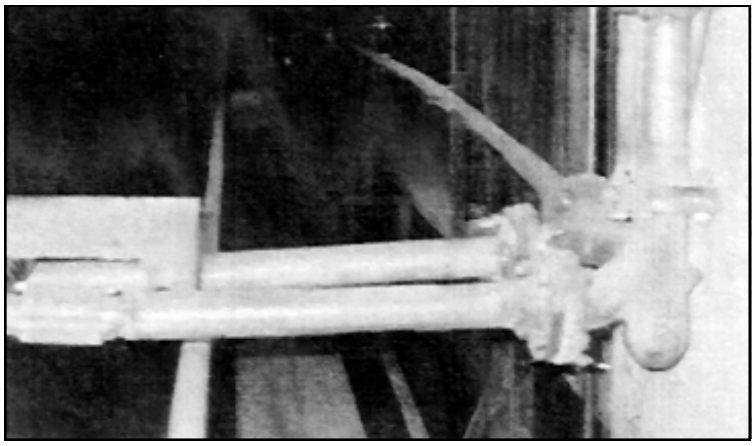
ENVIRONMENTAL IMPACTS

CASE HISTORY #1



Smart Elbow™ stops limestone blow-outs at trash-to-energy plant

SUBJECT ...

Montgomery County's North Incinerator plant, in Dayton, Ohio.

SITUATION ...

To meet EPA air pollution control standards for sulfur dioxide emissions, finely powdered limestone needed to be injected into the three incineration units at all times. The operation required approximately 18,000 pounds of powdered limestone a day, and needed to be on-line 24 hours a day, 365 days a year.

THE "GLITCH" ...

Not even the use of high grade stainless steel, long radius sweep elbows in the dense phase pneumatic conveying system could withstand the abrasive action of the limestone pumice. At operating pressure, even a pin-sized hole in a sweep elbow would create a tremendous cloud of dust, and a considerable mess to clean up.

Sweep elbow failure was occurring about every 90 days. EPA required the incinerator units to be shutdown if the limestone injection system was off-line for more than a few hours. Total downtime expense for repairs was nearly $40,000 a day.

THE SMART SOLUTION ...

A single 90° HammerTek® SMART ELBOW™ made of HammerLast™ Series 300 was installed in place of the stainless steel sweep elbow. System shutdown due to elbow wear was eliminated because of the new elbow's unique characteristics.

Continued...

ENVIRONMENTAL IMPACTS

INTELLIGENT ENGINEERING ...

SMART ELBOWS™ rely on ***DEFLECTION*, NOT IMPACT**, to change flow direction, thereby eliminating the impact-related problems associated with virtually every other conveying elbow design. At system start-up, a gently rotating ball of suspended material forms in the patented vortice chamber of the SMART ELBOW™. As the main flow of material passes this ball, it is "deflected" through the desired change of direction without impact, friction or wear to the elbow's interior surfaces.

SUBSTANTIAL ENVIRONMENTAL IMPACTS ...

HammerTek® SMART ELBOWS™ can save your company time, expense and reduce regulatory paperwork by not failing in the first place. Truly an intelligent "ounce-of-prevention" for conveying systems where any incidence of sweep elbow failure has environmentally sensitive consequences.

Fact: The patented SMART ELBOW™ design provides maximum environmental protection by eliminating elbow wear due to abrasive impact and friction.

Fact: The SMART ELBOW™ eliminates/reduces: plugging, surging, turbulence, noise, product degradation, and streamer formation.

HAMMERTEK® SMART ELBOWS™ FOR ENVIRONMENTALLY SENSITIVE, ABRASIVE, TURBULENT, STICKY OR TRICKY MATERIAL CONVEYING ...

- American-made
- Reliable delivery
- Competent technical support
- 60/120 day free trial offer on normally stocked items
- 45° and 90°
- Socket Weld and Flanged
- Aluminum
- Cast Iron
- Ductile
- Carbon Steel
- Stainless Steel 304 and 316
- HammerLast™ Series 300 and 400
- HammerLoy™
- Alloys and coatings available to your specifications

HAMMERTEK® FACTS ...

Well into its second decade of operation, HammerTek Corporation has established a solid reputation as an innovative U.S. manufacturer of "problem-solving" conveying elbows. The design and flow characteristics of the SMART ELBOW™ are patented in the U.S. and 15 other countries.

U.S. distribution is conducted through a nationwide network of manufacturers representatives. Canadian distribution is conducted through CORREPRO LTD. Worldwide distribution is conducted under license agreements with GERICKE G.m.b.H., Switzerland; JENKINS OF RETFORD LTD., U.K.; LEDGER ENGINEERING PTY., Australia; and YAMAMOTO INDUSTRIES, Japan.

SMART ELBOW™

FROM THE ENVIRONMENTALLY INTELLIGENT FOLKS AT...

HammerTek CORPORATION

For more information and the name of your nearest distributor contact:

HammerTek Corporation
P. O. Box 416
Landisville, PA 17538
Phone: 717-898-7665
FAX: 717-898-9279

613(9603)