

## Trade Licensing Program

### Steam Engineer & Boiler Fireman License

1. Describe the boiler you are now firing including how it is fired, the type of heat source (natural gas, fuel oil, electric power, or a combination), type of flame failure device protection, type of main boiler outlet valve, how vented, location and type of safety valve, and how water is heated in the boiler (fire tubes, water coils, etc.) and the bottom type blow or drain.
2. Discuss the effect of low water in a steam generating boiler fired by fuel oil or natural gas.
3. Discuss the effect of low water in an electric element heated boiler.
4. Discuss what you would do if you observe excessive pressure on the pressure gage.
5. Discuss what you would do if you observe no water level showing in the gage glass and you do not know how long the water has been out of sight.
6. Describe how to test your flame failure device for proper operation.
7. Describe how you start the boiler from checking the boiler water level, water supply, fuel supply, air supply, vent, purging, feedwater pump, etc. When and how should you test the safety valve?
8. Discuss means for preventing corrosion inside the boiler and in firebox, scale in the boiler, the buildup of dissolved and non-dissolved solids in the boiler water and control of alkalinity in the boiler.
9. How do you prevent and extinguish paper or wood, oil and electric fires.
10. Discuss the explosion potential and possible damage that could result from a boiler explosion. Note that one pound of steam requires over 1600 times as much space as one pound of water at atmospheric pressure.
11. Discuss proper care and maintenance of boiler controls, water level control, low water cut-out, and safety valve.
12. State who issues boiler permits and operators license and list information shown on the boiler permit.
13. Knowledge of the City of Seattle "Steam Engineer and Boiler Fireman License Law." And the "Seattle Boiler and Pressure Vessel Code".
  1. Definitions
  2. License required
  3. Maximum capacity allowed for Grade V
  4. License to be posted
  5. Notice of place of employment
  6. Reporting defective boilers
  7. Duties of Boiler Fireman
  8. Observation and inspection of boiler
  9. Enforcement
  10. Posting of regulation