



INFORMATION BULLETIN

RECOMMENDED MAINTENANCE AND INSPECTION FOR LOW PRESSURE STEAM BOILERS NOT EXCEEDING 30 M²

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No: IB-BP-2013-02

Topic:

Lack of routine inspection and proper maintenance for small low pressure (not exceeding 15 psig) steam boilers is widespread and one of the major causes of accidents, breakdowns and repairs. The BC Safety Authority recommends that owners of low pressure steam boilers put into practice a routine maintenance program and establish a regular, periodic safety-testing program. Such programs will help prevent accidents, repairs and operating problems and result in operating cost savings.

Most boiler manufacturers will recommend maintenance and testing practises for their equipment which can be used to develop a program and checklists. As a minimum the following maintenance, inspection and testing should be carried out:

DAILY

- Blow down and test low water cutoffs of steam boilers
- Blow down make up feeder
- Blow down boiler
- Check boiler control linkage
- Visual check of burner flame
- Record feed water pressure and temperature, flue gas temperature, steam pressure and make-up water usage

WEEKLY

- Check flame failure cutoff, safety and interlock controls
- Check operating and limit controls
- Check indicating lights and alarms
- Check pilot and main flame fuel shutoff valve closing
- Check burner operation
- Check boiler and system for leaks, noise or vibration

SEMIANNUALLY

Have a licensed contractor:

- Inspect burner components
- Carry out combustion analysis
- Check flame failure system components

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505 SIXTH STREET, SUITE 200, NEW WESTMINSTER, BRITISH COLUMBIA, CANADA V3L 0E1
Toll Free: 1-866-566-7233 Fax: 778-396-2064 Web Site: www.safetyauthority.ca E-mail: info@safetyauthority.ca

- Check piping and wiring of all interlocks and shutoff valves
- Inspect burner control linkage and cams
- Lubricate pumps and other equipment
- Open, inspect and clean low water cutoff and perform a slow drain test for low water cutoffs (steam)
- Inspect combustion control system, burner, refractory and casing for hot spots
- Inspect for flue gas leakage
- For oil -- check atomizers and strainers
- Test boiler safety/safety relief valves in accordance with *ASME Boiler and Pressure Vessel Code, Sections VI and VII*

ANNUALLY

Have a licensed contractor:

- Perform the SEMIANNUAL maintenance procedures
- Clean boiler firesides
- Drain boiler, open manholes and hand holes, inspect and clean waterside surfaces
- Replace gaskets
- Leak-test all fuel valves
- Test operation of all controls and safety devices
- Have fuel-burning system adjusted using combustion test instruments

AFTER EACH PERIOD

- Make a record of all maintenance and parts replacement in the maintenance log

A handwritten signature in blue ink that reads "E. J. Hurd".

Ed Hurd P.Eng.
Provincial Safety Manager, Boilers

References:

Safety Standards Act
Power Engineers, Boiler, Pressure Vessel & Refrigeration Safety Regulation

For more information on the British Columbia Safety Authority, please visit our web site at:
www.safetyauthority.ca