker
2" X 6" Wedges (Brass)	Gloves	Safety Glasses
Crescent Wrench 12"	18" Pipe Wrench	Hardhat
Torpedo Level	Tool Box w/Lock	Hacksaw

NON-PHYSICAL JOB REQUIREMENTS

The Dictionary of Occupational Titles, Fourth Edition, Revised 1991, United States of America, Department of Labor Specific Vocational Rating for Boilermaker is: Over 2 years up to and including 4 years.

PERSONAL TRAITS

The ability to get along well with co-workers and management and the ability to work together with other employees as part of a group, the ability to accurately communicate ideas, instructions, questions, problems, solutions. The ability to accurately receive and understand ideas, instructions, questions, problems, solutions or feelings understanding of the nature and causes of accidents, appreciative of the effects and seriousness of accidents, alert and attentive for possible hazards, takes necessary actions to prevent accidents - is not accident prone and does not have a history of chronic unsafe behavior.

PHYSICAL JOB REQUIREMENTS

The ability to verbally communicate alarms or warnings clearly, concisely, loudly and quickly, to clearly and quickly hear or otherwise sense alarms or warnings and take appropriate action, maintain equilibrium to prevent falling when moving, walking, standing, kneeling or crouching - particularly on narrow, uneven, irregular, slippery surfaces, going up or down ladders, stairs, scaffolding, ramps, poles or other objects using hands, arms, feet or legs. Moves about on hands and feet, bending the body downward and forward bending leg and spine - working in a bent over position. Sensing physical attributes such as size, shape, temperature, texture or sharpness of an object by touching. Foot agility and dexterity - operating pedals, foot controls, kick bars and other similar tasks, which require foot or toe motion. Grasping, gripping or applying pressure to an object with the fingers and palm, holding an object in the hand. The ability to clearly and concisely perceive sounds, the ability to hear and understand detailed oral communications, the ability to hear warning signals and alarms given verbally and mechanically. Lifting, raising or lowering objects in a vertical direction, particularly heavy or bulky objects. Moving objects backward, forward, in or out in a horizontal direction, particularly heavy or bulky objects. Pulling, exerting a steady backward, downward, upward or outward force against an object -jerking, plucking, wrenching, stretching, towing, drawing, dragging or tugging objects in a sustained motion. Pushing, pressing against something with steady forward, downward, upward or outward force - shoving, pushing, compressing, squeezing, mashing, packing, pressing, jamming, compacting, or squashing objects in a sustained motion. Reaching, extending the hand(s) and/or arm(s) in any direction. The ability to see, read and understand written communications: including directions, instructions and warning signs, to see and distinguish colors, to visually distinguish shapes and patterns, to accurately sense distances (depth perception), to accurately see objects and detect motion at wide angles (peripheral vision). Bending the body downward and forward by bending the spine at the waist, using the lower extremities and back muscles and moving on foot, particularly for long distances.

PHYSICAL MODIFIERS/DEMANDS

The Dictionary of Occupational Titles, Fourth Edition, Revised 1991, United States of America, Department of Labor Physical Demands Strength Rating for Boilermaker is: H - Heavy Work - Exerting 50 to 100 pounds of force occasionally, and/or 25 to 50 pounds of force frequently, and/or 10 to 20 pounds of force constantly to move objects. Physical demand requirements are in excess of those for Medium Work.

VISUAL MODIFIERS/DEMANDS

The job requires considerable, sustained use of eyesight for functions such as visual inspection, reading, measuring, assembling, transcription, data analysis and operating machines or vehicles and the ability to clearly see at night or in dim light, in daylight or bright light, under glare or poor contrast.

ENVIRONMENTAL MODIFIERS/DEMANDS

The job involves: Exposure to cold working conditions during winter months and to hot working conditions during summer months, exposure to noise - workers must wear protective hearing equipment or frequently shout in order to be heard above the ambient noise level. Exposure to pollutants or allergens which can adversely affect the skin and/or the respiratory system such as gases, smoke, odors, mists, fumes, dust, chemicals, oils or solvents, exposure to hazardous working conditions including moving machinery, electricity and/or working in high places. The job requires the use of protective equipment such as hard hats, respirators, aprons, gloves, special clothing, safety shoes and safety glasses. The job involves continuous work that cannot be easily or economically interrupted for breaks except at regularly scheduled intervals or at the completion of an assignment.

I understand and can perform this job with or without reasonable accommodation.