



# Water treatment and maintenance for your low-pressure boiler

HSB, a Munich Re company, is a technology-driven company built on a foundation of specialty insurance, engineering and technology, all working together to drive innovation in a modern world.

## Introduction

Every year, HSB investigates numerous boiler failures. The primary reasons for these failures are poor or non-existent water treatment and little or no preventive maintenance.

Monitoring the boiler at start-up, ensuring good water quality, checking for leaks, and periodic inspection and maintenance can go a long way in helping avoid costly breakdowns.

## Breakdowns are costly

The cost of a breakdown of a heating system can be more than you might expect. Even when boiler insurance is available, the deductible may still account for a considerable out-of-pocket expense.

Also consider the indirect costs. Because low-pressure boilers are usually used for heating, the breakdowns are usually in cold weather. Having boiler insurance may be of little comfort when your boiler just broke down, the outside temperature is in the teens, and your location is freezing.

In addition, if you have tenants or are running a business, you don't need the added headache of dealing with irate customers because your system is down due to minor maintenance oversights.

## Monitor start-up

The most common error in the operation of boilers is made at start-up. Don't expect to fire the boiler at the beginning of the heating season and then walk away for days or weeks.

The probability of something happening to the boiler is highest during the startup period. Monitor the system frequently to determine that all water levels and operating conditions are stabilized.

## Water treatment

Treat the water to combat corrosion in all low-pressure steel boilers. If you have a cast-iron boiler, use properly treated water and keep the system as tight as possible. Cast-iron boilers are very difficult to clean mechanically, and chemical cleaning may be prohibited in your area due to local ordinances.

## Leakage

How much make-up water is used on a routine basis? Is the system tight (low leakage) or do leaking return lines, leaking packing, fittings, pipes, or radiators necessitate continuous make-up?

A tight system will ensure that additional water is not required. Preventive maintenance, including periodically inspecting the system to detect leaks, must be performed. Corrective action can be taken before minor leakage becomes a major boiler repair.

## HSB is a resource

- Your HSB inspector can provide you with logs and boiler tags. This information will help you schedule maintenance for your boiler.
- Your HSB inspector can also assist you in finding a local company to look after your boiler and water chemistry requirements.
- Please give us a call! We are ready to assist you in taking care of your boiler needs.

### Here are some questions to consider:

What is the quality of the water used in the system? If your well, stream, or city water contains impurities, the water could be causing corrosion or scale to form. Hard water is high in minerals and will cause scaling. Untreated soft water may be aggressive and cause corrosion.

Determine the quality of the water used in your system by sampling and testing. Once an analysis is made, a plan of action can be developed to properly treat your boiler water.