



## Lincolnway Energy installs Plattco Airlock® Valves, corrects problem in fly ash bag house and reduces costs

Soon after the Lincolnway Energy ethanol production plant went online in 2006, the operations team realized they had a problem on their hands. The eductor valves installed in their fly ash bag house and the heat recovery generating system (HRSG) were constantly getting plugged.



"It was so bad," says Lincolnway Energy maintenance manager, Keith Davis, "that we had to station someone next to the valves to wrap them with a hammer just to keep the material flowing." In the original design for the Lincolnway plant, eductor valves were installed as part of a positive pressure conveying system in the fly ash bag house and the HRSG.

"With the eductors, the fly ash material would just sit on top of the valve," Davis explains. "Because the fly ash is fine, the material was constantly getting clogged above the valve." The constant maintenance issues were also a safety issue, since the material moves through the system at high temperatures.

After the Lincolnway plant had been open only for a few months, Davis contacted Industrial Accessories Company (IAC) to find an alternative. According to Robert Frye, a principal at IAC, his company analyzed the situation and determined that a vacuum conveying system using Plattco technology would be more suitable for Lincolnway than the pressure conveying system using eductors.

"The energy savings with the Plattco valves is awesome. The valves have basically paid for themselves in energy savings alone."

Keith Davis, Maintenance Manager,  
Lincolnway Energy, LLC

### facts at a glance:

⇒ <b>Company:</b>	Lincolnway Energy, LLC
⇒ <b>Location:</b>	Nevada, Iowa
⇒ <b>Industry:</b>	Ethanol
⇒ <b>Plant Capacity:</b>	50 million gallons corn ethanol per year
⇒ <b>Energy Source:</b>	Coal
⇒ <b>Revenue:</b>	\$81 million (2009)
⇒ <b>Employees:</b>	44

### Plattco products:

- Six 12" H-1275 Single Flap Airlock Valve on heat recovery steam generator (HRSG). Installed in 2006.
- Six 8" H-0875 Single Flap Airlock Valve on fly ash bag house. Installed in 2008.
- One H-1295 Double Flap Airlock Valve under intermediate silo in fly ash blow out system. Installed in 2008.

## Plattco valves eliminate throughput problems caused by eductors

IAC first installed six Plattco model H-1275 Single Flap Airlock® Valves at the HRSG. Once the issues had been resolved in the HRSG, IAC installed six Plattco model H-0875 Single Flap Airlock Valves in the fly ash bag house. A Plattco model H-1295 Double Flap Airlock valve was installed in the positive pressure system where the fly ash is blown out to the load-out silo 100 feet away.

"I was very pleased after we started up the new Plattco valves," says Davis. By installing the Plattco valves, Lincolnway Energy has eliminated the clogging problem and the down time it caused. "Plattco valves are the only way to go. We like them because only a specific amount of product is dumped based on a preset time interval," he explains.

## Plattco valves more than pay for themselves in energy savings, reduced maintenance

He also credits the Plattco valves with helping Lincolnway Energy significantly reduce energy consumption. "When the eductors were on line, we had to run two 50 horsepower blowers just to keep the system working," Davis says. "Because of the efficiency of the Plattco valves, we've been able to shut these off. The energy savings with the Plattco valves is awesome. The valves have basically paid for themselves in energy savings."

Since the Plattco valves were installed beginning in 2006, they have operated with minimal maintenance. "We've never had to replace the seat and flapper on the inside," Davis says. "The Plattco valves just sit there and work. It's great."

## Business Benefits

- Reduced energy costs by eliminating the need to operate two 50hp compressors
- Eliminated interruptions in fly ash system to increase throughput
- Saved man-hours formally required to keep eductors operating
- Eliminated virtually all valve maintenance expenses
- Reduced risk by eliminating need to work around valve while hot materials are being processed.

## About Plattco

Plattco Corporation is the recognized leader for valves that solve material handling problems in a wide variety of industries. Plattco specializes in the design and manufacture of Double Flap Airlock® Valves and associated multi-purpose slide gates. Plattco is an integrated manufacturer with engineering capabilities, a pattern shop, foundry and machine shop at its facilities in Plattsburgh, NY. Plattco invented the double flap material handling valve in 1960 and has established a proven record of innovation. Plattco was the first to install double flap airlock valves on the windbox at iron ore mines and on the clinker coolers at cement plants. Founded in 1897, Plattco began as a gray iron foundry, producing drainage castings, stock valves and other machined castings for the paper, mining and other regional industries. Plattco is employee owned.



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