



Quantum Leap

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

AUG-SEPT 2010:

- Tea Time at Vortex!
- Spotlight on Mike Yost
- New Vortex agent in India
- Vortex offers waterjet capabilities
- Not-So-Serious Desk has a flashback to the '70s



The Global leader in Valves for Dry Bulk Solids

Welcome to QL!

Vortex valves have the capability to handle a wide variety of dry products, with numerous material characteristics. In the last edition of QL, we focused on the range of heavy and abrasive aggregates our valves are designed to handle.



In this issue, we showcase a tea and coffee application at Taylors of Harrogate in the United Kingdom. No matter what the application, the most important aspect of a project is to ensure that we've met our customer's expectations from the initial technical discussion to the ongoing performance of our valves after installation.

Dynamic and innovative manufacturing is also another benefit our clients can expect from Vortex. Our new Flow Mach 2 Waterjet (page 5) is one example of many leading-edge machines we use to deliver solutions.

Also in this edition you find out more about Mike Yost, one of our most Senior Application Specialists, and our new agent in India, Adroit Controll.

So sit back, relax, and enjoy Quantum Leap!

Jeff Thompson, CEO & President
Salina Vortex Corporation



Vortex's Corporate Headquarters in Salina, Kansas - USA

Case History: Tea Time for Vortex's Wye Line Diverters™!

Taylors of Harrogate is one of England's leading tea and coffee merchants. The company was founded in 1886 by Charles Taylor, who had acquired a wealth of experience as a northern agent for a London tea company. He had noticed how local variations in the water supply could affect the quality of a brew, and made it his first priority to supply the most suitable blend of tea for each area. His attention to detail was soon reflected in the success of his products.



Nearly 125 years later, Taylors of Harrogate continues to expand its operations and product offering around the world. The company's success can be attributed to its focus on sourcing the world's best coffee and teas to create delicious blends.

In the autumn of 2009, Taylors collaborated with Vortex Valves to assist in improving a tea transfer system at their state-of-the-art plant in North Yorkshire, United Kingdom.

In order to reduce costs and energy consumption, four Vortex Wye Line Diverters were installed in the system, thus enabling a reduction in pipe work and the number of vacuum pumps required for each line.



Vortex Wye Line Diverters allow the vacuum transfer of loose leaf tea from a choice of two sources to two destinations.

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At the plant, the blended tea was transferred to each packaging machine by a dedicated vacuum system. The project was to combine these two systems into one, reducing the number of vacuum pumps and quantity of pipe work whilst not affecting the quality, taste or structure of the tea in any way.

Following the decision that Two and Three Way Wye Line Diverters offered the best solution, Taylors were able to test a set of four diverters on a trial basis for several weeks. At the end of this period, Taylors confirmed that the diverters were performing to expectation and placed a further order for eight more Wye Line Diverters.

Representatives of Taylors added "Dry leaf tea is a very abrasive material and we certainly valued the trial service that Vortex provided, so that we could evaluate them in use with our product. They also fitted the valves to help us get around the potential problem."

By using Two Way Wye Line Diverters in pairing together new manufacturing and packaging lines, Taylors have already reduced power consumption and noise in the production hall by eliminating three 4.3kW electric motors.

Due to Taylors' continuing growth in the UK tea market plans are in place to install more systems over the next two to three years, using Vortex valves. **QL**

Photo to the Right:

Laurence Millington, Vortex General Manager of UK & Ireland, inspects a Wye Line Diverter installation at Taylors of Harrogate located in North Yorkshire.



For more information about Vortex's Wye Line Diverters and its applications, please contact one of our global offices:

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Who's Who at Vortex

Mike Yost, Senior Sales Engineer Vortex Valves North America

Mike Yost is one of Vortex's most knowledgeable and seasoned valve application specialists. It is not uncommon for Mike to take on the company's most difficult projects, as he has worked with nearly every type of dry product on the market. Mike is based out of Vortex's satellite office in Kansas City, but provides technical advice on applications around the world.



In his free time Mike enjoys playing golf, hunting, fishing and watching movies. He is married to wife Carla and has two teenage sons, one of whom just left the family nest to attend college at Kansas State University.

The Editor of QL sat down with Mike to ask important questions covering a wide variety of sensitive topics (Okay maybe not).

What do you like the most about working at Vortex?

The close relationships with the people I have worked with over the years.

What is your fondest memory of Vortex?

The get-togethers on the Fridays after a great week in sales.

If you could be anywhere else in the world right now, where would it be and what would you be doing?

On a golf course anywhere it's warm.

If you could change one thing in the world, what would it be?

Of course world peace.

Do you have a favorite quote or phrase?

"That'll leave a mark!"

Describe your first pet.

A basset hound who slept a lot and barked at the neighbors.
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Vortex announces Adroit Control as an official agent in India

ADROITT CONTROLL is a sales and marketing organization representing globally reputed equipment manufacturers, serving customers in India and South Asia. Adroit - meaning 'skilful' 'dexterous' 'adept' 'competent' and 'nimble' - it will be our continuous endeavour for improvement in products & services through feedback analysis & corrective measures.

Adroit Control is committed to "delivering solutions" to customers with a sense of urgency and fulfilling expectations with quality products and services, while providing single-point responsibility. Our product and service portfolio includes:

- Technical Engineering Services
- Sizing and selection of process equipment
- Product consultation with our principals
- Installation
- Commissioning
- After-sales service support

The company was started by process industry professionals with over 16 years of experience in sales, marketing, and servicing of process instruments, control valves, on-off valves, and transmitters throughout India. As a team of core professionals, we intend to impart and increase the business for our esteemed principals by way and goodwill of the company, leading to mutually beneficial and long term business associations.

Adroit Control is based in Mumbai, the capital city of the State of Maharashtra. The city of Mumbai maintains a strong infrastructure including a significant international airport, harbor, highway systems, and communication links. **QL**

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delivering solutions



High Pressure System Produces Excellent Manufacturing Weather

By Monty Leach, Vice President of Manufacturing



Manufacturing solution technologies come in many shapes and classes, from the common shop tools we all are familiar with, extending to the digitally aided machines that possess truly amazing capabilities. This in itself defines the depth and how fascinating the world of manufacturing can be. Not to end there, add the requirements to process many material types, the scope of complexity of this arena can expand exponentially.

For certain one fact exists, the utilization of computer controlled machinery has become a central theme within the manufacturing vision at Vortex.....we combine innovative technologies to maintain best in class manufacturing performance.

With that thought we want to spotlight our Flow CNC (computer numeric control) waterjet cutting technology as a featured subject. Flow, with corporate headquarters in Kent, Washington, is a world leader in waterjet design. The company was founded by former research and development scientists from Boeing. Vortex installed a Flow Mach 2 machine in early 2010. From a manufacturing perspective, this technology adds new dimensions to our customer service tool set.



The Flow Mach 2 waterjet can cut metal materials, such as this chromium carbide, up to 250mm or 10" thick.

The Waterjet History Lesson

Waterjets have been around for decades dating back to the creation days of the 1950s. Waterjet technology had a relatively long development cycle however. The technology gradually evolved and really came into its own in the 1990s. And in the last ten years, waterjets have proliferated in manufacturing sectors mainly due to the decline in cost to acquire the technology.

Specifically, the Flow company has a long list of first in industry designs and accomplishments. Nearly 10,000 units are installed in over 45 countries. Unlike others waterjet OEMs, Flow is a technology development company as well as a manufacturer.

Photo to the Right:

The waterjet executes cut commands with a concentrated high pressure beam of water.



Let's Talk Nuts and Bolts

The "I can't wait to know" question is, what can a waterjet do? Perhaps the short answer would come from the inverse, what can't the waterjet do?

Versatility is definitely the waterjet's forte, while cutting speed is the trade-off when compared to Lasers or flame based systems. It is common to hear from industry players, waterjets can cut anything! A statement that is literally true.

Metals, plastics, mineral base materials are common applications along with foams and elastomers, all of which are materials commonly processed at Vortex. What really sets this technology apart from other cutting systems, such as two dimensional Lasers, the waterjet can cut metal materials up to 250mm or 10 inches. No other cutting technology can realistically come close to this capacity. Compared with a 4 kilowatt laser, that is at least a ten fold factor!

On the specialty side of things, this technology has been used to slit tissue paper for instance. And believe it or not, even Snickers® candy bars and Fig Newtons cookies are officially on the menu.

The waterjet executes cut commands with a concentrated high pressure beam of water up to 4218 kg/cm² or 60,000 psi, depending on desired speed and cut quality. Fine garnet abrasive is merged with the water beam to enhance cutting capacities. When desired water only cuts are viable.

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The cutting head moves in a bridge/gantry like arrangement through a computer program generated directly from a dxf file. What impressed us greatly is the fact that the Flow machine is surprisingly user friendly from both a programming and operational standpoint. Job orders are issued and in a few minutes the machine can begin producing finished parts. With such a short plan-to-part window, it is easy to understand how favorable the customer service potentials are.



Abe Horning, Waterjet Operator, loads the computer file for the waterjet to cut a rubber seal. The special application is supported by the red waterjet bricks.

Going Green

Waterjets if not managed well can have a large consumable footprint. This is something Vortex is not obviously comfortable with by any means. With optional accessory controls, the Vortex machine is configured to minimize water usage as much as possible. A chiller mechanism to cool the high pressure pump system was installed primarily for resource conservation purposes. This basically operates the same as the cooling system for a car engine. Without a chiller system, a great deal of cooling water would simply be discharged down the drain.

A large water holding tub is designed into the super structure of the machine. The water level in the tub is necessary to properly diffuse the cut beam as it exits the part, and the tub is the essential accumulation pool. When changing materials for processing, the tub water level must be adjusted accordingly depending on material thickness. This presented an additional opportunity to green our process. Our manufacturing team deserves credit for designing and building a custom system to manage and reuse tank water with a clever on/off loading system.

Our green initiative with the waterjet is something we are very proud of.



Cory Wellbrock, Fabrication/Weld Supervisor, showcases the water tank that employees designed and fabricated to recycle the water from the waterjet.

The Game Changer

For Vortex, the Flow machine has provided an immediate capability improvement in several key areas. In the customer service arena, overall customer product lead times will shrink. Certain items that carried lengthy outplant lead-times in terms of days, have in some cases, reduced to hours.

In short, the water jet single-handedly simplified the supply chain for entire product lines. And obviously we can expect this technology to help hold costs from inflating as well.

Other benefits are in the research and development opportunities the water jet brings. For example, when metal castings are required for development purposes, procurement often takes months. The waterjet may now be able to quickly produce the custom requirement. And not to be underscored, our Flow machine provides critical back up capability to our Trumpf Laser.

Where do we go from here?

The waterjet is just one of many technologies in our manufacturing task force, where a high pressure system has delivered perfect weather for great customer service.

There is certainly no shortage of technology subjects to display or illustrate from the Vortex manufacturing resource group. What could be the subject for next time? That is definitely an intriguing question, but if the wheel is ever reinvented it just might happen at Vortex.....we have the technology! **QL**



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Industry Affiliations & Events:



THE WOLFSON CENTRE for Bulk Solids Handling Technology



**BulkSolids
Europe 2010**



**INTERNATIONAL
Powder &
Bulk Solids**

Powder and Bulk Engineering



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Vortex's quality management system
is registered to ISO 9001:2008.

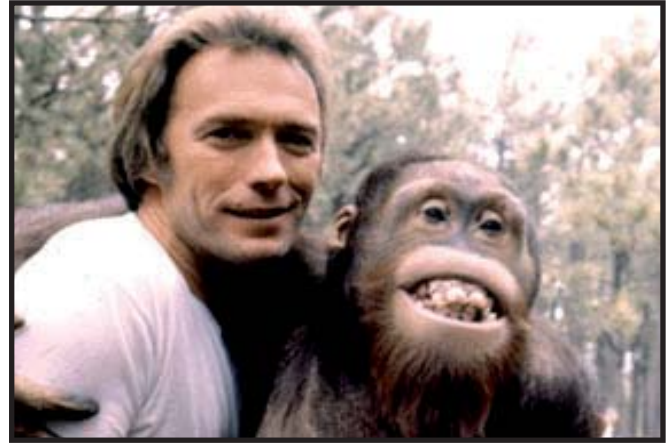
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From the Not-So-Serious Desk

The 1970s were tumultuous times...war, oil crises, economic turmoil, and strange clothing. Luckily we live in the present!

This edition of the Not-So-Serious Desk takes us back to the time of disco, leisure suits, 8 Tracks, pet rocks, Amway distributors, sea monkeys, Lite Brites, Magic 8-Balls, Charlie's Angels, nylon jogging suits, bell bottoms, shag carpet, mutton chop side burns, English Leather aftershave, black lights, paisley shirts, and afros.

So keep on keepin' on. Can you dig it?



The editor of the Not-So-Serious Desk starred as Clyde alongside Clint Eastwood in 1978's film Any Which Way But Loose

Rejected Vortex Ad of the Month!

The AMC Pacer! We may never be able to figure out why this fine automobile never survived the '70s. The three-wheeled Reliant Robin at least made until 1981 and was even revived in 1989! If it wasn't for *Wayne's World*, the Pacer could have easily been erased from memory. Unlike AMC, Vortex designed and manufactured products to live on, for example, the Vortex Orifice Gate. Good ideas never die!



Some things survived the 70s.



The Vortex Orifice Gate



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Who kicked the most tail from 1970 to 1979? Vote now!

The '70s was a time when men were men and rock ruled over disco (sorry Barry Gibb, but it did). So who kicked more tail...Bruce (martial arts master), Richard (Shaft), Steve (Bullit), Roger (007), Jack (Steelers linebacker), Gene (Kiss), Clint (Dirty Harry), or Eric (Ponch)? If you vote, you may be eligible to receive a full size poster of your favourite '70s icon (we are not joking). The winner will be announced in the next issue of QL. Submit your vote to quantumleap@vortexvalves.com. Vote now!



The June/July caption contest winner....

"It's not funny! I heard coach say white uniforms today."

Congratulations to:

**Fernando Almaguer
S & B Engineers & Constructors, Ltd.
Houston, TX - USA**

