

CASE STUDY: WASTEWATER HEAT RECOVERY

SYSTEM TYPE: Heat Exchangers, Coils, Controls, Piping, Pumps

PROJECT FINANCIALS

- Total Turnkey Installed Cost: \$ 481,500
- Annual Energy Cost Savings: \$ 140,500
- Simple Energy Funded Capital Payback: 3.4 years
- Average Project IRR: 39%
- CO2 Equivalent Reduction : 1,300 tCO2e (Nat'l. Avg. Emission Rate)

MANUFACTURING Facility Installs New Plate Coils, Sanitary Heat Exchangers, Intermediate Heat Transfer Loop, Controls, Piping, and Pump —Saves \$140,500 Annually

System Description

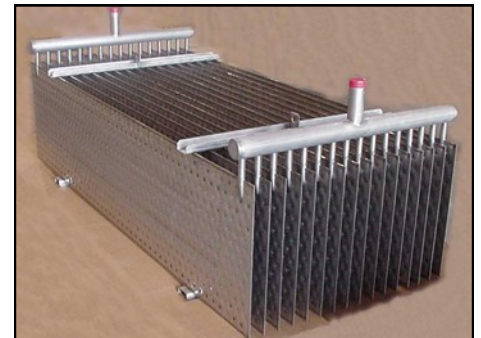
- Large amounts of dirty & hot wastewater being sent to treatment system
- Large amounts of quality process water being heated
- Existing steam powered water heating systems

System Opportunities

- The opportunity to use waste heat from process water discharge was identified
- The opportunity to use the recovered waste heat to pre-heat process water was identified

Project Description

- Installed plate coils in the hot water discharge system
- Installed an intermediate hot water recovery loop to transfer the heat
- Installed sanitary heat exchangers to transmit the recovered heat to the process water
- Added automaton for process water quality protection, alarms, automated shut down, and leak detection



Used with Permission. Omega Thermo Products. Web Site www.laser-plate.com

Project Benefits

- Used waste heat to reduce water heating loads
- Conservatively saved 24,600 MMBTU annually
- Conservatively saved 270,000 gallons of water annually
- Increased the deliverability capability of the existing hot water system

Plant Profile

- Manufacturing facility, personal care products
- Production areas

Key Benefits

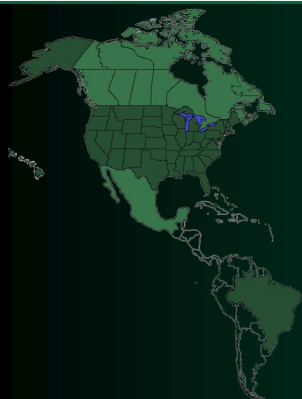
Annual Energy Cost Savings	\$ 140,500
Carbon Reductions	1,300 tCO ₂ e (Natl Avg. Emission Rate)
Natural Gas Savings/Year	24,600 MMBTU
Water Savings/Year	270,000 Gallons

Financial Data

Investment	\$ 481,500
Project IRR	39%
Life Expectancy	N/A
Incentives/Rebates	\$ 0
Payback Period	3.4 Years



Achieve energy/sustainability goals & increase profit - Guaranteed



Solution Dynamics is a team of certified energy experts committed to improving the environment by implementing sustainable solutions that reduce use of precious natural resources.

We serve clients in commercial and industrial sectors who are seriously committed to reducing their energy consumption, cost, and environmental impact.

Guaranteed results are delivered on a risk-free basis. For additional case studies, or to schedule a free, no-obligation consultation, contact us at 888-435-9226.

Corporate Office: Kansas City, KS | Web: www.sol-dyn.com | Email: info@sol-dyn.com