

MINERAL BUILD-UP

SYMPTOMS

- Rumbling
- Crackling
- Popping

CAUSE

With the advent of high input and larger storage tanks in both commercial and residential heaters, deliming has become a necessity of modern maintenance. Lime (CaCO_3), is the most notable factor when discussing water hardness. Lime is present in every water system to some degree across the entire United States. Since lime is inversely soluble (the more you heat, the more lime comes out), higher usage, excessive hardness, and increased heating surface can lead to a high incidence of “limed-up” heaters.

Symptoms often include a popping of water trapped under lime deposits or the sizzling of water trapped next to elements, boiling it to steam.

THE FIX

Treatment of a “limed-up” heater is relatively simple. Since CaCO_3 is a base, the easiest way to dissolve it, so that it can be flushed from the heaters is with an acid. In water heaters manufactured for potable water, a food-grade product – generally made with phosphoric acid – is required. Two common treatments available through A.O. Smith’s parts department are Mag-Erad® and Un-Lime®. Any well-stocked plumbing supply house should have a deliming solution available. The directions on the product should be followed expressly.

NOTES

For additional information and instructions in deliming water heaters and boilers, please refer to the following pamphlets available from A.O. Smith:

- [Why? When & How: To Remove Water Scale from Tank Type Water Heaters](#)
- [The Mag-E-rad Method of Cleaning Gas Fired Water Heaters](#)
- [Up-N-Down Transfer Kit](#)
- [All About Deliming Coil Type Water Heaters](#)