



TECHNICAL BULLETIN

BULLETIN 13

MINERAL BUILD-UP

SYMPTOMS	<ul style="list-style-type: none"> • Rumbling • Crackling • Popping
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CAUSE	<p>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.</p> <p>Symptoms often include a popping of water trapped under lime deposits or the sizzling of water trapped next to elements, boiling it to steam.</p>
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THE FIX	<p>Treatment of a “limed-up” heater is relatively simple. Since CaCO_3 is a base, the easiest way to dissolve it so it can be flushed from the heater is with an acid. The most commonly used is phosphoric acid at a food-grade level.</p> <p>Two common treatments marketed by A.O. Smith are Mag-Erad® and Un-Lime®. Any well stocked plumbing supply house should have a deliming solution available.</p> <p>The directions on the product should be followed explicitly.</p>
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NOTES	<p>For additional information and instructions in deliming water heaters and boilers, please refer to the following pamphlets available from A.O. Smith:</p> <ul style="list-style-type: none"> • <i>Why? When & How: To Remove Water Scale from Tank Type Water Heaters</i> • <i>The Mag-Erad® Method of Cleaning Gas Fired Water Heaters</i> • <i>Up-N-Down™ Transfer Kit</i> • <i>All About Deliming Coil Type Water Heaters</i>
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