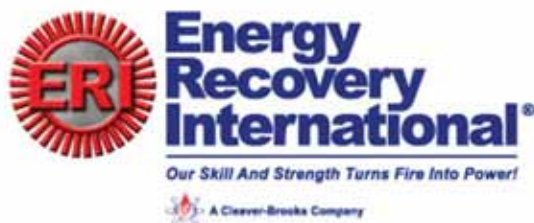


WE'RE PROUD TO  
REPRESENT THE FOLLOWING  
PRODUCT LINES



**Waterloo  
Manufacturing  
Company Limited**

**Boiler  
News**

Volume 9

July 2006



As fuel prices continue to remain high we thought we would run through possible ways to conserve fuel or lower your fuel bill:

## 1. REPLACEMENT OF OLD EQUIPMENT:

There are times, an investment is made in servicing an older existing unit, when the costs associated with the next major maintenance requirement would justify investing in a new unit.

- ☐ **Keep in mind the following factors when you are evaluating your heating or industrial boiler needs**

**Maintenance Cost** – over the life span of any piece of industrial equipment there will be ongoing maintenance costs associated with peak performance. As the age of the equipment increases the potential is for larger costs to be incurred for maintenance, which could potentially be put towards the purchase of new equipment.

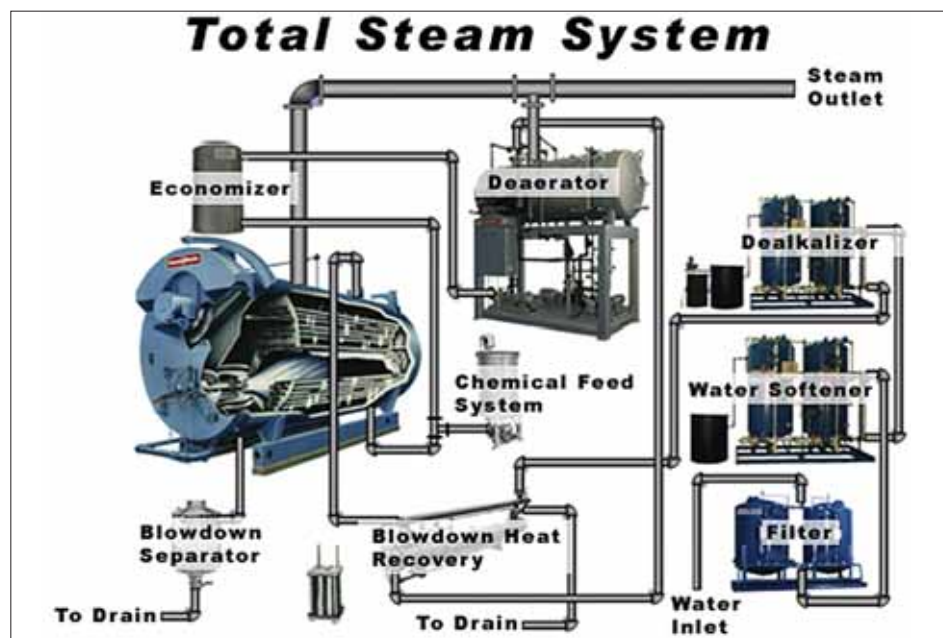
**Boiler Performance** – with newer equipment comes technological improvement. Higher performance standards, accurate-repeatable air/fuel ratio, lower emission, guaranteed efficiencies. An overall conservation of energy, both fuel and electrical.

## 2. ENHANCEMENTS TO THE EXISTING BOILER ROOM SYSTEM:

Both steam and hot water systems can utilize the combustion by-products created by the boiler itself. The following products can be added to existing equipment to improve overall efficiency. The result being extra saving in energy usage and fuel usage.

### SAMPLE COOLERS:

Sample coolers monitor boiler water quality without shutting down the boiler system. They are simple, compact and designed to cool boiler samples with minimum disturbance to system pressure.



The diagram outlines the system which would optimize fuel efficiency in a steam system

## FLASH TANK HEAT EXCHANGERS (BLOWDOWN SEPARATORS) Can offer up to 5% in fuel efficiency.

### Features and Benefits:

**Flashing:** Hot, high-pressure blowdown water from each boiler is piped to individual flow control valves on the inlet manifold. Pressure drops across the flow control valve to 5-20 psig, causing the blowdown water to flash into a mixture of steam and water.

**Separation Steam/Water:** An entrainment baffle directs the mixture around the inside of the tank in a centrifugal motion. Efficient baffling separates the dirty blowdown water from the clean steam.

**Discharge:** Steam then rises through the top of the flash tank and is piped to the feedwater heater, or wherever low pressure steam is required. The remaining hot, dirty water flows out the bottom of the flash tank to a heat exchanger for additional heat recovery, or to a blow-off tank or sewer.

**Heat Recovery:** In addition to the heat recovered as flashed steam, the heat exchanger will transfer the remaining heat normally lost during blowdown, to the cold make-up water as it flows to the feedwater heater.

## ECONOMIZERS

Economizers are added between the boiler and the stack. They recover heat from flue gases that would otherwise be wasted. This heat is used to raise boiler feedwater temperature prior to it entering the boiler. Rapid changes and low demands can be met faster due to higher feedwater temperatures. Up to 5% efficiency can be gained in the system by utilizing an Economizer.

## OTHER ADD-ONS

**Hawk – ICS – Advanced boiler control system** which monitors your boiler room equipment as well as ties directly into your building management system.

**FARC - Fuel/Air Ratio Controller** - Allows the end user to set up the exact air to fuel ratio to produce peak efficiencies with the boiler equipment.

**Oxygen Trim Systems** – the lower the amount of excess air, the higher the boiler efficiency is. In other words, the more efficient your fuel dollars are being spent. Money-Saving Feature: The new O2 Trim System-on a typical application-can save up to 2% in annual fuel cost due to greater efficiency.

**Simple Stack Thermometer** – This allows the end-user to monitor the stack temperature regularly. If there is a rise in stack temperature, action can be taken quickly, as this could indicate a potential problem with the equipment. An investment of \$100. could save you thousands.

## ☐ TAILOR FITTED PREVENTIVE MAINTENANCE PROGRAMS

As mentioned in the last newsletter, we offer preventative maintenance programs for your boiler room equipment, anywhere from annual maintenance to monthly checks. The annual service will ensure your boiler is free of scale, tubes are clean and all safety operating controls are functioning properly. Monthly or periodic checks ensure the boilers, burner and controls are set and functioning at peak efficiencies for the specific season, as ambient air temperature and humidity change so does the combustion efficiencies of your boiler.

## ENERGY EFFICIENCY REBATES OFFERED BY GAS SUPPLIERS TO OFFSET THE RETROFIT COSTS

### ENBRIDGE & UNION GAS DISTRIBUTION

Enbridge and Union Gas Distribution offer discount to customers and BONUS CASH MONEY based on improved boiler efficiency. For more information on how the new discounts can benefit you and your business give us a call or visit the following websites:

**ENBRIDGE GAS:** <https://portal-plumprod.cgc.enbridge.com/portal/server.pt>

**UNION GAS:** <http://www.uniongas.com>

For further information on products and services used in this newsletter please contact us at:

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