



NONWOVEN TERMS

For the informed employee

Steam Boiler

In a nonwovens plant a common method of providing heat for process applications is through the use of a boiler that generates steam. The steam may be used to heat ovens, calenders, area heaters, and rotary drying cans. Whatever the use, it is important for production employees to know what a boiler is and to be aware of safety issues involved with the generation and use of steam. The picture below shows a cutaway view of a modern steam boiler. Boilers primarily use oil or natural gas to produce the flames that heat the water in the boiler. The heating of the water produces steam which is piped to wherever heat is needed. Water turned into steam has the ability to hold a large amount of heat. Since steam is easy to convey through pipes it is very convenient to use in a manufacturing environment.

Most steam boilers use a closed system to conserve energy and water. The boiler heats water and turns it into steam. The process generates steam under pressure, usually in the range of 50 to 125 pounds per square inch. The pressurized steam pushes through pipes to the point of use. As the steam heats fabric or air, it gives up its heat and turns back into hot water. This water is pumped to a receiving tank near the boiler and when the boiler runs low on water, the water from the tank is pumped into the boiler to be turned into steam again.

Boilers contain numerous safety systems to insure that they operate properly. It is extremely important that a boiler does not become over pressurized as this could cause it to rupture and destroy itself and the equipment and building around it. No one should operate a boiler without proper instruction and training. Boilers must be properly maintained. They should also be inspected at least yearly.

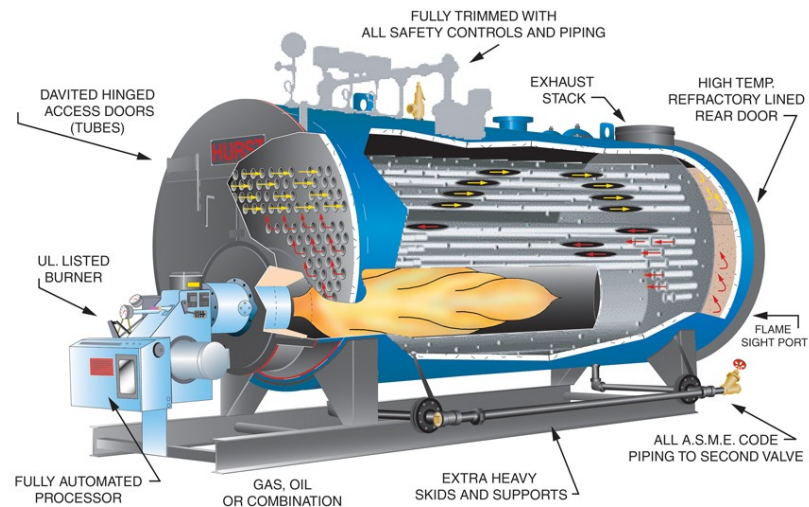


Photo credit: http://www.hurstboiler.com/boilers/scotch_marine/series_300/

“I don't believe you have to be better than everybody else. I believe you have to be better than you ever thought you could be. .”

Ken Venturi

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