**How Are Water Softeners Used in Steam Boilers**

One of the most important accessories for steam boiler is a water softener, which serves several purposes and plays a crucial role in helping the industrial steam boiler avoid malfunctions and run more efficiently. Let's go back to the basics and walk through how water softeners are used in steam boilers.

Hard water that’s filled with minerals like calcium and magnesium can cause damage to the tubes inside steam boilers. If these minerals are present in the boiler’s water supply, it can lead to hard scale forming on the surface of the tubes, which has the potential to cause the water to overheat and ultimately the tubes to fail.

The efficiency of a boiler can also be negatively affected by hard water. If the presence of calcium and magnesium causes hard scaling, it will have an impact on the heat transfer inside the boiler. A layer of hard scaling as small as 1/8 of an inch on boiler tubes can decrease efficiency as much as 25 percent. This will only make the boiler work harder and consume more fuel in order to meet customer's steam needs.

Water softeners will introduce sodium compounds into the boiler’s water supply to negate the presence of any calcium and magnesium, effectively resolving the hard water problem. A water softener will reduce the risk of hard scaling inside the boiler, improve the flow of water, ensure maximum levels of efficiency.

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