

IOWA DEPARTMENT OF ADMINISTRATIVE SERVICES ▼
HUMAN RESOURCES ENTERPRISE
POWER PLANT ENGINEER 3

DEFINITION

Performs advanced journey level work in the operation, maintenance and repair of steam generating boilers, electrical generating equipment and auxiliary systems and centralized air conditioning 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

Diagnoses problems relating to equipment malfunctions and makes mechanical, electrical and plumbing repairs to power plant equipment and auxiliary systems.

Operates and controls automatic or manually operated steam boilers and electrical generating equipment; activates and regulates boiler firing, fuel and air controls, feed water and condensate pumps, fans and motors.

Makes periodic rounds of the heating/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/lubricates fans, motors, pumps and generators and cleans screens, strainers, burners and automatic controls; performs any unusual maintenance tasks which cannot be performed by a second skill level engineer.

Blows down the boilers, checks the low water cut off 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.

COMPETENCIES REQUIRED

Knowledge of the principles, methods, manufacturers manuals, procedures, fuels and equipment used in the operation, maintenance and repair of steam generating boilers, electrical generating turbines and generators, centralized air-conditioners and auxiliary equipment.

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

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

Skill in operating and controlling steam generating systems.

Skill in regulating and/or synchronizing steam and electrical power generating systems.

Ability to analyze and diagnose equipment malfunctions, isolate the defective components and make necessary repairs or replacements.

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

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

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 three years of full-time work in the operation, maintenance and repair of steam generating boilers, centralized air-conditioning or electrical power generating equipment and auxiliary systems;

OR

an equivalent combination of education and experience, substituting 30 semester hours of accredited coursework from a military school or recognized trade or vocational school in power plant engineering principles including the operation, maintenance and repair of steam boilers for each year of the required experience to a maximum substitution of one year;

OR

employees with current continuous experience in the state Executive Branch that includes experience equal to one year of full-time experience as a Power Plant Engineer 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 job class require applicants to obtain the required certification, license and endorsements within a period of time as determined by the appointing authority at the time of hire.

Effective Date: 04/10 DDF