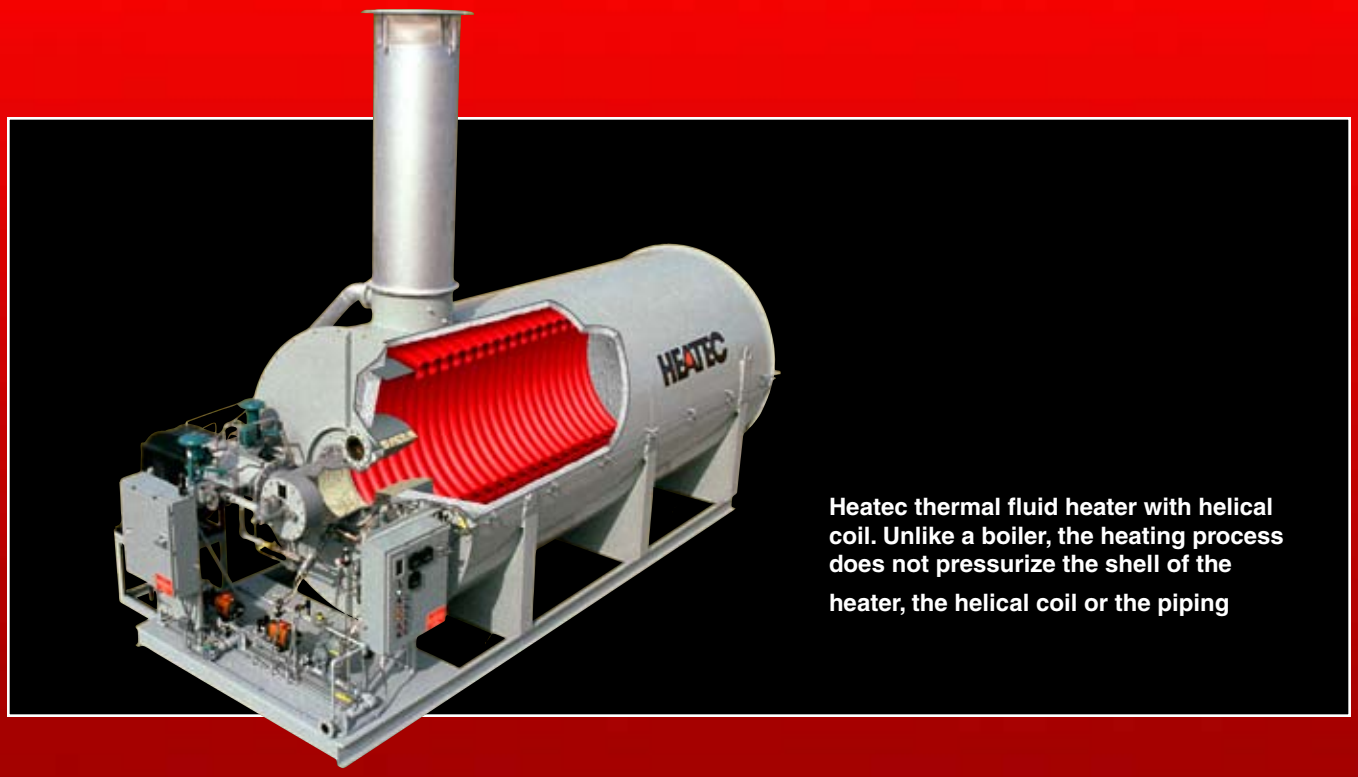

Heatec thermal fluid heater with helical coil. Unlike a boiler, the heating process does not pressurize the shell of the heater, the helical coil or the piping

NOT A BOILER

This is not a boiler. It's a thermal fluid heater. Fired boilers are commonly used to produce steam for heating products. However, a thermal fluid heater can be used instead. So what's the difference and why is that important?

Consider, for example, a fired boiler that has a burner that fires into a combustion chamber. Combustion gases flow through tubes and out an exhaust stack. Water surrounding the hot chamber and tubes turns into steam. The steam expands, thereby pressurizing the shell of the boiler. This same pressure causes the steam to flow in piping that carries it to heat exchangers that heat other things.

Heatec thermal fluid heaters fire through a helical coil. Energy from the flame heats the coil by radiation and convection. The hot helical coil heats thermal fluid that is pumped through it. The thermal fluid heats coils in heat exchangers. Unlike a boiler, the heating process does not pressurize the shell of the heater, the helical coil or the piping.

Boilers are nearly always cheaper, but often cost considerably more to maintain and operate. Moreover, boilers are far more hazardous than thermal fluid systems.

Another important advantage of a thermal fluid system is the lack of corrosion, lime deposits and scale. Thus, there is no need for water treatment as required for boilers. Other advantages include no annual shutdown for inspection. And no boiler "blow-down." And no need to cool waste water. And no concern for freezing. And no maintenance of steam traps.

If steam is required for special functions, a steam generator can be added. In that case, the thermal fluid also circulates through the tubes inside the steam generator. The tubes heat water surrounding them, converting the water into steam. Unlike a fired boiler, the heated tubes in the steam generator never get hotter than the thermal fluid flowing through them.

This eliminates explosion hazards commonly associated with boilers. And because steam generators are not fired, they are not subject to restrictions for fired boilers. Steam generators do not require a boiler operator, who (in most states) must be present whenever a boiler is in operation.

Of course, the advantages and disadvantages of either system depend on the specific application. But it is always smart to consider all options when building a new plant or replacing old equipment.

Contact Heatec for more information.

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an Astec company

5200 WILSON RD., CHATTANOOGA, TN U.S.A. 37410 • PHONE 423-821-5200 • FAX 423-821-7673 • WWW.HEATEC.COM • E-MAIL: HEATEC@HEATEC.COM