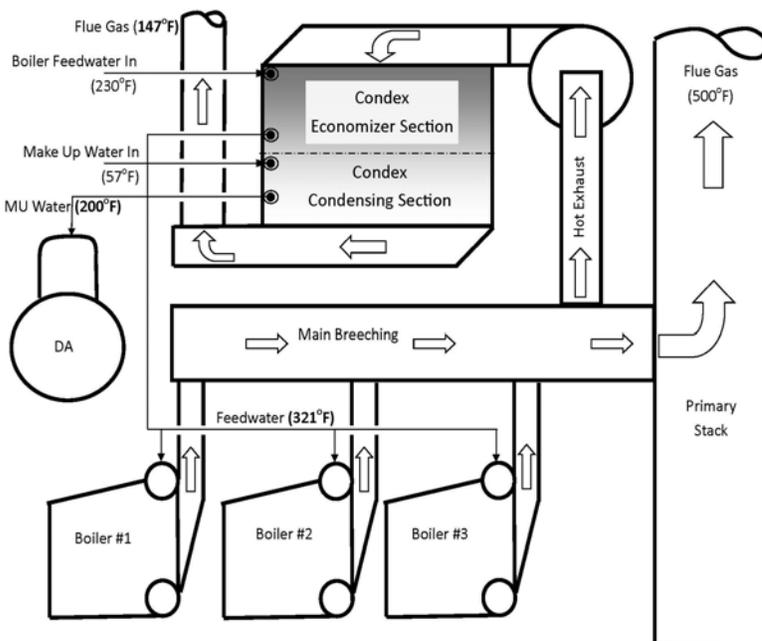


BMR Thermal Inc. Supplies Waste Heat Recovery Equipment For Fuel Savings and Reduced Emissions to a Vermont Paper Maker.

After realizing considerable savings in fuel costs with the installation of a Condex condensing heat exchanger in their Dallas, TX plant, Rock Tenn paper investigated the potential savings in their Shelburn Springs, Vermont plant.

The plant's multiple boilers had been converted to dual fuel firing with natural gas and oil many years before, but boiler exhaust temperatures were very high without back end economizers to recover heat. In addition, the plant suffered from reduced condensate return due to process requirements and steam leaks in the system.

A dual zone Condex system was proposed for maximum waste heat recovery. The system used exhaust gas from a common breeching so that any combination of boilers firing would allow for waste heat recovery.



Using a Condex dual zone condensing heat exchanger, Rock Tenn can preheat their feedwater in the first, standard economizer section and heat make up water coming from the adjacent river in the second section before it is sent to mix with the returning condensate. This will allow for a large reduction in steam admitted to the deareator to heat the incoming cold make up water.

Energy previously wasted in high temperature boiler exhaust will now be captured and utilized to reduce the amount of natural gas needed to generate steam in the papermaking process. In addition, fewer pollutants, NO_x, CO & VOC's will be exhausted to the atmosphere on a scale of tons per year.

Other potential uses for waste heat in the papermaking process include:

- Shower Water
- Pocket Vent Heater Coils
- Air Make Up Heater Coils

Vermont Gas was instrumental in making the project move forward with incentives for energy savings and reduced gas use to Rock Tenn. Once the system came online a representative of Vermont Gas questioned if there was a problem at the plant because their gas use had dramatically reduced.

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