

## **BOILER ACCIDENTS**

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### **HEATING BOILERS**

**During 1998 the National Board reported a total of 1586 heating boiler accidents. Of these accidents (739 with steam heating boilers and 847 with hot water heating boilers), 33% were caused by a low water level condition. 39% were attributed to poor operation/maintenance, and the remaining 28% were other causes. This shows that 72% of all reported accidents occurred as a result of low water or poor operation/maintenance. These accidents resulted in 11 injuries. In order to reduce these accidents to the lowest possible level, owners and operators of heating boilers are again reminded to follow the guidelines detailed in the ABSA brochure "Safe Operation and Care of Heating Boilers".**

### **POWER BOILERS**

**Accidents related to power boilers during 1998 totaled 272 and resulted in 8 injuries according to National Board information. 47% of the accidents were related to low water condition. and 31 were attributed to poor operation/maintenance. This shows a total of 78% or 212 accidents were probably preventable through maintenance and regular scheduled testing of the applicable safety shutdown devices (low water cut-off control being the significant one) and appropriate training.**

### **FURNACE EXPLOSIONS**

**During this past year a number of boiler furnace explosions have occurred throughout North America and have resulted in several deaths and many injuries. A furnace explosion is usually a result of instantaneous combustion of flammable gas, vapour or dust that has been allowed to accumulate in the boiler. Precautions against furnace explosions may include:**

- Ensure that fuel valves on non-operating burners do not leak.
- Ensure that fan(s), dampers and burners are in good condition. Purge the furnace each time before igniting the first burner.
- Ensure that fuel controls and flame safeguards operate as required. Ensure the air intake is open and the stack is not obstructed.
- Ensure that fuel system is free of contaminants.
- Ensure proper fuel/air ratio.
- Remove heavy oil guns after closing the oil and air or steam shut off valves.
- Clean and service the guns before reuse.

- Do not use soot blowers to blow soot in a cold boiler.
- Ensure that limit and operating controls are in good working order and are not by-passed or jumpered-out.

**Training, proper operation/maintenance, orderly testing and timely inspections are key elements in ensuring safe boiler operation.**

#### **REGULATIONS**

**The Power Engineer is provided with the authority to operate boilers and related equipment under the Safety Codes Act, Power Engineers Regulation. With that authority, the designated Power Engineer is accountable and has a responsibility to ensure that all equipment under his/her charge is operated in a safe and competent manner. As such, in the event of an incident or accident, the Administrator may suspend or cancel any Power Engineer Certificate of Competency if it is shown that the holder of such Certificate of Competency failed to comply with the requirements of the Act.**

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