

Why Deaerate?

"Why is a deaerator necessary?" The answer is that it **pays**. The pay back is in real dollars via many routes.

It could be obvious, such as the need for less blowdown, a reduction in oxygen scavengers and chemical additives, or an opportunity to reclaim heat, by recovering exhaust and flash steam. There is approximately a 1% fuel savings for every 10 degree rise in feed water temperature.

The savings may also be subtle, such as those accomplished through improved heat transfer by eliminating the insulating non-condensable gasses, corrosion control in the entire steam and condensate system, and a reduction in the thermal shock to the boiler by feeding water closer to the boiler temperature.

In addition to these immediate savings, a **ZER-O-PAC** deaerating system adds value to the original purchase by utilizing heavier duty equipment which will result in longer equipment life, thereby amortizing the cost over a longer period of time. One example is the use of **ASME** tanks with heavier gauge steel, having a higher copper content than that used in a standard condensate tank. Pumps will automatically become heavier duty when used on a deaerator, and pipe sizes are increased to keep friction losses to a minimum.

In conclusion, the **greatest value** in a deaerator comes through protecting the largest single investment in a boiler room, the **boiler**. As its cost increases, the necessity to protect this investment through total deaeration becomes mandatory.