

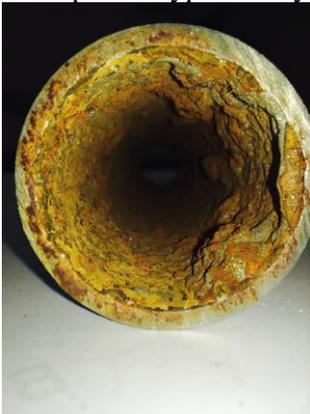
It is important to understand the corrosion process in galvanized piping.

Galvanized piping is steel piping coated with zinc. Over time the zinc coating erodes from the piping building up corrosion. The corrosion process is advanced over time with the introduction of air into the water. Air is introduced into the water naturally as we increase its velocity and when we heat it. Given that the velocity of the water is the same in both the hot and cold piping, corrosion will tend to be more visible in hot water piping than cold water piping. This erosion process is advanced over time with both the air and water mixture. Typically, the period of this process is 40 -50 years and referred to as “the lifespan” of galvanized piping.

One of the major health hazards with the corrosion process in buildings that have galvanized pipes and have or had lead service lines are at risk for the release of lead in water from the corroded pipes. As galvanized pipes corrode and form rust, lead that is accumulated over decades is likely to be found deep in the interior walls of rusty pipes. This does not necessarily increase the risk of exposure to lead from the piping but prolongs it over the lifespan of the piping.

In Chicago galvanized domestic water piping is replaced with Type L copper piping for pipe sizing 4” and under. Galvanized piping is still used for piping sizes over 4”. This is primarily due to commodity costs and that large diameter galvanized piping tends to have a somewhat longer lifespan. When piping is replaced it is important that it is performed in a manner to limit the exposure or risk of corrosion breaking free and entering the system. This is for numerous mechanical reasons as well as limiting it into the drinking water.

Examples of typical 40-year-old galvanized piping



Sample 1: Visible Corrosion & Deteriorated Wall Thickness