



## Home Inspection Services Newsletter

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February 1, 2007

### Educational Section: **Galvanized Water Pipe**

**Steel pipe** began to be utilized for potable water supply in the 1850s.

Because of its rapid corrosion characteristics, it's highly unlikely there is any uncoated steel pipe left in residential buildings.

**Galvanized** (which is steel coated with layers of zinc to retard corrosion) replaced steel pipe in the 1930s. Galvanize piping was widely used through the 1950s and sparingly used through the 1960s. We inspected five homes in January with galvanized (1943, 1949, 1955, 1961, & 1968)

**Location:** Galvanized piping was utilized for both the underground water feed line to the home and for water distribution in the home which includes attics, walls, and sometimes under the slab.

**Life of Galvanized pipe:** The typical life is 40 to 60 years.

**Failure modes:** There are three common failure modes (Note: galvanized pipe fails from the inside):

**Reduction of flow:** Calcium and other minerals build up in the pipe (resulting from years of use) and reduce the inside pipe diameter.

**Rusty water** is produced after the zinc layer on the inside of the pipe is worn away and steel begins to rust (on the inside of the pipe).

**Leaks:** These generally start at joints (thinner areas) but can occur in the pipe where the zinc layer is thin or where there are imperfections in the steel. Depending on the location of the leaks, considerable damage can occur before a leak is detected.

**Replacement:** Replacement cost thousands of dollars and is dependent on the size of the home and the access to fixtures (toilets, sinks, etc.). If you have galvanized plumbing, we recommend that you obtain an estimate of remaining life, scope of work, and quotations for a replacement to modern materials. Permits are required for re-piping.

**Caution:** Galvanized joined to (or touching) copper will cause a galvanic reaction which is extremely corrosive to galvanized steel piping.

## Inspection Item for Feb.: **Washer valves and hoses**

(Each month, we select appropriate items so that over a 12 month period you are reminded to attend to most common household maintenance/inspection items.)

The **hot** and **cold** water feed behind the clothes washer is a frequent source of water leaks. Occasionally, and disastrously, the water hoses connected to the washer burst; flooding the home. Using your flashlight, examine the valves, water connections, and drain box for corrosion or dampness. Operate the valves to ensure that they shut off the water (It is a recommended practice to turn off the water to the washer when not in use). Consider replacing inexpensive (especially older rubber hoses) with the modern reinforced type.

## Question of the Month: **What is Functional Flow?**

During the home inspection, water pressure is measured and functional flow is observed. Pressure is determined by the water provider and is measured in pounds per square inch (60 PSI is considered ideal). **Functional flow (FF)** refers to the volume of water flowing to the fixtures. In a home inspection this is a subjective opinion. **FF** is determined by inside diameter of the water feed pipes and is affected by: the number of fixtures drawing water, corrosion in the pipes, the number of elbows, kinks or restrictions, clogged faucet screens, etc.

## Safety Tip of the Month: **Utility disconnects**

Various emergencies may require that electricity, water, or gas be turned off immediately. You should know where and how to turn these off.

**Electricity:** Shut off at the main panel requires activating one (modern panels) or as many as six circuit breakers. Where is your main Panel?

**Water:** A valve is generally located at the front or side of the home at the main water pipe. If there is no valve here, it can be shut off at the meter (usually near the street) with a wrench. Try your valve. Is it Operable?

**Gas:** Shut off at the meter requires a wrench. Line up the holes! Do you have a wrench handy? Propane is shut off utilizing the valve at the tank.

## Drawing for February: **\$25 Starbucks gift card**

To enter, send a reply email with "February Drawing" in the subject along with your name and Ph# to [Lauren@hainspect.com](mailto:Lauren@hainspect.com) Tom B of Peoria was January's winner.

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