

Steps to take when a boiler room becomes flooded

After floodwaters recede, people begin the long process of cleaning and restoring their property. The following information is provided to assist in recovery of boiler systems affected by flooding.

1. Safety of personnel performing inspections and repairs is the highest priority. Floodwaters contain many hazardous chemicals and bacteria; therefore, personnel safety procedures should be developed and enforced.
2. All utilities in a boiler room should be turned off until inspection and necessary repairs of the individual systems allow reactivation.
3. A careful visual inspection of an entire boiler system should be made, both internally and externally, with notations of obvious problems and any special equipment or personnel needed to facilitate repairs.
4. Keep in mind some equipment may only be repaired by the original manufacturer or its licensed agents to maintain warranties and/or certification.
5. The boiler setting or foundation should be examined closely to determine if it has been weakened or undermined. Any movement of the boiler or building will have an adverse effect on piping and other equipment connected to both the boiler and building structure.
6. Waterlogged insulation hastens external corrosion of boilers and pipes. If removal is deemed necessary, remember asbestos is still present in many boiler rooms and requires handling by specially licensed personnel. If the insulation is left in place and the boiler is fired before thoroughly drying, steam can be generated within the insulation layers, thereby creating the potential for explosive damage to the external lagging.
7. Refractory and fire brick should be checked for deterioration or loosening.
8. Feedwater and condensate return systems should be thoroughly cleaned of any mud, silt or debris. After the boiler is put back in operation, the water quality should be checked often for contamination of any kind.

9. Pressure-relief devices should be checked for corrosion or any damage that could cause binding and failure to operate. The outlet and discharge line of the pressure-relieving device should be inspected for blockage. Only qualified personnel should perform disassembly or repair of a pressure-relief device. Some jurisdictions require this work to be performed by a company with the National Board "VR" symbol stamp.
10. All drains and blow-off lines should be inspected to ensure there is no blockage by debris.
11. Electrical wiring and equipment that has been submerged in floodwater is required to be replaced. In limited instances it may be practical for motors to be reconditioned or rewound and placed back into service.
12. Check to make sure air inlets are clear and gas stacks are free.

The list above is not intended to be all inclusive, because boiler systems and equipment vary in design and operation. However, this list could be used as a catalyst to developing individual inspection and repair guidelines to fit many systems affected by flooding.

More information about boilers and pressure vessels can be found at <http://www.dli.mn.gov/ccld/boiler.asp>.

- Updated April 2013