ASK THE INSPECTOR COLUMN FOR AUGUST 19, 2015
HEADLINE: WOOD BURNING & CHIMNEYS 101

There is generally only one time of the year when one thinks to have their wood stove, fireplace and chimney cleaned/inspected and that is in the fall. Wood Energy Thermal Training (WETT) sweeps are at their busiest at that time of the year, which is why I am recommending it now, in the late summer.

There are two types of chimneys; insulated metal and masonry. A wood fireplace in a home is really meant for "Saturday Night…glasses of wine after the kids have gone to bed." It has limited heat value, although during the ice storm many people found it far better than nothing. Most fireplaces are masonry, brick, stone or concrete block, with a clay liner.

One of the first things to check is for a poorly fitted damper or a lack of one at all. Warm air from inside the home flows up the chimney and, if it is really cold outside, this warm, moist air will condensate and form as ice on the inside of the chimney. When you next build a fire, this ice melts and literally "rains" on your fire. There are other possibilities for water where it shouldn't be, too, such as a leaking chimney cap; possibly, a bad flashing around the cap; damage to the bricks and mortar or it might even be a problem with the clay liner itself.

Allowing a fireplace to burn low will greatly increase the creosote buildup over time and, if the moisture dripping down from your chimney is blackened, you can bet that this number one cause of chimney fires is present. Some years ago, I was on a rural volunteer fire department and, every fall, we had a rash of chimney fires. In every case, they were due to a build-up of creosote and, with that first hot fire, the creosote quickly ignited, creating this life threatening issue, not to mention the ensuing property damage.

The next most common issue is smoke. At one point or another, this is one thing that happens to most wood burning appliances. The smoke curling back into the room and not up the chimney is caused by a lack of draft. This was rarely a serious problem in older homes, as their structural assembly was not as airtight as newer homes and they gained combustion air through the leaks around the windows and doors and general assembly of the home.

When a fire is first started or when it is burning out, it may lack draft. This can spill carbon monoxide into the home. When a fireplace has a really good blaze going, no glass doors installed and the home is otherwise reasonably air tight, other appliances that also use air for their operation can be adversely affected. If you have a gas or oil hot water heater or furnace, for instance, back draft combustion fumes could enter your home when the fireplace is in operation. Some form of direct air supply to the fireplace is one solution. Here, a qualified mason should be called, since this is not a do-it-yourself project. He/she may be able to bring a vent from the outside to the side or front of the fireplace and will likely recommend some form of glass fireplace doors. Good glass doors often have a slide draft control to help regulate the air getting to the wood fire.

They will also help stop any embers from leaving the firebox and landing on that lovely hardwood floor!

If your home has excessive moisture levels in the winter, open a window at the other end of the house from the fireplace, get a good fire going and open the glass doors. This will give your home a quick change of air ventilation - keep your eye on the fire though.

Insulated metal chimneys became popular in the 60's as a quick alternative to a masonry chimney and they have proven effective and usually safe. There are two main issues with a metal chimney, however. The first is improper separation from a combustible surface and the other, internal or external damage to the metal liner. Both of these conditions should be checked when your chimney is cleaned and inspected – in the late summer, remember. Creosote is also an issue, but that, as already noted, is related to burning your fire to low, but could also be due to the use of wet wood.

Some tips for a wood stove or fireplace. Always open a window when you are starting the fireplace, preferably one close to the fireplace. Build the fire slowly. Start with paper, add small kindling wood and then position your logs so they can get air around them to burn evenly. If you find your fire hard to start, try lighting a tightly rolled up newspaper and hold it near the open damper until it draws the fire up the chimney. This may help warm the inside air of the chimney, allowing for a better draw.

As a rule of thumb, open the damper wide before you start your fire and, with a strong flashlight, take a good look at the inside of the chimney. If you see a build-up of black or dark brown residue on the liner, it is time for a cleaning. If you have a fireplace with a metal liner in the firebox and see rust showing up, this should be investigated. If you see any mortar or pieces of clay or brick, forget the fire, it's time for an inspection.

I recommend that all wood burning appliances are cleaned annually by a WETT certified chimney sweep. Make sure he or she is a "sweep" and not operating with just a WETT inspection certificate. There are a number of levels of WETT certification, so make sure you get a "WETT Sweep." With some of the insurance issues I see, your home insurance company may require this to be done.

When you retire, close the fireplace's glass doors tight and leave the damper open fully. The next morning remove the ashes and place in a metal container, then clean the firebox. You are now prepared for next Saturday Night! All you need is the wine.

Questions or Comments: Cam Allen L.I.W. NHI ACI LEED Green Assoc
E-mail: cam@alltechconsultinggroup.com