

KRAFT FOODS CANADA

Cobourg, Ontario, Canada



BENEFITS

- ▶ 15% reduction of boiler fuel consumption
- ▶ Increase of the thermal efficiency of the boilers to 96%
- ▶ Recovery and reuse of 80 to 90% of the waste heat
- ▶ Recovery and reuse of condensed water
- ▶ Heat recovery from dryers and boilers
- ▶ Over 8000 ton/year of greenhouse gas reduction

FLU-ACE® Rice Process & Boiler Exhaust Heat Recovery Systems

Thermal Energy International implemented the design and installation of two FLU-ACE® Heat Recovery Systems at a Kraft manufacturing plant in Cobourg, Ontario, Canada. The towers have run with minimal maintenance for 10+ years. There are two integrated condensing heat recovery systems:



The Rice Process Heat Recovery Tower

The 8.5 ft diameter FLU-ACE® tower was designed to recover 24 MMBtu/h (at peak) and 11 MMBtu/h (winter average) of otherwise wasted heat. Stainless steel breaching collects hot gases from three separate exhausts (two rice process dryers and one rice steamer). Recovered heat, in the form of 150°F water, is sent to three plate heat exchangers which are used to heat:

- ▶ Rice Process makeup water,
- ▶ Rice and Cereal Process wash water, and
- ▶ Fresh air makeup (through a secondary glycol heating circuit).

The FLU-ACE® System, including controls, distribution pumps, and heat exchangers, are grouped inside specially designed enclosure for easy maintenance and accessibility.

The Boiler Exhaust Heat Recovery Tower

The FLU-ACE® tower has an average heat recovery rate of 6.9 MMBtu/h. The system receives hot exhaust gases from two 70,000 lb/h boilers. Recovered heat, in the form of 150°F water, is sent to three plate heat exchangers which are used to heat:

- ▶ Boiler makeup water,
- ▶ Fresh air makeup (through a secondary glycol heating circuit), and
- ▶ Rice Process wash water.

The FLU-ACE® systems helped Kraft's Cobourg Plant achieve significant savings, and consistently reduced plant energy costs and air emissions.

"As the Facility Maintenance Manager for Kraft Canada's Cobourg division, my primary responsibility was Energy Conservation & Project Engineering. The FLU-ACE® is and was a good, matter-of-fact, energy saver, and the best thing that we could have installed. It saved a bundle for Kraft."

— Werner Krebs, former Facility Maintenance Manager, Kraft Foods Canada



An Innovative Technology Company Providing
Custom Energy and Emission Reduction Solutions

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