

Job Class Profile: **Power Engineer (Fourth Class)**

Pay Level: **CG-25** **Point Band:** **456-489**

Factor	Knowledge	Interpersonal Skills	Physical Effort	Concentration	Complexity	Accountability & Decision Making	Impact	Development and Leadership	Environmental Working Conditions	Total Points
Rating	3	2	4	6	3	2	2	1	6	
Points	140	33	25	29	90	43	41	21	64	486

JOB SUMMARY

The Power Engineer (Fourth Class) is responsible for the overall operation of a heating plant.

Key and Periodic Activities

- Operates a pressure plant and auxiliary equipment.
- Performs maintenance by adjusting, repairing and/or replacing equipment/components.
- Operates various power tools.
- Records and interprets readings of all plant equipment and systems; maintains records.
- Records results of water treatment tests, oil consumption and steam production on each shift.
- Cleans boilers and auxiliary equipment.
- Performs custodial duties within the plant.
- Performs annual shutdown, cleaning and inspection of all pressure vessels.

SKILL

Knowledge

General and Specific Knowledge:

- Policies and Procedures
- Safe Work Practices
- Occupational Health & Safety Guidelines
- Boiler Pressure Vessel Act and Regulations
- Basic principles of operating a pressure plant

Formal Education and/or Certification(s):

- Minimum: High School Diploma. Completion of a 1 year Power Engineering (Fourth Class) Program. Possession of a valid fourth class power engineer's certificate as issued by the Province of Newfoundland and Labrador.

Years of Experience:

- Minimum: No experience required (entry level).

Competencies:

- Follow basic instructions and work processes

- Apply established techniques to the completion of activities
- Develop new solutions to deal with new problems
- Operate a computer
- Write straightforward text for record keeping and maintaining log book
- Repair, calibrate and operate machinery
- Conduct analysis or assessment to perform equipment adjustments and repairs

Interpersonal Skills

- A range of interpersonal skills are used including listening to information from other people, asking questions to get information and providing routine information and direction to others.
- Communications occur with employees within the immediate work area and department including supervisor/manager, co-workers and other government employees.
- The most significant contacts are with supervisor/manager to coordinate work activities and for advice/guidance on any problems related to equipment or plant operations and with Government Inspectors when equipment and safety controls are inspected.

EFFORT

Physical Effort

- The demands of the job occasionally result in fatigue, requiring periods of rest.
- Lifting or moving objects weighing 10 to 25 lbs is performed on a regular basis and lifting or moving objects over 50 lbs is an occasional requirement.
- Work activities typically involve sitting, standing or walking to complete tasks. Climbing ladders may be required occasionally.
- Manual or physical activities includes performing fine finger or precision work; using hand tools that require accurate control and steadiness; using gross motor skills; maintaining physical balance; and working in awkward or cramped positions or body movement when working in confined spaces.

Concentration

- **Visual concentration or alertness** is required when operating a computer; reading instruments and gauges such as a pressure gauge, temperature gauge, smoke monitor, etc.
- **Auditory concentration or strain** is experienced when listening to operational sounds of plant equipment to identify any unusual sounds that may require investigation.
- **Other sensory demands such as smell** is important to identify oil and/or gas leaks or to determine if anything is burning; and touch is important when checking equipment to ensure it is working properly.
- **Alertness and concentration** are required when making repetitive rounds of plant to ensure equipment is operating properly and when reading gauges, recording information, etc.
- **Higher than normal levels of attentiveness or alertness for the health and safety of others** is required when monitoring an employee and surroundings while working in a confined space.
- **Time pressures and deadlines** are experienced when diagnosing and repairing equipment

<p>problems and when responding to emergency situations. Interruptions and lack of control over work pace can occur with equipment failure; during periods of annual maintenance on boilers and when performing repairs to equipment.</p> <ul style="list-style-type: none"> — Eye/hand coordination is required when setting-up equipment. — Exact results and precision are required when performing repairs to equipment.
Complexity
<ul style="list-style-type: none"> — Work involves the operation of a heating plant which requires performing tasks that are different but use similar skills and knowledge. — A typical problem or challenge is diagnosing a problem with equipment and determining the most appropriate method required to perform the repair while ensuring minimal downtime of equipment. Troubleshooting and diagnosis may require analysis and development of new solutions as technology changes. — Reference material to assist in addressing problems, challenges and issues include manufacturer's specifications and operational procedures; policies and procedures; Boiler Pressure Vessel Act and Regulations and advice/guidance from supervisor/manager.

RESPONSIBILITY

Accountability and Decision-Making
<ul style="list-style-type: none"> — Work tasks and activities are highly monitored or controlled. — Work independently in the performance of daily work activities. Problems or issues can be referred to the Chief Power Engineer. — Supervisory approval is required for most day-to-day decisions. — Discretion and independence of action may be exercised to respond to emergency situations.
Impact
<ul style="list-style-type: none"> — Work results can have a positive impact within the immediate work area; department; organization and on customers/clients/patients/general public as well as on resources such as equipment; processes and systems; finances; facilities; health and safety and corporate image when power plant and auxiliary equipment is operated and maintained safely in accordance with applicable standards and regulations. — Mistakes or errors resulting in lack of steam production can cause equipment breakdown and system failures; damage to equipment resulting in increased cost of repairs or replacement; loss of heat resulting in government building closures or shut down of central laundry operations; health and safety issues for building occupants; and a negative impact on corporate image, etc. — All readings and events are logged and recorded and work is reviewed by the Chief Power Engineer. Errors are typically identified and resolved within hours of problem identification.
Development and Leadership of Others
<ul style="list-style-type: none"> — Not responsible for the supervision of staff. — Not responsible for the development and leadership of employees.

WORKING CONDITIONS

Environmental Working Conditions

- There is a requirement to wear safety equipment such as ear and eye protection, safety shoes, vest, gloves, etc.
- The likelihood of minor cuts, bruises, abrasions or minor illnesses resulting from hazards in the job is significant. Fractures and partial or total disability is limited.
- Work is performed in a power plant which produces steam for laundry operations and heating of government buildings with exposure to undesirable working conditions such as unusual/distracting noise; dust; fumes; vibration from equipment; odours; sharp objects; working in awkward or confining work spaces; temperature extremes and fire.