

IOWA DEPARTMENT OF ADMINISTRATIVE SERVICES ▼
HUMAN RESOURCES ENTERPRISE
POWER PLANT ENGINEER 1

DEFINITION

In a training capacity, learns to perform work in the operation and maintenance of steam generating boilers, electrical generating equipment, centralized air-conditioning and auxiliary systems; performs related work as required.

The Work Examples and Competencies listed are for illustrative purposes only and not intended to be the primary basis for position classification decisions.

WORK EXAMPLES

Learns to operate and control automatic or manually operated boilers and electrical generating equipment; activates/regulates boiler firing, fuel and air controls, feed water and condensate pumps, fans and motors.

Makes periodic rounds of the heating or power plant and monitors a variety of gauges and meters (e.g., steam flow and pressure, water levels and temperature, power and fuel consumption and air and exit gas pressure).

Performs routine preventive maintenance on systems equipment; oils and lubricates fans, motors, pumps, and generators and cleans screens, strainers, burners and automatic controls.

Blows down the boilers, checks the low water cutoff and automatic controls and manually opens/closes the valves.

Makes chemical tests of boiler feed water for alkalinity, chlorides, hardness and pH level and adds required chemicals to the water.

Records water temperature, steam pressure levels, fuel consumption, atmospheric conditions, kilowatts of power generated and does preventive maintenance; reads a variety of gauges, meters and dials and maintains a log of results.

Helps an a higher level power plant engineer make major mechanical and minor plumbing/electrical/fire protection system repairs to equipment; uses a variety of hand and power tools.

Performs general plant custodial tasks (e.g., sweeping/scrubbing floors, washing windows and cleaning/painting equipment).

COMPETENCIES REQUIRED

Knowledge of the methods, procedures, fuels and equipment used in the operation and maintenance of steam generating boilers, turbines, centralized air-conditioning generators and auxiliary equipment.

Knowledge of plant safety and accident prevention measures required for operating and maintaining all heating and power plant equipment.

Knowledge of chemical water testing and treatment methods and procedures used to prevent scaling, pitting of boiler tubes and the buildup of sludge deposits.

Ability to withstand constant high noise, fumes, poor lighting and ventilation, and high temperature levels.

Ability to physically operate, adjust and control steam generating systems requiring climbing, lifting, bending and walking.

Ability to learn the repair, maintenance and installation of fire protection systems.

Displays high standards of ethical conduct. Refrains from dishonest behavior.

Works and communicates with all clients and customers providing polite, quality professional service.

Displays a high level of initiative, effort, attention to detail and commitment by completing assignments efficiently with minimal supervision.

Follows policy, cooperates with supervisors and aligns behavior with the goals of the organization.

Fosters and facilitates cooperation, pride, trust, group identity and team spirit throughout the organization.

Exchanges information with individuals or groups effectively by listening and responding appropriately.

EDUCATION, EXPERIENCE, AND SPECIAL REQUIREMENTS

Experience equal to one year of full-time work in plumbing, electrical or mechanical maintenance/repair;

OR

thirty semester hours accredited coursework in the operation and maintenance of steam boilers from a military school or an area college;

OR

employees with current continuous experience in the state executive branch that includes six months of full-time work as a Trades Helper or Maintenance Worker 2.

SPECIAL REQUIREMENTS

Within a period of time as determined by the appointing authority, certain employees in this class may be required to obtain a Fire Sprinkler Installer and Maintenance License in accordance with Chapter 100D, Iowa Code.

Designated positions in this class require applicants to obtain a Commercial Drivers License and endorsements within a period of time as determined by the appointing authority at the time of hire.

Effective Date: 04/10 DDF