



Quantum Leap

**Vortex® News &
Events from around
the globe.**



2nd QUARTER 2011

- Vortex and Atex
- Spotlight on Mariano Garcia
- Wye Lines Provide Diversity
- Vortex Delivers Books to Orphanage
- Visitors at the Home Office
- Not-So-Serious Desk Gaffes at World Predictions



The Global leader in Valves for Dry Bulk Solids

Welcome to QL!

Welcome to the latest edition of Quantum Leap! We've been extremely busy at Vortex since the last issue of Quantum Leap. (And that's our excuse as to why this edition is late again!)



In this issue, you'll read about:

- the ATEX directive,
- our wye line diverters and configurations,
- expansion of our sales force in Latin America,
- recent guests to our headquarters,
- and delivering books to an orphanage in Africa.

Now, sit back, relax, and enjoy reading Quantum Leap!

Warm regards,

Jeff Thompson, CEO & President
Salina Vortex Corporation



*Vortex's Corporate Headquarters in
Salina, Kansas - USA*

The ATEX Directive and Vortex

By Laurence Millington
General Manager Northern Europe

Dust Explosions in the Dry Bulk Handling Industry

Controlling and suppressing dust is a constant concern for dry material processors. In the United States and Europe, approximately 20 dust explosions are reported each month. The cost, in terms of lives lost and damage to plant, as a result of a dust explosion can be enormous. The following are a few examples that highlight the associated danger with such environments:



- On 7 February 2008, a dust explosion occurred at a Port Wentworth, Georgia, sugar refinery, which killed 14 people and injured over 40. The explosion was likely caused by a static discharge igniting dry sugar dust that had become suspended in air.
- A pharmaceutical plant in Kinston, North Carolina, was destroyed in a 2003 explosion that killed six workers and injured more than 40. Investigators determined that combustible dust inside the plant ignited, causing the deadly fire.
- In the United Kingdom, a food company experienced a dust explosion when a hopper was overfilled with corn-starch by the pneumatic conveying system. This created a dust cloud which was ignited by nearby electrical equipment, leaving nine men badly burnt.
- An explosion occurred in a grain storage complex at Société d'Exploitation Maritime Blayaise in August 1997, killing 11 people in nearby offices. Significantly-sized debris from the explosion was found up to 100 metres from the silo.
- In 2005, an employee was walking from an office in a flour mill's receiving area when he was reportedly hit by a fireball that knocked him 25 feet down a metal catwalk. An Occupational Safety and Health Administration report said the blast was caused by three flour hoses that were not properly bonded to a vacuum conveyor system. Sparks in the system ignited flour dust, which then caused the explosion.

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The ATEX Directive

In the mid 1990s the European Community developed regulation (also known as Directives) to reduce the likelihood of dust and gas explosions. From the French term “ATmosphères EXplosibles”, the guidelines were designed to enable everyone in industry to operate safely and to avoid an explosive incident.

Two primary directives under ATEX have been introduced. Directive 1999/92/EC is the applied regulation to employers that operate in potentially explosive environments, while Directive 94/9/EC is applied to equipment manufacturers that supply them. Vortex is required to follow and conform to Directive 94/9/EC.

Unlike regulations in the United States, ATEX covers more than electrical equipment applied in explosive environments. In accordance to ATEX, manufacturers must also prove the mechanical equipment used in a process cannot cause a source of ignition (sparks, static discharges, etc).

ATEX defines three “zones” for dust environments and three for gases or vapours. Based on these zones, the equipment must conform or be certified to the specific category of equipment required:

Zones		General Definition of ATEX Zones	ATEX Equipment Category
Gases & Vapours	Dusts		
0	20	Explosive atmosphere is present continuously, for long periods or frequently.	1
1	21	Explosive atmosphere is likely to occur under normal operation occasionally.	2
2	22	Explosive atmosphere may occur under abnormal operation and persist for a short period only.	3

Since its inception, ATEX has been recognised as the most comprehensive regulation for explosion prevention. The guidelines and laws that support ATEX may only be applicable in the European Community, but many multinational processors are adapting these standards to their plants outside of Europe.

ATEX and Vortex

Vortex products are certified as category 1, 2, and 3 Equipment, for both Dust and Gas environments. Compliance to the ATEX directive is reflective of Vortex’s reputation as an

industry leader and solutions-based supplier to the dry bulk industry. If you have any questions about Vortex products and the ATEX Directive, please contact us at one of our offices listed below. **QL**



For more information about Vortex’s dust explosion certification, please contact one of our global offices:

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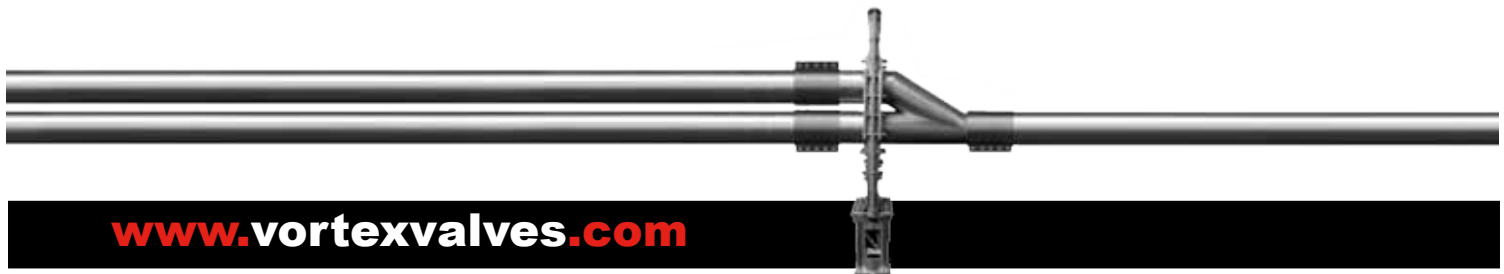
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Vortex Donates Books to the Kilimanjaro Orphanage Centre

Over the past two years, Vortex employees in the UK and the USA have collected over 6,000 children's books for the Kilimanjaro Orphanage Centre in Moshi, Tanzania.

"It was quite a challenging effort," commented Travis Young, Vice President of Global Business Development. "We originally intended the books to be delivered to a local primary school in Moshi, but we found it difficult to communicate and get support. Luckily we found the great people at the Kilimanjaro Orphanage Centre, as they have tremendous need for books and educational materials."



The Kilimanjaro Orphanage Centre in Pasua was founded in early 2009 by Edward Lazaro responding to the recognized need to provide care and shelter to an increasing population of orphaned children in the Moshi area. The Centre is a registered NGO (Charter # 3959) that provides residency care for orphaned children as well as day care and community support for other children at risk.

The Kilimanjaro Orphanage Centre currently accommodates 30 children mostly between the ages of 4 and 10. Future plans are in place to care for about 100 children. The orphanage provides matron supervision, regular nutritious meals, clothing, as well as, school needs that include uniforms, books, materials and fees.

Vortex would like to recognize The Salina Youth GrantMakers Council for their tremendous contribution to this effort.

For more information on the Kilimanjaro Orphanage Centre, please visit www.kiliorphanage.com. **QL**



Who's Who at Vortex

Mariano Garcia Ramirez,
Director Regional Desarrollo de Negocios

Vortex Valves Latin America is pleased to announce the appointment of Mariano Garcia as the Director Regional Desarrollo de Negocios of Vortex Valves Latin America. Mariano will oversee Vortex's new office based in Hidalgo, Mexico, where he will be responsible for sales and marketing for all Latin American countries from Mexico to Argentina.



Mariano will provide support to the Latin American reps that Vortex has in place by having a Latin American-based office and be more readily available to travel with the reps to customer sites. He will also be responsible for increasing representation in Latin America.

Mariano has 12 years of sales experience in dry handling equipment. Mariano has a wife, Lila, who he has been married to for 13 years, and has a 7 year-old boy and a 3 1/2 year-old girl. He enjoys traveling with his family in and out of Mexico to the beaches and mountains.

Please welcome Mariano to Vortex! **QL**





Valves and diverters for bulk solids

Key benefits of latest valve and diverter developments have served to extend the capabilities and cost-efficiency of pneumatic conveying systems.

Wye Line Diverters™ provide diversity in pneumatic conveying

Unlike common in-line flap or plug-type diverters, Vortex's series of Wye Line Diverters offer a wider range of dilute phase and vacuum conveying options. The design features a stainless steel sliding blade with unrestricted flow ports, and is capable of shifting directions while the system's blower or vacuum pump continues to operate. If installed near a destination point, the diverter may also shear through material to facilitate continuous conveying.

Available in 2, 3, and 4-Way configurations, Vortex Wye Line Diverters may be utilised to convey from:

- 1 source to 2 destinations
- 2 sources to 1 destination
- 1 source to 3 destinations
- 3 sources to 1 destination
- 1 source to 4 destinations
- 4 destinations to 1 destination

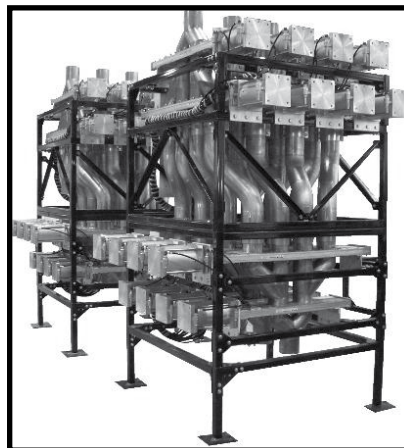


Vortex Wye Line diverters conveying plastic pellets from two rail cars to eight silos.

Utilising combinations of 3 and 4-Way Wye Line Diverters can reduce the overall quantity of 2-Way diverters required

in a conveying system, saving on equipment cost and installation time.

Interconnecting various Vortex Wye Line Diverters may permit greater diverting scenarios. For example, combining one 2-Way diverter with two 4-Way diverters allows conveying from 1 source to 8 destinations or 8 sources to 1 destination. By adding eight more 4-Way diverters to that configuration, processors can achieve 32 destinations or sources.



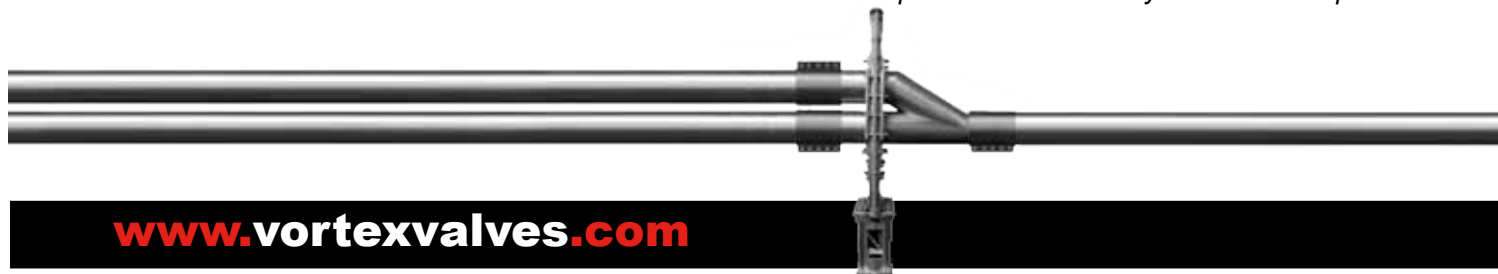
Vortex Wye Line Diverters conveying starch from four sources to any of four destinations simultaneously.

In more complex applications, engineers can construct multiple sources to multiple destinations. This allows for the conveying of material from any source to any destination simultaneously. This flexibility is ideal for truck or rail unloading stations that must convey product to a complex network of primary storage silos. Fully automated and interfaced with a PLC, a Multi-Port Wye Line Diverter installation can provide efficient material delivery, whilst reducing labour and incorrect destination selection associated with typical hose manifold stations.

The Wye Line's modular, fabricated design allows for a selection of metal construction and seal options to suit a wide variety of dry material characteristics. This diversity in manufacture also provides flexibility in size and pipe connectivity.

The diverter's sealing mechanism consists of "live loaded" hard polymer seals compressed against a stainless steel sliding blade. This feature allows for wear compensation of the seal to optimise service life and performance. A series of shims on the exterior/lateral aspect of the diverter allows for adjustability in the seal compression load. This design feature offers a simple maintenance solution without removing the diverter from the pipe work. **QL**

Partial reprint from EuroBulkSystems March/April 2011



www.vortexvalves.com



Recent Visitors

U.S. Dept. of Commerce Tours Vortex



Perez (left) is given a tour by Monty Leach, Vortex VP of Manufacturing

Deputy Assistant Secretary for Manufacturing, Peter M. Perez, of the U.S. Department of Commerce, stopped to tour Vortex Valves en route to the NEI ExportNow conference in Wichita, Kans. Perez was appointed by U.S. President Barack Obama to help

American industries succeed internationally by strengthening their competitive position in foreign markets and create more jobs. Perez toured the Vortex facility and spoke with management about their concerns related to doing business globally.

“With a wide range of highly engineered products, the challenge for Vortex in the global market place is to protect intellectual property,” Russ Barragree, Director of Global Marketing said. “We are fortunate to have voice in the government from Mr. Perez, a person in the manufacturing sector experienced in dealing with these issues.”

Congressman Huelskamp Tours Vortex



Congressman Huelskamp

Freshman Congressman Tim Huelskamp, who represents the First District of Kansas, visited with some of Salina’s major employers. The day included tours of the Philips Lighting plant, the Tony’s Pizza plant, and Vortex Valves, as well as a roundtable meeting with more than 15 of the city’s biggest job creators.

“It was a privilege to spend the day hearing from job creators in the First District of Kansas,” Congressman Huelskamp said. “The insights these employers offered provided further evidence that more of Washington is not the solution to getting the economy back on track. What employers need now is more tax certainty and less regulation; this will ensure that employers have more time to focus on growing their businesses rather than answering to Washington.” **QL**



POWTECH 2011

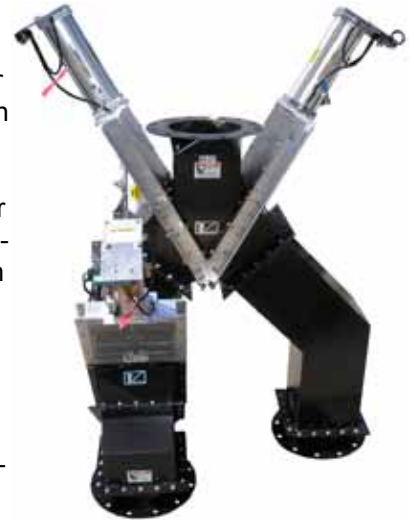
Vortex at World-Leading Trade Fair

Stop by and visit Vortex Valves at POWTECH in Hall 9, Stand 123, Exhibition Centre, in Nuremberg, Germany, October 11-13. On display will be Vortex’s Titan Series Abrasion Resistant Slide Gate, Quantum™ Series Orifice Gate™, Multi-Port Gravity Vee™, and the Fill Pass Diverter.

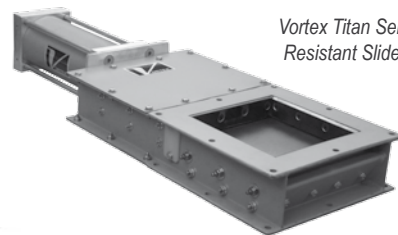
POWTECH takes place every 18 months and is the international forum for the latest developments in the Mechanical Processing Technologies and Europe’s top get-together for process technicians, process engineers, production managers and scientists.

All the relevant manufacturers of mechanical processing technologies present cutting edge powder, granule and bulk solids technologies at the leading exhibition.

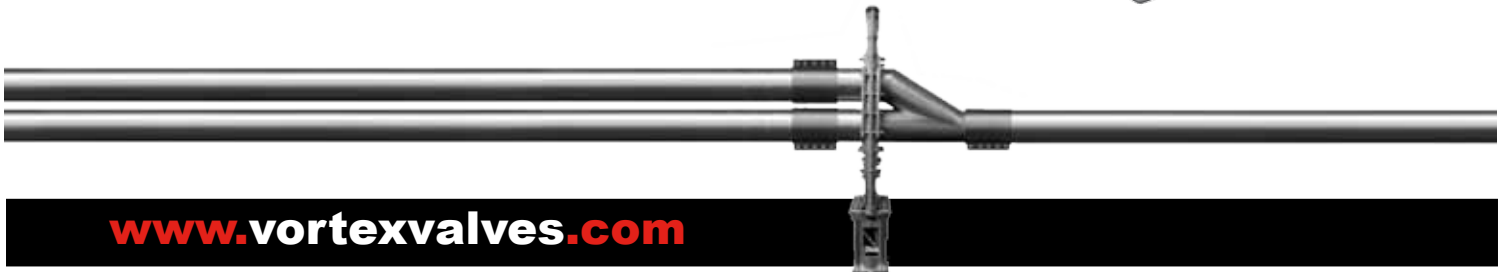
The event focuses on processes for conveying, size reduction, milling, screening, mixing or for granulating powders or bulk solids which are required for the production of chemicals and plastics as well as the areas of food and pharmaceuticals - to name just a few examples: pharmaceuticals, detergents, body care articles, cosmetics, plant protection agents, fertilizers or pesticides. But POWTECH also shows technologies for the ceramic, building material, plastic and food industries as well as solutions for explosion protection. **QL**



A Vortex Multi-Port Gravity Vee designed to divert material by gravity from one source to three destinations



Vortex Titan Series Abrasion Resistant Slide Gate



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Industry Affiliations & Events:



THE WOLFSON CENTRE for Bulk Solids Handling Technology



Powder and Bulk
Engineering



EuroBulkSystems



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From the Not-So-Serious Desk

Harold Camping, who founded Family Radio Worldwide, predicted the world would end on May 21, 2011. With the help of group followers and the World Wide Web, his Rapture prediction was spread to countries in the Middle East, Asia and Latin America. Some viewers met it with panic, some with laughter. Here are a few other predictions in history that the NSSD Editor found absurd.

World's Worst Technology Predictions:

10. Computers in the future may weigh no more than 1.5 tons.
- Popular Mechanics, forecasting the relentless march of science, 1949
9. In 1939 The New York Times said the problem of TV was that people had to glue their eyes to a screen, and that the average American wouldn't have time for it.
8. An English astronomy professor said in the early 19th century that air travel at high speed would be impossible because passengers would suffocate.
7. Theoretically, television may be feasible, but I consider it an impossibility--a development which we should waste little time dreaming about.
- Lee de Forest, 1926, inventor of the cathode ray tube
6. With over 50 foreign cars already on sale here, the Japanese auto industry isn't likely to carve out a big slice of the U.S. market.
- Business Week, 1958
5. I think there is a world market for maybe five computers.
- Thomas J. Watson, 1943, Chairman of the Board of IBM
4. This 'telephone' has too many shortcomings to be seriously considered as a means of communication. The device is inherently of no value to us.
- Western Union internal memo, 1876
3. We don't need you. You haven't got through college yet.
- Hewlett-Packard's rejection of Steve Jobs, who went on to found Apple Computers
2. Airplanes are interesting toys, but they have no military value.
- Marshal Ferdinand Foch in 1911
1. 640K ought to be enough for anybody.
- Bill Gates, 1981

Write Your Own Caption

Within the past 3 months, Britain's royalty has made headlines: *The Queen Visits Ireland... Will and Kate Marry... The Duke of Edinburgh Turns 90...* But poor Charles... What can we say? He is still the longest serving heir to the throne in British history. Create your own headline caption and send it to us at:

quantumleap@vortexvalves.com

We will choose the winner and publish it in the next issue!



Your caption here