Using preventive chemical heating-product additives during annual boiler and furnace tune-ups can ensure that customers' equipment performs efficiently throughout the winter heating season. Additives also can help equipment reach its full lifecycle expectancy.

In addition to ensuring proper operation, selling preventive chemical heating-product additives can add more profitability to a service call. If presented properly, customers will appreciate the extra care a service technician takes by suggesting these treatments be applied and explaining what they do.

Boiler-water treatments
While some service technicians may not be proponents of periodic boiler-water treatments, all boiler manufacturers recommend them. Depending upon the inherent water chemistry of local water conditions, a boiler can seemingly operate fine for 5–10 years without a water treatment, however operational longevity may eventually suffer.

Most treatments provide multiple benefits, including:
- Removing sludge and rust scale;
- Inhibiting boiler and steam line corrosion;
- Preventing oxygen pitting;
- Inhibiting lime scale;
- Preventing surging and foaming; and
- Checking water chemistry with built-in color indicators.

One of the most notable benefits of water treatments is the color indicators manufacturers build into them, which are useful for visual water-quality checks. After application, a pinkish-purple water sample indicates a proper pH water chemistry of approximately 8.2, which is neither too alkaline nor acidic. Blue or bluish-green water indicates more water treatment is needed. A complete flushing may be needed if subsequent applications do not generate the proper water color.

Too much alkalinity can cause surging, scale buildup, or eventually “caustic embrittlement,” a process that causes the metal to crack. Too much acidity, on the other hand, leads to corrosion.

In large commercial boilers, these ailments are averted with daily checks typically performed by maintenance staffs.
Soot buildup can cause a 1%-2% decrease in efficiency. Utilizing a soot spray or soot stick can minimize the layers that build up over time.

Corrosion and scale can also create hot spots, percolating noise and active pitting sites that could affect the system’s future integrity.

Minimizing fuel-oil tank problems
The most common problem fuel-oil-fired boilers and furnaces experience is moisture in the oil tank and fuel line. Typically, moisture can cause an ice blockage, flame failure, sputtering...
Seasonal treatments can be utilized every fall to help prevent sludge and remove moisture.

flame and corrosion-caused leaks from oxidation. Other problems that occur in fuel-oil-tank storage include sludge, varnish, waxing, gelling and general oil degradation.

Therefore, the most effective way to prevent these issues is a year-round preventive treatment with an antifreeze and other additives that minimize these ailments by dissolving sludge and removing moisture. A year-round treatment can be applied every fall as part of an annual heating-system checkup. Also, since summer effects can cause condensation within the tank, a mid-year treatment can be sold to the customer to apply themselves in the spring.

An annual test to detect if excessive moisture is present in the fuel-oil tank can help alert technicians to issues that can occur over time, such as microbial growth that can lead to sludge and blockages.

Once too much moisture or sludge accumulates, the customer is looking at system downtime, several hours of repair and the expense of curative chemicals.

Year-round treatments are not curative, but they can prevent problems from manifesting over the course of several years. Once too much moisture or sludge accumulates, the customer is looking at system downtime, several hours of repair and the expense of curative chemicals. In severe cases, the service technician may need to revert to dumping, cleaning and refilling the tank, which will cost the customer hundreds of dollars, especially considering the cost of a fuel-oil refill. A year-round fuel-oil treatment, along with periodic filter replacements, can also minimize blockages in the fuel line to the burner.

Not unlike the gasoline-additive market for engines, all year-round fuel-oil treatments are not based on the same sci-
Annual preventive maintenance can help avoid costly repairs and premature system failure.

U n t r e a t e d o v e r t i m e p r e m a t u r e l y f a i l o r c r e a t e c a s t a t o p h i c r e p a i r s t h a t c o u l d b e e a s i l y a v o i d e d w i t h a n n u a l t r e a t m e n t s a n d c h e c k u p s . I t i s u p t o t h e s e r v i c e t e c h n i c i a n t o s u g g e s t a n d u s e p r e v e n t i v e p r o d u c t s . H o m e o w n e r s w i l l l i k e l y p a y f o r t h e e x t r a s e r v i c e a n d a p p r e c i a t e t h e c o n s c i e n t i o u s n e s s w i t h l o y a l t y e v e r y f a l l .

Harvey Grodjesk is Vice President of Operations for the Stewart-Hall product line of RectorSeal Corp. Grodjesk is a 37-year veteran of the chemical heating-product industry. RectorSeal offers a variety of products for fuel tanks and fuel lines, such as year-round treatments, water-detection pastes, water and sludge dispersant, and several products for boilers. For more information, visit www.rectorseal.com.