

CASE STUDY



SIEMENS



ENERGY COSTS REDUCED BY 50%



AmeriPride - Minneapolis, MN

AmeriPride's Minneapolis facility contacted Albers Mechanical to help them determine the best way to increase the efficiency of their laundry heating system. Brian Hauck, Albers Project Manager, worked with Ryan Company, Inc and recommend that they replace the old burner on their 500HP Kewanee boiler with a new Gordon Piatt F18 burner with a Siemens LMV Linkageless Burner Management System. In addition, we recommended they replace their old water heater with a new Ludell Direct Fired Water Heater and that they remove the existing boiler stack and add a new Ludell Stack Economizer with a new Schebler Chimney System .



Mike Rocheford, Ryan Company President, stated "A stack economizer is perfect for this type of continuous heating application and the payback time will be very short."

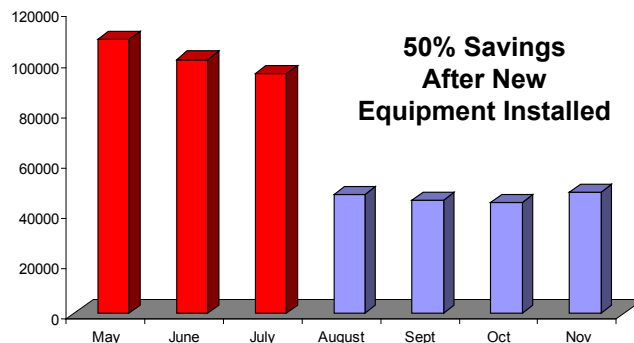
After all the new equipment was installed, the fuel bills were cut in half.

Flue gases from the boiler are diverted to a Ludell Stack Gas Heat Absorber where they come in direct contact with the incoming water via stainless steel heat transfer medium. This direct contact puts virtually all the heat into the water which reduces the exiting flue gas temperature and adds up to large fuel savings.

Similarly, the Ludell Direct Contact Ultra-Efficient Water Heater, provides the final heating stage for the process water using a high efficiency natural gas burner.

Both units were supplied with a Schebler double wall stack system. Due to the low flue gas temperature, the inner liner was constructed of 316 stainless steel for greater corrosion resistance.

Fuel Usage (Therms)



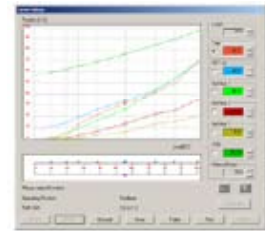
The new Gordon Piatt burner fires up to 21,000 MBH input on natural gas and is equipped with the Siemens LMV Linkageless Burner Management System.

The Siemens LMV System utilizes individual servo motors that are directly mounted to the air damper, oil metering valve, and gas butterfly valve and controlled via an electronic interface. This system controls the fuel/air ratio in lieu of a standard linkage system that uses a mod motor, linkages, various swivels and crank arms.



The result is improved burner performance and efficiency as well as a system that has greater repeatability than a standard linkage system. The Siemens system uses SQM4 actuators which are highly accurate to 1/10th of one degree. And because each servo motor is independently controlled, separate operating curves produce the highest efficiency possible for each fuel.

A digital feedback signal ensures the correct position is maintained throughout the actuators modulating range. If it should fall out of position, the LMV Burner Management System automatically locks out to ensure that the burner will always perform with repeatability and accuracy as well as within the recommended safety parameters.



AmeriPride's Chief Engineer indicated that they are "very pleased with the new equipment". He also stated "the new burner is more efficient and easier to maintain".

Taken from www.ameripride.com

In 1889 George A. Steiner worked his way through high school delivering towels for a local laundry in Lincoln, Nebraska. Driven by his young, entrepreneurial spirit and foresight, he purchased the towel business for \$50.80 - half down, half later.

He called the business American Linen Supply and as it grew, he formed a partnership with his brother Frank. Together they made deliveries from a green & white hand cart they pushed through the city streets. It wasn't long before the hand cart was upgraded to a horse-drawn wagon. Business continued to boom and their Lincoln business expanded to Minneapolis, Minnesota and Vancouver, British Columbia in the early 1920's.

Today, AmeriPride Services is still owned and actively managed by the founding family. We have grown into a multi-national organization operating over 190 production facilities and service centers throughout the United States and Canada. Over 200,000 customers receive AmeriPride service every week. We are now recognized among the five largest uniform rental and linen supply companies in North America.



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