



## Reino's **Commitment to Green**

*Partners for a cleaner today and greener tomorrow*

**Reino Linen Service  
Gibsonburg, OH  
Brownstown, MI**

[www.reinolinen.com](http://www.reinolinen.com)

# Made Energy Efficiency Update to Lights in September 2007

Replaced (100) 400 watt metal halide light fixtures with (100) T8 light fixtures in our Gibsonburg plant.

## Energy Savings:

(100) 400 watt fixtures=45,100 watts

(100) T8 fixtures=13,600 watts

45,100 – 13,600=Savings of 31,500 watts

Burn time of 7,800 hours per year.

31,500 watts x 7,800 hours=**245,700 KWH/year savings**



# Made Energy Efficiency Update to Air Compressor in September 2007

Replaced 100 hp air compressor with a new  
75 hp variable speed air compressor at our  
Gibsonburg plant.

## Energy Savings:

100 HP compressor consumption was 474,168 KWH/Year

New 75 HP compressor consumption is 119,635 KWH/Year

$474,168 - 119,635 = 354,533$  KWH/year savings



# Tunnel Upgrade Gibsonburg-May 2007

Installed 2 new Milnor G-3 (150 pound) CBWs.

Water usage before upgrade was 1.10 gallons per pound.

Water usage after upgrade is .75 gallons per pound.

**Total savings per year is 10,500,000 gallons.**

*(Based on 30,000,000 pounds processed per year.)*



# Dryer Upgrade Gibsonburg-May 2007

Installed 10 new 300 lb dryers  
to replace 11 - 220 lb dryers

Average Therm per pound of old dryers was .0374324.

Average Therm per pound for new dryers is .0291296.

Savings of .0083028 Therms per pound

Average cost per Therm is .0323197 cents.

$.0083028 \times .0323197 = .0002683$  cents per pound

$.0002683$  cents  $\times$  30,000,000 pounds =

**\$8,049 per year average savings.**



# Installation of New Stack Economizer Gibsonburg-April 2010

Based on an average operating rate of 8,370 cubic ft per hour, 33% average boiler load, gas-fired, the Stack Economizer will recover 1,274,000 BTU per hour.

With a 65% system efficiency, this recovery is equivalent to 1,960 cubic ft of gas per hour.

Operating at this rate for 80 hours per week, 52 weeks per year, with gas at a cost of \$ 8.00 per 1,000 cubic ft, this recovered heat has an **estimated savings of \$65,229 per year.**



# Transitioned to Green Chemicals -September 2009

We changed our laundry chemicals and were completely converted within 1 month at our Gibsonburg plant.

- EPA Certified
- High Customer Satisfaction
- Links into customers' Green programs



# Recyclable Bag Program – October 2009

- Bags are picked up, saving the customer disposal costs
- Used bags are melted, processed and reused
- Reduces medical waste
- Avoids landfills where they contribute to pollution





# Ramped up the Reino Recycling Program – January 2010

- Created a recycling committee at both Reino plants
- Found a reputable recycler that was willing to work with us at both locations
- Initiated efforts by recycling paper, plastic and cardboard
- Installed the proper recyclable containers in both plants



# The Test

We wanted to give the program  
6 months to stabilize  
before advancing our recycling efforts.

The proof was in the numbers!



Reino's  
Jan-Jun 2010  
Ecological  
Report



**Reino**  
Linen Service

*2010 Year to Date  
Ecological Report*



**POUNDS OF MATERIAL RECYCLED**  
106,856



**CUBIC YARDS OF LANDFILL SPACE CONSERVED**  
250.25



**TREES SAVED**  
914.28



**GALLONS OF WATER SAVED\***  
373,994.89



**BARRELS OF OIL SAVED\***  
133.48



**KILOWATT HOURS SAVED\***  
219,546.96

*\*Using recycled materials to make new products conserves trees, water, oil, energy and landfill space*

# Reino Linen Service Brownstown, MI

Opened our Brownstown, MI location as a Green plant in July 2009.

- Latest energy efficient equipment
- Heat recovery system
- Reusing heat from boiler room and air compressor to heat plant during winter months
- Green chemicals
- Recycling paper, plastic and cardboard
- Recyclable Bag Program
- Final savings calculations being completed at this time



# Reino's Newest Tractors Meet EPA Standards-April 2010

- 2010 EPA/CARB Emission Certification
- 2008 CARB Emission Certification-Clean Idle
- Aluminum wheels for lighter weight
- Engine parameter set for (5) minute idle shutdown

Designed to reduce carbon (CO<sub>2</sub>), nitrogen oxide (NOX) and particulate matter (PM) emissions reducing fuel use, saving money and improving efficiency.



## Our Next Step in Sept 2010

- To begin recycling glass
- To establish an employee incentive program for recycling efforts
- To go to each of our suppliers requesting an outline of their Green initiatives
- To incorporate Green initiatives in our contracts



 **recycle** 

The possibilities  
are endless.



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**Recycle**