

# W J T A

WaterJet Technology  
Association



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## Hydrodemolition In The Channel Tunnel



Conjet hydrodemolition robots removed the damaged C45 concrete to a depth of 30mm from the walls and roof of the tunnel. *See article on page 2.*

# Hydrodemolition In The Channel Tunnel, from page 1

**T**rain services through the Channel Tunnel linking Britain and France were fully restored in February 2009 following several months of repairs after a major fire in the tunnel on 11 September 2008. A lorry caught fire on a shuttle train carrying heavy goods and vehicles bound for France through the 50km long northern tunnel. The fire, which spread to other vehicles, raged for about 16 hours. The extreme temperatures of up to 1000°C caused extensive damage to about 600m of the 7.6m diameter tunnel's concrete lining, approximately 11km in from the French entrance.

The Channel Tunnel operator Eurotunnel awarded the repair contract, estimated to be between €50-60M, to a consortium of Freyssinet, Eurovia Travaux Ferroviaires and Vinci Energies. Freyssinet was appointed to look after the civil engineering work, while ETF would be responsible for track and overhead wire restoration and Vinci Energies responsible for other equipment. The technique of hydrodemolition, which uses high-pressure waterjets to remove concrete from various structures, was specified as the method to remove the fire damaged concrete. Freyssinet subcontracted the concrete removal to the specialist hydrodemolition and industrial cleaning contractor Philip Lasserat.

For the hydrodemolition part of the repair, Philippe Lasserat hired four Conjet hydrodemolition robots and pumps, together with a team of experienced operators and a project manager from Rotterdam based Doornbos Equipment, a specialist in the rental of ultra high-pressure waterjetting and vacuum equipment.



**The total area of removal of the fire damaged concrete was about 9,500m<sup>2</sup> over an approximate 600m length of tunnel, including about 350m<sup>2</sup> directly above where the fire damage was most severe.**

To meet the tight schedule Doornbos had to work three shifts around the clock and opted to use two Conjet 364s and two Conjet 322s. Conjet supplied specially modified banana-shaped feedbeams, which carry the jetting nozzle, to match the curvature of the tunnel wall.

“We had to remove the damaged C45 concrete just from the walls and roof to a depth of 30mm and managed this at an average of 650m<sup>2</sup>/day,” says Doornbos project manager Uwe Clausen. “The total area was about 9,500m<sup>2</sup> over an approximate 600m length of tunnel, including about 350m<sup>2</sup> directly above the fire where the damage was most severe. We removed



**Conjet supplied specially modified banana-shaped feedbeams, which carried the jetting nozzle, to match the curvature of the tunnel wall.**

all the fire damaged concrete in 14 working days using four robots. We had to work non-stop around the clock in three 10 hours shifts, which included an hour in and an hour out at shift change to get through all the security.” The robots were supported by 350kW and 400kW pumps operating at pressures up to 1000bar and flow of up to 240litres/min.

After the removal of the damaged concrete, Philippe Lasserat repaired and replaced fire damaged reinforcing prior to spraying on the new concrete lining. The various services and utilities were then replaced.

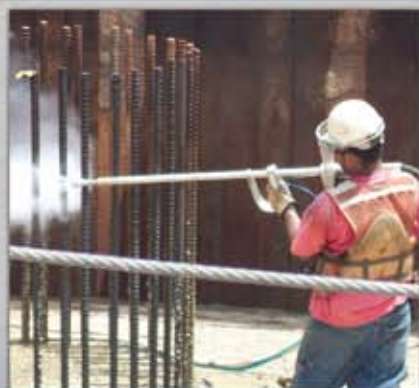
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# Eveready Energy Services Takes Part In WJTA Industrial Vacuum Seminar

Recently, over 100 employees of Eveready Energy Services took part in the WJTA Industrial Vacuum Seminar. After having some employees attend the first industrial vacuum seminar in Houston, management at Eveready felt it was important and proactive to have this seminar held at their corporate head office in Edmonton, so all of its industrial vacuum truck operators could take part.

The Industrial Vacuum Seminar continued the training courses Eveready employees receive. Previously, representatives from various industrial vacuum and high pressure water blasting suppliers have put on courses and training seminars for Eveready employees. Eveready Energy Services has over 350 pieces of high pressure water blasting, industrial vacuum, and CO2 blasting equipment located throughout North America.

Continuous education and training of its employees is how Eveready

is able to run such a large fleet of industrial cleaning equipment. "During this temporary economic downturn, training and education will be the keys to sustainable growth," states Eveready Vice President Wally Dumont. Eveready is using this economic slowdown as an opportunity to actually grow its employee base and increase its training programs for its employees. This is somewhat rare thinking when many companies are downsizing. "Companies best prepared to 'absorb a punch' from economic slowdowns are those with well trained and educated employees," echoes Rick Hein, manager of industrial services for Eveready Energy Services.



By taking advantage of training expertise available from the WJTA and other companies within the WJTA, Eveready has positioned itself favorably for today and the future.

## Discounted Airfares Through Jet Blue For 2009 WJTA Conference And Expo

**W**JTA has arranged with Jet Blue a special 5% discount off Jet Blue airfares booked online at [www.jetblue.com/promo](http://www.jetblue.com/promo). If Jet Blue flies from your city, visit [www.jetblue.com/promo](http://www.jetblue.com/promo), and enter WJTA group code WJTA09 and check flight information.

Airline prices in general have been coming down. If you already booked your flight, you may be able to rebook at a lower fare. Check with your travel agent, the airline web sites, or reseller websites (e.g. Orbitz).

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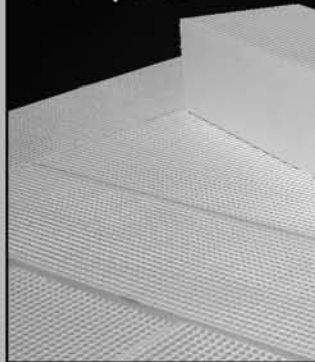
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# Meet The Candidates For The WJTA Board Of Directors

**BILL GAFF** is vice president of strategic sales for the Environmental Solutions Group of Federal Signal Corporation, Streator, Illinois. Mr. Gaff has worked in the environmental industry for over 27 years starting out as a service technician at Peabody Myers, which was subsequently purchased by Federal Signal and renamed Vactor Manufacturing. Mr. Gaff has held various management positions, including vice president of sales and marketing at Peabody Myers, president of Vactor Manufacturing and Vactor/Guzzler, president of the air and water group of Federal Signal, and vice president of sales and marketing of industrial products of the environmental group of Federal Signal. Mr. Gaff has a bachelor's degree in finance and business administration from Illinois State University. He currently serves on the WJTA Board of Directors.



**Mission/Vision:** In my first term on the WJTA board, we have made some significant advances in expanding the services we offer our membership to include the industrial vacuuming industry as well as the waterblasting industry. I see the WJTA becoming even more progressive in defining and sharing industry standards and best practices in the waterblasting and industrial vacuum industries. I also see this organization's role expanding its scope to additional adjacent industries in which WJTA members also do business. This defining and sharing of best practices will help improve the safety of its members' industry as well as reduce operating costs such as legal, insurance, and training costs. The WJTA can also provide operational, training and safety guidelines for smaller companies that do not have the size or staff to ensure that their training and safety practices provide their workers with the safest work environment possible.

**Nominated by:** Bill McClister, Veolia Environmental Services, Baytown, Texas.

**MOHAMED HASHISH, Ph.D.,** is senior vice president of technology at Flow International Corporation, Kent, Washington. Dr. Hashish joined Flow Industries in 1979 as a research scientist, and in 1980, he invented the abrasive waterjet process. Dr. Hashish is an expert



in the areas of high pressure design and tribology. He has developed new concepts in ultrahigh-pressure seals for high-pressure pumps (60,000 psi), high-speed rotary joints, hand held tools, and quick-change nozzles. Most recently, Dr. Hashish led a team that developed 100,000 psi food sterilization systems for semi-continuous and batch processing. Dr. Hashish holds 16 patents in the areas of waterjet cutting and high pressure. He has published over 200 papers in industry journals and proceedings and edits proceedings for WJTA and for the American Society of Mechanical Engineers (ASME). Dr. Hashish received the WJTA Pioneer Award and the first WJTA Technology Award presented. He also received the Hetenyi Award for best paper from the Society of Experimental Mechanics. Dr. Hashish graduated from the Mechanical Engineering Department, Alexandria University, and obtained his Ph.D. in mechanical engineering from Concordia University. Dr. Hashish currently serves on the WJTA Board of Directors and is the editor of the 2009 WJTA Conference Proceedings.

**Mission/Vision:** To maintain the WJTA as the world premier society; to spread the waterjet technology awareness in a wide range of industries; to maintain and enforce the quality of the society's conferences and proceedings; to spread the awareness of the technology and dissemination of new developments in waterjet technology to jobshops and contractors; to interact and collaborate with other societies to promote and extend waterjet technology; and to examine the affordability and costs associated with WJTA conference attendees to attract new blood into the society.

**Nominated by:** M. Ramulu, Ph.D., University of Washington, Seattle, Washington.

**HUGH B. MILLER, Ph.D.,** is an associate professor in the Mining Engineering Department at the Colorado School of Mines (CSM). Before joining CSM in 2005, he taught for six years at the University of Arizona and was the director of the San Xavier Mining Laboratory and co-director of the International Center for Mine Health, Safety, and Environment. Prior to entering academia, Dr. Miller worked 13 years for several engineering and mining companies, including five years as director of operations



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## Meet The Candidates For The WJTA Board Of Directors, from page 6

for International Engineering Technology, Inc. and their waterjet research group, IET Jet Technology, Inc. Dr. Miller has served on the boards of several companies and has over 18 years of experience in waterjet technology and hydro-excavation. He currently conducts waterjet research in applied applications associated with mining, mineral processing, petroleum extraction, and heavy construction. Dr. Miller received his undergraduate and graduate degrees from the Colorado School of Mines. Dr. Miller currently serves on the WJTA Board of Directors and on the 2009 WJTA Conference Committee.

**Mission/Vision:** I have had the distinct pleasure of serving on the WJTA Board for the last four years. Over that time, I sincerely believe that the organization has made significant strides towards achieving a number of key objectives related to growth, financial security, improvements in the quality and breadth of member services, and the advancement of this unique technology in a multitude of industry sectors. The mission of the WJTA has always represented a diversity of interests that have capitalized on the broad-based appeal of the technology, extending from research and academic institutions to end-users and equipment manufacturers. The strength of the organization is that it brings together all these diverse groups into a common, collaborative environment that is beneficial to all. As a board member, I would like to continue to work on encouraging the safe introduction of the technology into new applications, promoting the development of innovative equipment and processes, improving services to existing members, and finding ways to enhance the appeal of the organization to potential new constituents.

**Nominated by:** Grzegorz J. Galecki, Ph.D., Missouri University of Science and Technology, Rolla, Missouri.

**GARY NOTO's** career in waterjetting and the industrial vacuum business began in 1978 as an administrator and technician for Hydro-Services, Inc. in Baton Rouge, Louisiana. He served as the New Orleans and later southeast region operations manager. Mr. Noto performed the first automated rotary tube lancing job for DuPont Pontchartrain in a hazardous environment. He developed business relationships including contract negotiations



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## 2009 American WJTA Conference & Expo

August 18-20, 2009

Marriott Houston Westchase • Houston, Texas

### Preliminary Schedule of Events

(as of 5/1/09)

#### MONDAY, AUGUST 17, 2009

12:00 Noon	Board of Directors Meeting
6:30 p.m.	Board Dinner

#### TUESDAY, AUGUST 18, 2009

8:00 a.m.	Pre Conference Seminars <ul style="list-style-type: none"> <li>• Basics &amp; Beyond</li> <li>• Vacuum Equipment Safety Seminar</li> </ul>
5:30 p.m.-7:00 p.m.	Welcome Reception – Exhibit Hall A

#### WEDNESDAY, AUGUST 19, 2009

8:00 a.m.-10:00 a.m.	Live Demonstrations
10:00 a.m.-4:30 p.m.	Boot Camp
10:00 a.m.-5:00 p.m.	Exhibits – Hall A
10:00 a.m.-7:00 p.m.	Exhibits – Hall B
1:00 p.m.-5:00 p.m.	Paper Presentations
5:30 p.m.-6:00 p.m.	Awards Presentation – Rose Garden
6:00 p.m.-7:00 p.m.	Cocktail Reception – Exhibit Hall B

#### THURSDAY, AUGUST 20, 2009

8:00 a.m.-10:00 a.m.	Live Demonstrations
10:00 a.m.	General Membership Meeting
10:00 a.m.-1:30 p.m.	Exhibits – Halls A & B
10:00 a.m.-1:30 p.m.	Boot Camp
1:00 p.m.-5:00 p.m.	Paper Presentations

# Algona, Iowa-based Company Supplies Custom Floor Matting To Major Retailers And Commercial Properties

You have probably walked all over Sbemco International Matting by Design's work. You may have even wiped your shoes off on it. But that is A-Okay with them.

Sbemco, which does business as Matting by Design, is the nation's largest manufacturer of custom and designer commercial floor matting products for retail store entryways and commercial properties. Its products complement the décor of high-end commercial buildings and protect the floors of just about every major retail store around the world, including Target, Kohl's, Bloomingdales, Macy's, Nordstrom and Saks Fifth Avenue.

A classic American success story, Sbemco started out in 1986 as a small part-time venture in co-founder Brian Buscher's basement in rural Algona, Iowa. Buscher was hard at work as a carpet installer when he started a side business hand-cutting logos and designs into floor mats. Eventually his innovative work caught the eye of Target Corporation and Sbemco catapulted to success, moving out of the basement to a small leased facility, which it outgrew within four years.

In 1993, the company relocated to a 30,000 square foot facility in Algona which has been expanded four times to its present size of 75,000 square feet. The company has grown sales every year since its inception and now has 33 employees and branches in Boston, St. Louis, Tampa, Chicago, Minneapolis and Bemidji, Minn. It does business in 49 states and in several countries abroad. As of August 2008, Buscher estimated that this year alone his company has cut more than 25 miles of 12-foot-wide matting.



**This custom entry mat for a commercial property at 150 East 58<sup>th</sup> Street in New York City picks up on the entryway's architectural details, including the floor tile design and elements from the entrance doors.** Photo courtesy of Sbemco International Matting by Design.

Buscher says his company sets itself apart from its competitors by offering higher quality and attractive matting that is breathable and slip resistant thanks to its signature pink and blue proprietary backing and one-of-a-kind system that laminates this backing to polypropylene and nylon surface yarns. It also is able to offer intricate computer-generated designs that it cuts on a Jet Edge ultra-high pressure waterjet system.

Some of Sbemco's notable projects include matting at the Plaza Hotel in New York, a massive 22-feet by 72-feet mat for U.S. Steel and a 40-feet by 40-feet bulls-eye shaped matt for Target's corporate headquarters in Minneapolis.

Two projects that Sbemco is especially proud of include a project at 580 California Street in San Francisco and matting for Sak's Fifth Avenue that features its new logo.

"Five-eighty Cal had several hundred small pieces cut into it," Buscher says. "Some pieces were

just bigger than a nickel. The accuracy of the waterjet cut (fit and finish) allowed us to build a mat that we could have designed in the past, but never built. The new Sak's logo is extremely complex in the number of cuts and how many of the pieces taper to such a sharp point. The Jet Edge allows us to cut the fabric without any stretching which was an issue when we cut by hand and also is an issue with any mechanical cutting system that relies on the blades having contact with the surface of our fabric. The last new Sak's mat was just shipped to Dubai."

In 2000, Buscher boldly modified his business plan to capture the lucrative architectural and property management markets in addition to his bread-and-butter retail market. He added the name "Matting by Design" to better convey Sbemco's unique ability to produce stunning work-of-art matting that is in keeping with a property's architectural details and interior design. He also began selling his products directly rather than through distributors so he could work more closely with his customers to better understand and meet their needs.

"Since we sell direct, we are constantly interfacing with customers to find out their future needs," Buscher says. "Based on that model, they have helped us create new products to expand current markets and even help us create whole new markets."

Buscher noted that his continued growth and entrance into the architectural and property management market was made possible largely by his decision to invest in his first

(continued on page 18)





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# Removing Storage Tank Floors With A Cold-Cutting Waterjet System

**S**afe-Cut, a mobile cold-cutting service that specializes in safely and efficiently removing petroleum storage tank floors with ultra-high pressure waterjet, announced today that it has acquired a second Jet Edge-powered RAGWORM® robotic waterjet cutting system to meet a growing demand for its services.

Based in Kilgore, Texas, Safe-Cut is a sister company of Mass Technology Corporation Company, a leading provider of precision leak measurement for above (AST) and underground (UST) fluid storage tanks. Safe-Cut provides mobile waterjet cutting services to storage tank contractors and builders throughout North America. It is the only contractor in North America that offers storage tank waterjet cutting services using the patented RAGWORM robotic system developed by Jet Set Hydro Technics B.V. of the Netherlands.

Safe-Cut's RAGWORM waterjet cutting system is part of a totally self-contained rig that does not require an outside water supply or power. It uses 46,000psi. (3,200 bar) abrasive waterjets (ultra-high pressure waterjets mixed with abrasive garnet) to cut tank floors into easily removed sections without the risk of explosion or creation of toxic fumes associated with traditional cutting methods such as oxyacetylene torches. The RAGWORM crawls along the bottom of a tank and cuts away sheet after sheet of steel plate. It also can ride along the side of the tank and separate the walls from the floor and roof. RAGWORM can quickly cut through ¼-inch (6mm) carbon steel at an average speed of 125 feet per hour (38 meters/hour) per cutter and easily cut through floors in excess of 1-inch thickness. According to Jet Set Hydro Technics, the RAGWORM

cuts at least five times faster than cutting with torches and 30 times faster than cutting with gouges.

The robotic cutter is powered by a 46,000 psi (3,800 bar) diesel waterjet intensifier pump manufactured by Jet Edge, Inc., of St. Michael, Minnesota. Using only one gallon (four liters) of water per minute, the cutter has minimal impact (2 inches or 5cm) on the underlying terp (tank industry term for foundation). It requires as few as two operators, one monitoring the diesel-generated power-pack and Jet Edge waterjet intensifier pump located outside the tank, the other controlling the cutter unit within the tank.

Jimmy Wolford, Safe-Cut's vice president of operations, says his company's business has been booming since it first started offering mobile waterjet cutting with the RAGWORM system in 2007. In its first year of business, Safe-Cut already has completed a dozen large contracts and expects to see continued growth as word spreads about its unique mobile waterjet cutting service.

"People in the industry have been very impressed," Wolford says. "Their response to the system is that it is the best they have ever seen and they all say 'why haven't we been doing this before.'"

"The safety aspects speak for themselves," Wolford continues. "In the refinery industry, industrial safety is a large issue. Torches generate fumes and noxious gases. When you have tanks with hot bottoms that have leaked, there's no risk of fire with waterjet cutting. When you're cutting with torches, you have a large risk of fire or even explosions.



The conventional methods of cold cutting without heat, such as using air chisels or hand-held waterjet cutters, are extremely labor intensive. We are faster, safer and cleaner with less manpower."

In addition to being safer than torches, waterjet cutting also is much more efficient because waterjets can cut through multiple layers of steel plates and epoxy or fiberglass liners all in one pass, Wolford adds. When using a torch, the liners must be painstakingly blasted away or delaminated from the steel plate prior to cutting.

Wolford says his customers have been surprised by the RAGWORM system's efficiency and minimal water and garnet usage.

"Eastman Chemical called us to get a quote on a 52-foot diameter chemical tank with a potentially hot bottom. After we gave them our estimate, they asked how much water and garnet we would use and how long it would take us. We told them one day, less than 500 gallons of water and less than 1,000 pounds of garnet. They were very skeptical at first because other companies that quoted the project said it would take two days, require 10,000 to 12,000 gallons of water and three

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## Removing Storage Tank Floors With A Cold-Cutting Waterjet System, from page 10

to four tons of garnet. We got the job and they wanted us to prove it so we put 500 gallons of water in our tank. At the end of the day, the bottom plate was cut into 6-foot by 20-foot sections and ready for removal with just 375 gallons of water and 800 pounds of garnet.

“On a typical day, we can cut ¼-inch plate at a rate of 25 to 30 inches per minute per cutter. We typically operate with two to four active cutters. We use less than one gallon of water per minute per nozzle. We can run up to four nozzles, so that is a max of four gallons per minute.”

In another project, Murphy Oil asked Safe-Cut to remove a floor from a 210-foot diameter crude oil tank after another contractor was unsuccessful in cutting through the steel plate floor and sidseshell. The floor plate was ¼-inch while the side shell plate was in excess of two inches.

“The other contractors had worked on it for three or four weeks with limited success,” Wolford says. “We completed the project in less than five days.”

“We have been very satisfied with the RAGWORM system and the Jet Edge waterjet pump,” he says. “The performance on both has been very good. We have had no problems.”

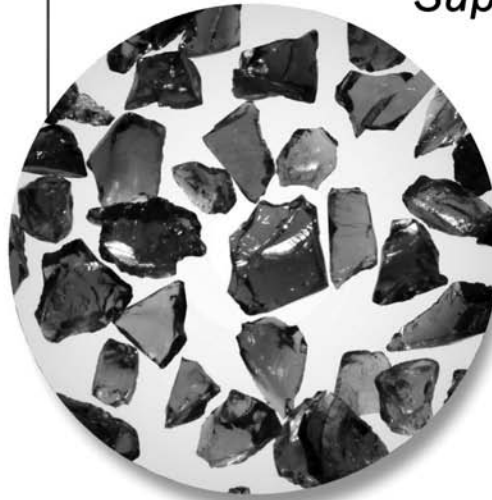
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## Recommended Practices Under Review

A subcommittee of the WJTA Safety Committee has been formed to review and update the *Recommended Practices for the Use of Manually Operated High Pressure Waterjetting Equipment*. In addition to a review of the current content, the committee will also discuss a new section that will address recommended practices for the use of automated waterjetting equipment.

Please submit your comments or suggestions for revising the *Recommended Practices* to: WJTA Safety Committee, 906 Olive Street, Suite 1200, St. Louis, MO 63101-1448, phone: (314)241-1445, fax: (314)241-1449, email: [wjta@wjta.org](mailto:wjta@wjta.org), website: [www.wjta.org](http://www.wjta.org).

# Deburring With Waterjets

Waterjets, especially abrasive waterjets, have been known for their versatility and effectiveness in cutting and drilling applications in today's machine shops. A review of an article of 25 years ago by Thiel et al.\* serves as a reminder that waterjets can also be effective tools for deburring applications.

This article reported three types of waterjet systems that can be used in deburring applications, categorized by pressure ranges into: wet blasting, waterjetting, and jet cutting.

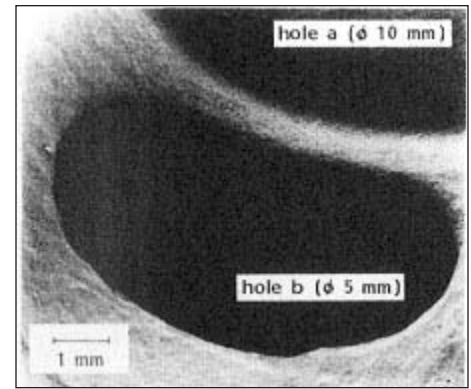
Systems with low pressure (60 psi) and very high flow rates (up to 260 gpm) of water-abrasive mixture were typically used for wet blasting. Compressed air can also be added to create an effect that atomizes the water. Abrasives, preferably silicon carbide, corundum, or glass beads, of 10 to 150  $\mu\text{m}$  in size, do the machining work while the water tends to dampen the abrasive impacts and produces a gentler machining effect than sand blasting. A relatively small nozzle diameter was favored for rounding the edges. Wet blasting is typically used for removing fine burrs resulting from grinding operations.

Waterjetting was referred to processes involving pressure under 15 kpsi and relatively high flow rate, with or without abrasives. Waterjets at this level of pressure are capable of breaking off burrs even without abrasives, very suitable for removing large-size burrs that can be easily broken of, especially suitable for these scenarios: (1) burrs in small openings; (2) internal burrs; (3) burrs in workpiece cavities. Because of the large jet force, proper clamping of the workpiece must be used. Fan-jets have a lower efficiency and a lower impact force per unit area than round-jets and are used only when their wider

span can be justified (e.g. cover the entire workpiece in a single pass). When abrasives are added, the jets are capable of erosive working, even of the edges of hardened steels. Shown in the picture is a deburred edge between two crossing holes.

When the pressure is high enough (e.g. 56 kpsi), the jet is capable of cutting (typically non-metallic materials) and therefore is very suitable for deburring plastic and rubber parts by cutting off the large burrs. Process parameters should be set such that burrs are removed by the kinetic energy of the jet while no damage is made to the nearby surfaces of the workpiece. When abrasives are added, the jet will be capable of cutting metallic materials and can be used to remove thick burrs, typically of parts from castings.

In the concluding section of the article, the authors emphasized that



among the several possible waterjet deburring processes, only one is optimal for a specific deburring application. This article did provide some useful guidance in the process selection.

\*Thiel, R., Przyklenk, K., & Schlatter, M. (1984) Deburring with water, Proceedings of the 7<sup>th</sup> International Symposium on Jet Cutting Technology, Ottawa, Canada, June 26-28, 1984, pp 337-352.

Reprinted by permission from Quality Waterjet Newsletter, January 20, 2009.

## Terydon Tooling And Systems

Terydon, Inc. has taken it upon itself to place the highest level of emphasis on the safety detail of its tooling and systems. Terydon has made safety the center of its systems and tooling development. As a result, the RSV-60 valve is now the only bimodal or multimodal valve with an E-stop mechanism, complete for user safety. In conjunction with Terydon's principles of safety and special-need design, the RSV-60 valve also mirrors a long-lasting quality that has been proven to last hundreds of hours typically before rebuild. Three easily replaceable components minimize downtime and increase efficiency at the same

time. Rugged, durable, safe, and weighing only 50lbs, the tumblebox is pneumatically operated to perform at **10-55K PSI**. The air-powered control and remote valve set up similarly affect the on/off regulation of both the high water pressure and the mechanics of the tool itself. Furthermore, pumps requiring remote valving or a conjunction of multiple tooling with additional multimode valves are assisted by the RSV-60.

For more information, contact Terydon, Inc., phone: (330)879-2448, fax: (330)879-2643, Web: [www.terydon.com](http://www.terydon.com).

# Guzzler Launches Guzzlergrip Nozzles To Reduce Worker Fatigue And Increase Productivity

At the 2009 International Pumper & Cleaner Environmental Expo, Guzzler Manufacturing launched its new line of GuzzlerGrip™ nozzles for industrial cleaning applications. The new nozzle line includes specially designed easy-lift, backbone, shovel, flat shovel, long-reach and pit cleaning nozzles made to fit four- and six-inch hoses.



Tony Fuller, director of sales, says that the new GuzzlerGrip nozzles come with carefully designed handles, harnesses and nozzle ends that together help reduce worker fatigue by making handling of the vacuum hoses easier and more efficient. “Most of the nozzles are fabricated out of lightweight aluminum. A few, including the long-reach configuration, also incorporate steel for extra durability, especially in highly abrasive materials,” he says.

Philip Harbin, president of Harbin Services and one of a select group of cleaning contractors who tested the new nozzles says, “Until now, the industry standard for lifting and directing hoses has been broom handles and duct tape. We all know that industrial cleaning is a dirty business, but the people who do it and do it well are hard-working professionals. Because good operators are hard to come by, anything we can do to make their jobs easier is a benefit.”

Harbin noted that the new GuzzlerGrip™ nozzles are good for

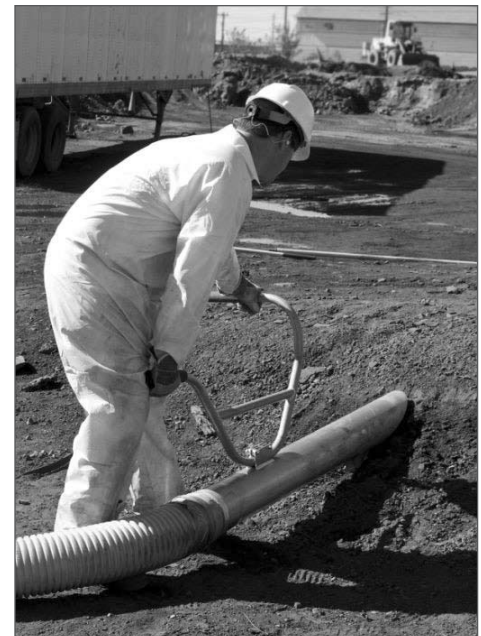
the operator because they’re easier to handle, which means less fatigue and less likelihood of injury. “Because the new nozzles and handles are made of lightweight aluminum built for the application, we are less likely to see the kind of breakage common with broom handles and duct tape,” he says. “More than that, we appreciate that these new nozzles

allow us to appear more professional on the job. And that increases the perceived value of the work we do for our customers.”

Fuller says, “We used input from customers like Harbin Services to improve the GuzzlerGrip nozzle offerings prior to production. One example of a change we made is in the easy-lift nozzle. We adjusted the positioning of the handles and the harnesses based on customer feedback. The goal of the GuzzlerGrip Nozzle line is to make life better for the person on the end of the hose, and we’ve done that.”

Harbin says he is sure his team will be using the GuzzlerGrip easy-lift nozzles. “Between the harness and the handles and the special angling of the hose, we know we’ll be able to get more done and do it with greater ease than before.”

The new line of GuzzlerGrip nozzles is available through FS Solutions locations across North America and online via [www.fssolutionsgroup.com](http://www.fssolutionsgroup.com). For more information about these or other Guzzler products, visit [www.guzzler.com](http://www.guzzler.com) or call (800)627-3171.



## Meet The Candidates For The WJTA Board Of Directors, from page 7

with numerous local and national refineries and petrochemical plants. Upon the company being acquired by HydroChem, Mr. Noto served as company safety director, manufacturing support services, region manager, and finally company president and chief operations officer. His career with Hydro-Services/HydroChem spanned 24 years, during which the company's revenues grew from \$10 million to \$225 million per year. Mr. Noto's accomplishments include team involvement in numerous safety and technology innovations. For the last five years, Mr. Noto has been employed with Veolia ES Industrial Services, Inc, as executive vice president and chief operations officer. Mr. Noto's focus and accomplishments continue in the area of safety and technology as well as business development.

**Mission/Vision:** My mission as a WJTA board member will be to continue the current growth cycle and evolution of the WJTA. The current membership body is mostly comprised of those representing the research and development sector, equipment, tooling and cleaning contractors. The group that is missing is the end user – the chemical plants, refineries, steel mills, power plants and other industries that require the use of waterjets and vacuum equipment in their facilities on a daily basis. The WJTA, as the safety and best practices standard bearer for the waterjetting and industrial vacuuming industry, has significant value to these end users. As a WJTA board member I will use the relationships built over my 30 years of service to our industry to draw this group to the WJTA.

**Nominated by:** Bill Gaff, Vactor Manufacturing, Streator, Illinois.

### **GEORGE A. SAVANICK, Ph.D.,**

is a founding member of WJTA and has served on the Board of Directors since the Association was founded in 1983. He presently serves as association president, the chairman of the Waterjetting Safety Committee and the editor of the association publication, *Jet News*. He has received the WJTA Service Award and the WJTA Pioneer Award. He specialized in



hydraulic mining research during a long career with the US Bureau of Mines. Since retiring from the Bureau of Mines, Dr. Savanick has been a consultant in hydraulic mining and waterjetting safety. He holds a Ph.D. from The Pennsylvania State University and resides in Apple Valley, Minnesota.

**Mission and Vision:** My vision for the WJTA is that the membership will be composed of people interested in all the various aspects of waterjet technology and that there will be an open exchange of information among members. I want members to learn from each other and thereby advance the art and science of waterjet and vacuum truck technology. I am particularly interested in facilitating this exchange of knowledge by producing Codes of Practice (especially safety) and the periodical *Jet News* and making them available to the public both in print and electronic media.

**Nominated by:** Grzegorz J. Galecki, Ph.D., Missouri University of Science and Technology, Rolla, Missouri.

### **SHAWN S. SMITH**

is vice president of sales and technical support for Under Pressure Systems Inc., New Philadelphia, Ohio. Mr. Smith has been in the ultra high pressure waterjet industry for 18 years. He began his career with Valley Systems Inc. in 1991, followed by HydroChem Industrial Services. In April 2004, Mr. Smith joined Under Pressure Systems where, with his knowledge of pumps and customer relations, he increased company sales.



**Mission and Vision:** My mission is to expand waterjet technology, waterjet safety and to be dedicated to the water blasting industry by committing to improve the performance, function, and abilities of waterjetting equipment, by maintaining a solid safety standard with the safety of the end user in mind and by giving technical support to the water blasting industry, whenever needed. I also want to help create a larger, stronger WJTA, allowing waterjet business to grow and expand, here in the USA and internationally.

**Nominated by:** Eugene R. Valentine, Under Pressure Systems Inc., New Philadelphia, Ohio.

The *Jet News* is published by the WaterJet Technology Association (WJTA) and is a benefit of membership in the Association.

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(continued on page 16)

# Conference Exhibitors At The 2009 American WJTA Conference And Expo

August 18-20, 2009 • Marriott Houston Westchase Hotel • Houston, Texas

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KMT Waterjet Systems/KMT Aqua-Dyne/  
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## Meet The Candidates For The WJTA Board Of Directors, from page 14

**B.T. STEADMAN** currently serves as managing member of Vacuum Truck Rentals, LLC, one of the largest fleets of industrial vacuum loading equipment in North America. Mr. Steadman is an active member of the WJTA and currently serves on the Board of Directors. He is also an active member of the National Tank Truck Carriers (NTTC), Mississippi Trucking Association (MTA), Associated Builders and Contractors (ABC), Truck Renting and Leasing Association (TRALA) and some civic organizations. Mr. Steadman is an Eagle Scout and graduated from Mississippi State University with a degree in finance.



**Mission/Vision:** My mission for WJTA is to continue my work on the Board of Directors as it pertains to seeking new members from the industrial contractor market, increasing safety awareness through the promotion of the *Recommended Practices* manual and seminars and further development of the conference.

**Nominated by:** Bill McClister, Veolia Environmental Services, Inc., Baytown, Texas.

**MIKE VANDEN HEUVEL**, (photo not available) became the president and CEO of Super Products LLC, January 1, 2009. Mike joined Super Products in November of 2008 after leaving Miller Electric Mfg. Co. where he was vice president and general manager for the Construction Welding Products Group. Mike comments his vision for Super Products; “along with continuing to be recognized for the exceptional quality and practical innovation of our products we want to showcase our unmatched drive to impress every customer, every time.”

**Mission/Vision:** I'd like to advance the work of the WJTA in the area of safe vacuum truck operation. I'd encourage an even more aggressive agenda to promote awareness of and compliance with best practices and guidelines governing safe vacuum truck operations. Despite some very good work and sincere commitment on behalf of the WJTA and key contributors, I feel safety falls short as an industry priority. I'd also like to see the WJTA be the catalyst to make vacuum trucks safer and easier to use for operators by having

the industry manufacturers adopt universal terminology and symbols for all user interface controls, operator's manuals and service manuals. Grass roots support would come from our customers who would benefit from lower training costs, increased productivity and overall lower operating costs. Finally, I think the WJTA could become a vehicle for our industries businesses to advance and influence industry friendly legislative agendas in Washington. For lack of a better descriptor, the WJTA could be a watch dog of sorts alerting our industry and members of pending legislation, government grant opportunities, and likely “hot bed” emerging issues. An example might be increased consideration for vocational trucks for stationary use versus trucks used for transport in the areas of meeting Federal excise tax laws, IFTA fuel regulations and DOT licensing and reporting.

**Nominated by:** Forrest Shook, NLB Corporation, Wixom, Michigan.

An official ballot listing the eligible nominees will be forwarded by mail to all eligible voting members of the WJTA on **May 28, 2009**. Signed and executed ballots must be mailed to the WJTA office for tallying by **June 25, 2009**. Election results will be announced in the *Jet News* and on the WJTA website.

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FROM ACCUSTREAM

A large industrial waterjet machine with a white top and black frame. The brand name 'AccuStream' is visible on the top and side. A model number 'AS-60150' is on the right side. The machine has various control panels and a large nozzle assembly on top.



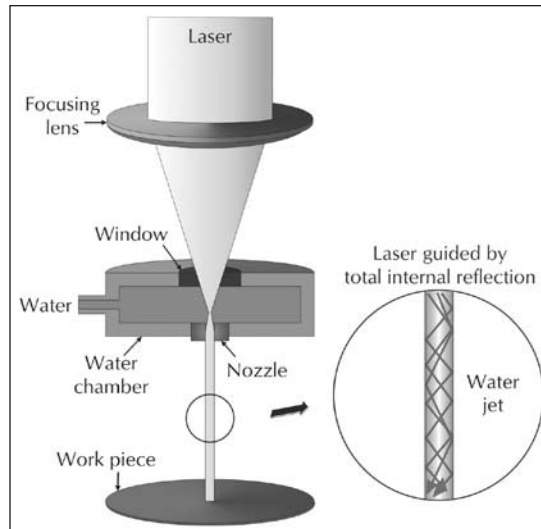
# Synova Laser MicroJet® Waterjet-guided Laser Cutting Systems

For the first time ever, it is possible to combine the advantages of both water and laser cutting in one operation. Utilizing the difference in the refractive indices of air and water, the technology behind Laser MicroJet® creates a laser beam that is completely reflected at the air-water interface.

The laser is, therefore, entirely contained within the waterjet as a parallel beam, similar in principle to an optical fiber.

This lack of deviation is maintained through and beyond the work piece, facilitating the accurate cutting of porous or layered materials, all with minimal thermal and structural distortion, leaving a fine cut edge. Its advantages outweigh both high-pressure waterjet cutting and conventional laser cutting.

The conventional focused laser beam has a limited working distance of just a few millimeters due to beam divergence. As a result, the conventional laser generates a heat-



Laser Microjet Principles

affected zone in the material causing damage. Contamination is also an issue as the molten material is not expelled.

Laser MicroJet® technology employs a laser beam which is completely reflected at the air-water interface, where the beam can be guided over a distance up to 10 cm. The waterjet cools the substrate while removing the molten material from the cut and avoiding contamination.

The waterjet releases a low pressure stream of water, generating virtually no force on the work piece, thus allowing trouble-free processing of very fine materials.

The gentle water stream reduces contamination to a minimum as ablated material is removed by the water, leaving the cut area clean and clear from debris.

Unlike conventional laser cutting where thermal distortion is a problem, the cut is cooled by the waterjet between laser pulses, producing what is effectively “cold laser cutting.” This method significantly reduces deformation and heat damage, allowing the material to retain its original structure.

With Laser MicroJet®, complex 3-D cutting is possible because of its long working distance and fiber-like transmission. Laser MicroJet® can be used effectively with complex profiles and contours where normal access would be impeded or impossible.

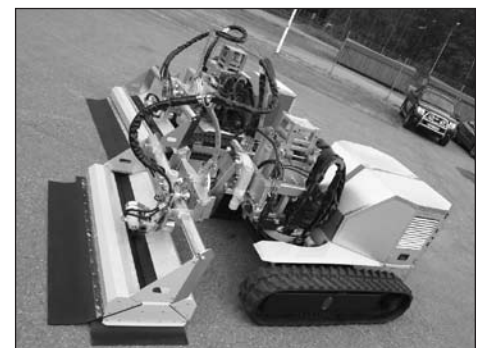
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## New Hybrid Hydrodemolition Robot

A new diesel/electric-powered hybrid hydrodemolition robot introduced by Aquajet Systems offers a wide range of new features, including pollution-free operation in enclosed areas in electric-mode. Simple ‘switchover’ operation ensures easy change to diesel power eliminating, for example, the need for electric cables. In electric mode, a ‘slow start’ electric motor ensures initial reduced operation accepting full load in up to five seconds, thereby preventing power surge failures.

Featuring an optional extended mast height of up to 9 m, the new robot is 20% larger than conventional models and offers larger, adjustable tracks to provide a variable width of between 1.5 – 2.0 m for increased stability if required. The hybrid model also incorporates a new type of steering drive to turn and twist the unit powerhead at the increased heights to provide improved precision.

For more information, contact Aquajet Systems, email: [aquajet@aquajet.se](mailto:aquajet@aquajet.se), web: [www.aquajet.se](http://www.aquajet.se).



## Algona, Iowa-based Company Supplies Custom Floor Matting To Major Retailers And Commercial Properties, from page 8

Jet Edge precision waterjet cutting system in 1996. Sbemco's original 13-foot by 20-foot Jet Edge system enabled the company to drastically increase productivity by cutting its matting with a supersonic CNC-controlled waterjet that is created by pressurizing water up to 55,000 psi with an intensifier pump, then forcing it through an orifice as small as .005 inch.

Before installing its first waterjet system, Sbemco used paper templates and hand cut its designs with carpet knives, a time-consuming process that limited creativity. Now it can easily cut precise computer-designed details that would have been impossible or impractical to cut by hand.

"When we got our first Jet Edge, it was specifically to speed up production and we realized the quality and accuracy would go up," Buscher recalled. "Later, we realized that we could expand our offerings. With the waterjet, the amount of detail we can do is higher than what everyone else can do and we can do it a lot faster. It also gives us the opportunity to do more complicated jobs that we would have had to turn away. Details that were too hard or impractical to cut by hand before are now easy with the Jet Edge. The accuracy allows us to also cut pieces much smaller than we ever could before. The Jet Edge

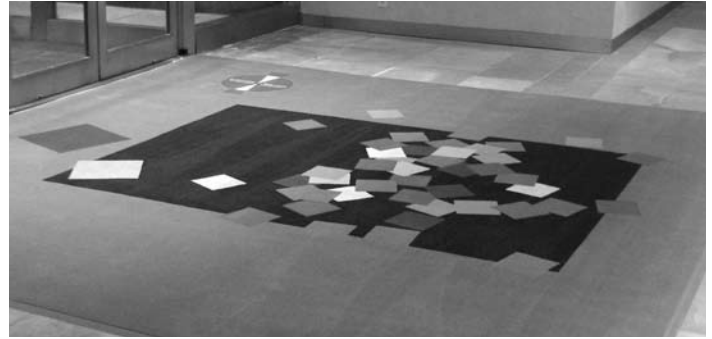
allows us to cut intricate pieces with remarkable accuracy and speed. The use of water means we are not using mechanical blades that can stretch our fabric. Laser systems are not an option because of the melting issue."

Jeff Grandgenett, one of Sbemco's two waterjet operators, noted that productivity shot off the charts after the company installed its first Jet Edge.

"When I started we had as long as an eight week production time. Now within three weeks, a project that could include dozens of mats is shipped out the door. We don't even hear the word 'overtime' anymore."

Since adding waterjet cutting capabilities, Sbemco has increased sales every year, but has not had to add a single employee or schedule an hour of overtime thanks to the waterjet's productivity, Grandgenett added.

Buscher noted that by freeing up production time, the Jet Edge has given Sbemco the ability to multi-task.



**Another entrance mat at 150<sup>th</sup> East 58<sup>th</sup> Street.**

Photo courtesy of Sbemco International Matting by Design.

"We can start it up and walk away," he said. "It can cut mats faster and error free all day."

With the Jet Edge, Sbemco can now tightly nest the pieces its cuts from the matting, which has greatly reduced the company's scrap, Buscher said.

"We're saving huge on materials," he noted. "Our scrap is in the single digits. We are well below 5%. It used to be in the double digits 10 years ago. It's almost to the point where scrap is a non-issue."

In 2007, Sbemco increased productivity even further by replacing its original waterjet table with a 16-foot by 31-foot in-floor waterjet cutting system that it powers with its original Jet Edge intensifier pump, which still looks and runs like new.

(continued on page 21)



The 16-foot by 31-foot in-floor waterjet cutting system features a CNC controlled table designed by ALLtra corporation that is equipped with Jet Edge waterjet cutting components and powered by a 55,000psi Jet Edge intensifier pump. This system brings the waterjet cutting work surface to floor level so large pieces of heavy matting material can be dragged into place to be cut. The system features a unique waterjet tank that is left unplugged so it can drain every night. Sbemco's crew can then get inside the tank and squeegee any carpet fiber residue into a trough, then collect it in a vat for easy disposal.

Photo courtesy of Jet Edge.

## Letter to the Editor

The following letter was submitted in response to the article, "Tanker Crew Uses High Pressure Waterjets To Fight Off Somali Pirates," *Jet News*, February 2009.

Dear Sir:

A large number of articles dealing with the above subject have recently been published. One of the suggested methods of counter-acting the pirates involves the use of water hoses. I should like you to please look at [www.berkeleychemical.com](http://www.berkeleychemical.com) where there is clear evidence showing that inclusion of only 3,000 ppm of SUPER-WATER brings about an incredible focusing of a water jet.

Over the past 35 years, I have been approached many times by companies wishing to use SUPER-WATER in water cannons for crowd control. In my response, I have always indicated the legal liability that I would incur if such a use were made of SUPER-WATER.

In dealing with pirates, I don't believe I should have any such legal concerns.

I would be happy to discuss this further with you.

My best regards.

Sincerely yours,

W. Glenn Howells, Ph.D.  
President, Berkeley Chemical  
Research Inc.  
[www.berkeleychemical.com](http://www.berkeleychemical.com)  
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## Brad Lawrence Joins KMT

**K**aroline Machine Tool (KMT) has announced that Brad Lawrence has accepted the position of OEM sales manager with the KMT Aqua-Dyne Division located in Houston, Texas. Brad has been a member of the KMT family for the past eight years and most recently held the position of north central area sales manager with the KMT Waterjet Division in Baxter Springs, Kansas.

Mr. Lawrence holds a Master of Business Administration Degree from Missouri State University in Springfield, Missouri, and a Black Belt in Six Sigma Methodology from Sigma Breakthrough Technologies in San Marcos, Texas. He has a solid background



**Brad Lawrence**

with more than 15 years of sales experience, as well as experience in management and quality assurance. In his new role, Mr. Lawrence will be responsible for developing KMT Aqua-Dyne's OEM and distributor network throughout most of North America and will continue to reside in Springfield, Missouri.

For more information, visit [www.kmtgroup.com](http://www.kmtgroup.com)

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## WARDJet Z-Series Waterjet Cutting Systems

**W**ARDJet has released its new WARDJET Z-Series product catalog. The Z-Series comes in a variety of sizes. View, download the new catalog at [www.wardjet.com](http://www.wardjet.com).

WARDJet manufactures waterjet cutting systems and offers over 15 different models of waterjets including self loading, multiple 5 axis linear motion units with high accuracy linear scales that cut at 3,000 inches per minute, small ball screw driven waterjets, very large multiple head abrasive waterjets, high speed lower cost belt driven systems, helical rack and pinion driven systems, and specially engineered systems. For more information, contact WARDJet, phone: (330)677-9100, fax: (330)677-9121, email: [sales@wardjet.com](mailto:sales@wardjet.com)

## Algona, Iowa-based Company Supplies Custom Floor Matting To Major Retailers And Commercial Properties,

from page 18

Both Grandgenett and Buscher said they would highly recommend Jet Edge to others.

“The Jet Edge is clean, fast and accurate with very, very low cost of operation and service,” Buscher said. “The performance of the system and ease of use is top shelf. Our Jet Edge pump has performed without a single issue for us for 12 years. It shows no sign of failure at all. The speed and size of the Jet Edge allows for rapid production and flexibility in our production processes which all help bolster our bottom line. The more we use the system, the more creative we become in using it to solve additional manufacturing issues which just increases our capacity, further lowers manufacturing costs and helps reduce employee workload and fatigue. If the Jet Edge is not solving a current manufacturing issue, it is because we haven’t thought to use it to solve that problem yet.”

For more information, contact: Sbemco International Matting By Design, phone: (515)295-3902 or (800)468-0860, website: [www.sbemco.com](http://www.sbemco.com); Jet Edge, [www.jetedge.com](http://www.jetedge.com), phone: (800)538-3343, email: [sales@jetedge.com](mailto:sales@jetedge.com).

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The new NLB 325 Series convertible pump units have a lot in common with our popular 225 Series — including the parts. That makes maintenance and inventory even easier, while letting you do jobs that require up to 400 hp.

With the 325 Series, NLB again meets customer needs, bringing convertible water jet technology and quick-change fluid ends to quintuplex pumps. We now offer 22 convertible models, the most in the industry, with an unbeatable range of pressures, flows and horsepower.

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Model	GPM	PSI
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24405D	25	24,000
20405D	30	20,000
15405D	40	15,000
12405D	50	12,000
10405D	60	10,000
8405D	74	8,000
<b>Model 365 (365 HP)</b>		
24365D	22	24,000
20365D	27	20,000
15365D	34	15,000
12365D	42	12,000
10365D	51	10,000
8365D	64	8,000

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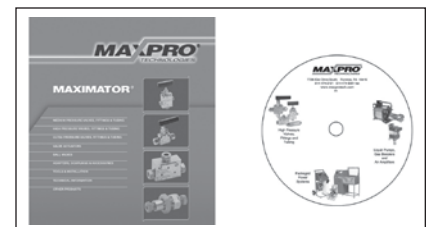


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**NJ:** (856) 423-2211, **LA:** (225) 622-1666  
**CA:** (562) 490-3277  
**e-mail:** [nlbmktg@nlbusa.com](mailto:nlbmktg@nlbusa.com)

## Maxpro Technologies Announces CD Catalog

Maxpro Technologies’ full line catalog is now available in PDF format on a compact disk. The catalog includes updated information on Maxpro’s full line of high pressure valves, fittings and tubing with applications in the waterjet industry.

Send your request for an updated CD catalog to [sales@maxprotech.com](mailto:sales@maxprotech.com), or call (814)474-9191, or visit [www.maxprotech.com](http://www.maxprotech.com).



# 2009 American WJTA Conference and Expo

Tuesday-Thursday, August 18-20, 2009

Marriott Houston Westchase, 2900 Briarpark Drive, Houston, Texas 77042

- **Live, Onsite Demonstrations** of a variety of waterjet applications (including cleaning, paint/coating removal, concrete preparation and testing of the effectiveness of safety equipment) and industrial vacuum/air moving operations.
- **Waterjet Expo** featuring displays of waterjetting equipment, systems and supplies and industrial vacuum/air moving vehicles.
- **Waterjet Boot Camp**—Industry experts offer information and suggestions on ways to help contractors buy smart, improve efficiency and generate profitable new business.
- **Pre-Conference Workshops**
  - ♦ Waterjet Technology - Basics and Beyond
  - ♦ Vacuum Equipment Safety Seminar
- **Emerging Technology, New Applications**—Hear some of the world's foremost engineers and researchers share new developments in applications, mechanics, equipment, and procedures.

The WJTA Conference and Expo is unique in that the program is dedicated to high pressure waterjet technology and related industries. If you are involved in high pressure waterjetting or industrial vacuuming/air moving for cleaning, surface preparation, industrial cleanup/recovery, waterblasting or cutting, and if you are interested in finding out more about this technology, the WJTA Conference and Expo is an ideal resource for information and an excellent meeting for networking with other professionals in the field.

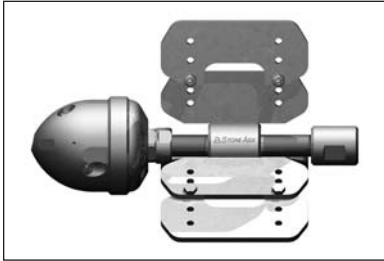
**Hotel Reservations at the Marriott Houston Westchase.** The Marriott Houston Westchase, 2900 Briarpark Drive, Houston, Texas 77042, is the central location for the WJTA Conference and Expo activities. The Marriott is a **smoke-free** facility. For reservations, call toll-free **800-452-5110** or contact the Marriott directly at **713-978-7400**. Be sure to identify yourself as attending the WaterJet Technology Association Conference to receive the special group rates of **\$149 single/double occupancy**. **August 2, 2009**, is the deadline for guaranteed room availability. Reservations received after **August 2, 2009**, will be confirmed on a space available basis. Rooms may still be available after August 2, but not necessarily at the rates listed above.

Visit [www.wjta.org](http://www.wjta.org) for Conference information or contact:  
 WJTA, 906 Olive Street, Suite 1200, St. Louis, MO 63101-1448  
 Phone: 314-241-1445, Fax: 314-241-1449, Email: [wjta@wjta.org](mailto:wjta@wjta.org)



## New Bigger Badger Handles 6-Inch Elbows Easily

The Badger tools have proven their ability to negotiate numerous 90° pipe bends and provide superior productivity in demanding applications. StoneAge is now adding on to the Badger line of tools with a larger version for bigger pipes and higher flow capacity. The new



Badger is offered for 15K psi with a 1/2-inch npt inlet or 20K psi with a 9/16 medium pressure inlet. The flow capacity is from 14 – 55 gpm.

The new and improved bigger Badgers are able to handle multiple 6-inch 90° bends or larger with the use of a centralizer. This tool comes equipped with a new type of adjustable speed control. The unique speed control design allows the operator the ability to maximize productivity from job to job by simply changing the adjustment sleeve with the wrench provided. There is no disassembly or fluid change required. The range of speed control is from 50-300 rpm. Tough applications will need the slow rpm while easier jobs can be finished quicker with faster rpm.

The Badger tools also offer a tremendous amount of versatility by simply changing the nozzle sizes. Depending on the challenges you are facing, the Badger can either have



more front hitting power or have as much as 70 pounds of pulling force to get to the end of your longest pipe cleaning jobs.

To learn more about these tools and how they can benefit your next large pipe cleaning job, contact StoneAge, phone: (970)259-2869, fax: (970)259-2868, email: [sales@stoneagetools.com](mailto:sales@stoneagetools.com), web: [www.stoneagetools.com](http://www.stoneagetools.com).



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# Remove More Highway Stripes Per Shift With STARJET-PLUS™

The STARJET-PLUS™, the latest waterjet system from NLB Corp., helps contractors remove more pavement marking or runway rubber per shift than ever before. It is the first ultra-high-pressure waterjet system with on-board filtration, so users can fill the water tank once and work all day without stopping to refill. This typically saves about two hours of downtime per 8-hour shift, speeding up project completion.

The STARJET-PLUS™ is a closed-loop system with rotating waterjets on a robotic arm that is mounted to the front of a flatbed truck. The 40,000 psi waterjets completely remove markings or curing compound as the truck drives along the road, or remove rubber as it drives along the runway. Ultra-high pressure waterjetting is faster and more thorough than grinding and does not damage concrete or asphalt.

The STARJET-PLUS™ system introduces a number of features not previously available:

- proportional controls on the robotic arm for more speed and better control;
- in-cab video (2 cameras in front, 1 in back) to let the driver monitor progress as well as surrounding traffic; and
- three levels of waste and debris handling to suit specific customer needs.

Unlike systems that are completely powered by the truck engine, the components of the STARJET-PLUS™ system have dedicated horsepower to minimize wear and downtime and increase productivity. Each self-contained system includes a truck, UHP (ultra-high pressure) water jet pump unit, water tank, NLB's patented rotating nozzle assembly(ies),

integrated vacuum recovery and cabin-mounted controls. NLB can custom-engineer systems to meet specific customer requirements.

For more information, contact NLB Corp., phone: (248)624-5555, fax: (248)624-0908, web: [www.nlbcorp.com](http://www.nlbcorp.com).



NLB StarJet-Plus

**2009 American WJTA Conference And Expo**  
August 18-20, 2009 • Marriott Houston Westchase Hotel • Houston, Texas

## Boot Camp

August 19-20, 2009

### *Preliminary Schedule*

#### **WEDNESDAY, AUGUST 19**

- |            |  |
|------------|--|
| 10:30 a.m. | <b>Electrical Safety</b><br>Alan R. Browne, Stewart R. Browne Mfg. Co., Inc.   |
| 11:30 a.m. | <b>DOT Regulations for Trucks/Trailers</b><br>Dan Hoffman, DOT, Commercial Vehicle Enforcement Officer, LaPorte, TX, Police Department |
| 1:00 p.m.  | <b>Proper Inlet Pump Suction Conditions</b><br>Jamie Forrest, NLB Corp.  |
| 2:00 p.m.  | <b>Safety in Waterjetting</b><br>Ed Twaddell, TurtleSkin Protective Materials  |
| 3:00 p.m.  | <b>Introduction to High Pressure Waterblasting</b><br>Gary Toothe, G.W. Training   |
| 4:00 p.m.  | <b>Cutting Edge Quality in Abrasive Waterjet Cutting</b><br>Axel Henning, OMAX Corporation   |

#### **THURSDAY, AUGUST 20**

- |            |   |
|------------|---|
| 9:30 a.m.  | <b>Target Safety: Reducing Specific Hazards</b><br>Dennis Cobb, Conoco Phillips Contract Safety Group     |
| 10:30 a.m. | <b>Hose Fittings, Pressure Testing</b><br>Paul Webster, Parker Polyflex                                   |
| 11:30 a.m. | <b>Choosing a Contractor</b><br>Roger Burwell, Plastics Division Makrolon/BPA, Bayer Material Science LLC |
| 12:30 p.m. | <b>Hydro-Excavation</b><br>Neil McLean, Hydro-Excavation Consultant                                       |



# Candidates Sought For 2009 WJTA Awards

**Y**ou are invited to submit candidates for the special awards that are presented biennially by the WaterJet Technology Association to honor a company, organization or individual who has made a significant contribution to the industry through accomplishments that directly enhance waterjet technology and the industry as a whole. A list of previous WJTA award recipients appears below.

**Candidate nominations must be received no later than July 3, 2009.** The award recipient(s), to be selected by the Awards Committee of the WaterJet Technology Association, will be honored at a presentation ceremony on Wednesday, August 19, 2009, in conjunction with the 2009 American WJTA Conference and Expo in Houston, Texas.

An official form for candidate nominations appears on the right. Complete one form for each nomination submitted. Please make additional copies of the form as needed. Completed nomination forms may be faxed to (314)241-1449 or mailed to the WaterJet Technology Association, 906 Olive Street, Suite 1200, St. Louis, MO 63101-1448, USA.

**2009 WJTA Awards Nomination Form**

**Candidate** \_\_\_\_\_  
 Company \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_  
 Country \_\_\_\_\_ Postal Code \_\_\_\_\_  
 Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
 Email \_\_\_\_\_

**Candidate Submitted by** \_\_\_\_\_  
 Company \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_  
 Country \_\_\_\_\_ Postal Code \_\_\_\_\_  
 Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
 Email \_\_\_\_\_

**Nominations must be received no later than July 3, 2009**  
**For a prompt response, fax completed form to 314-241-1449, or mail to WJTA, 906 Olive Street, Suite 1200, Saint Louis, MO 63101-1448**

## Previous Award Recipients

1981 Pioneer Award  
Jacob Frank

1983 Pioneer Award  
H.D Stephens

1985 Pioneer Award  
William Cooley

1987 Pioneer Award  
Norman Franz, Ph.D.

1989 Pioneer Award  
Richard Paseman

1991 Pioneer Award  
John H. Olsen, Ph.D.

1993 Pioneer Award  
Fun-Den Wang, Ph.D.,  
Safety Award  
David Summers, Ph.D.  
NLB Corporation  
Service Award  
George A. Savanick, Ph.D.  
Mohan Vijay, Ph.D.  
Technology Award  
Mohamed Hashish, Ph.D.  
Autoclave Engineers  
Hammelmann Corporation

1995 Pioneer Award  
George Rankin  
Safety Award  
Autoclave Engineers  
Service Award  
Thomas J. Labus  
Technology Award  
Thomas J. Kim, Ph.D.

1997 Pioneer Award  
David A. Summers, Ph.D.  
Service Award  
Andrew F. Conn, Ph.D.  
Technology Award  
Prof. Dr-Ing. Hartmut Louis

1999 Pioneer Award  
Mohamed Hashish, Ph.D.  
Safety Award  
Bruce Wood  
Service Award  
John Wolgamott  
Technology Award  
Ryoji Kobayashi, Ph.D.

2001 Pioneer Award  
George A. Savanick, Ph.D.  
Technology Award  
Richard Ward

2003 Pioneer Award  
Pat DeBusk  
Service Award  
Mohamed Hashish, Ph.D.  
Technology Award  
Ernest S. Geskin, Ph.D.

2005 Pioneer Award  
Hartmut Louis, Dr.-Ing.  
Safety Award  
TurtleSkin WaterArmor  
Service Award  
NLB Corporation  
Technology Award  
Jay Zeng, Ph.D.

2007 Pioneer Award  
Forrest Shook  
Safety Award  
Vacuum Equipment Safety  
Committee  
Service Award  
Tony Fuller  
Jim Petillo  
Technology Award  
Mamidala Ramulu, Ph.D.

# Jetstream Named Authorized Distributor For Peinemann Tube Cleaning Tools

Jetstream of Houston has been named an authorized distributor for Peinemann Equipment B.V., a Netherlands-based manufacturer of hydraulic tube bundle extractors and high-pressure cleaning systems for tube bundles and heat exchangers used in the petrochemical industry. Jetstream is authorized to distribute Peinemann's line of tube-cleaning tools – including the LTC and XLTC air-powered, hand-held flex lancing tools, and the TLE-B remotely-controlled tube cleaning tool – and accessory parts.



“Our partnership with Peinemann further solidifies our commitment to providing complete solutions to our customers,” says Mike Bullard, marketing manager for parts and accessories at Jetstream. “Both Jetstream and Peinemann have long-standing reputations for delivering unmatched quality products and service offerings to customers.”

According to Bullard, waterjetting practices have been trending toward automated and semi-automated equipment for some time, so the practice of running a lance through a tube by hand is declining.

“Peinemann’s products address this trend by isolating the operator from the flex lance,” Bullard said. He added that Peinemann specializes in automated and semi-automated equipment for the removal and cleaning of heat exchangers. “They are a strong international brand for a product group that supplements our current waterblaster product offerings,” he said.

“Jetstream and FS Solutions – which stocks high performance parts and accessories for the Jetstream brand of waterblasters at six locations around the country – are both part of Federal Signal Environmental Solutions Group,” Bullard says. “This gives Peinemann access to broader sales, service and distribution channels.”

For more information, visit [www.federalsignal.com](http://www.federalsignal.com).

## 2009 American WJTA Conference And Expo

August 18-20, 2009

Marriott Houston Westchase Hotel • Houston, Texas

### Waterjet Technology: Basis and Beyond

Tuesday, August 18, 2009

#### Preliminary Schedule

##### WATERJET TECHNOLOGY – THE BASICS

8:00 a.m.-8:30 a.m.	Registration
8:30 a.m.- 9:00 a.m.	<b>History</b> <i>By: Hugh B. Miller, Ph.D.</i>
9:00 a.m.-9:40 a.m.	<b>Equipment</b> <i>By: David A. Summers, Ph.D.</i>
9:40 a.m.-9:50 a.m.	Break
9:50 a.m.-10:40 a.m.	<b>Applications</b> <i>By: Bill Shires</i>
10:40 a.m.-11:30 a.m.	<b>Safety</b> <i>By: Gary W. Toothe</i>
11:30 a.m.-12:30 p.m.	Lunch

##### WATERJET TECHNOLOGY – BEYOND THE BASICS

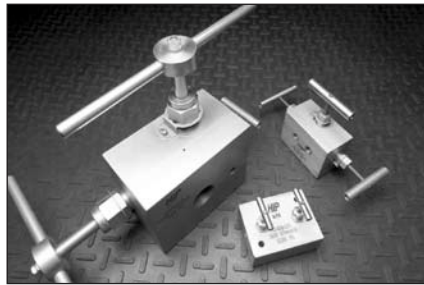
12:30 p.m.-2:30 p.m.	Concurrent Sessions
	- <b>Cleaning Applications</b> <i>By: Doug Wright</i>
	- <b>Cutting Applications</b> <i>By: Vanessa Cutler, Ph.D.</i> <i>Mohamed Hashish, Ph.D.</i>
	- <b>Hydro-Excavation</b> <i>By: Neil McLean</i>
	- <b>Surface Prep Applications</b> <i>By: Lydia M. Frenzel, Ph.D.</i>
2:30 p.m.-2:50 p.m.	Break
2:50 p.m.-4:30 p.m.	“Ask the Experts” Panel <i>Vanessa Cutler, Ph.D.</i> <i>Lydia M. Frenzel, Ph.D.</i> <i>Mohamed Hashish, Ph.D.</i> <i>Neil McLean</i> <i>Doug Wright</i>

#### IMPORTANT NOTICE REGARDING SPAM

Email addresses and other member contact information published in the WJTA Membership Directory is meant to encourage helpful, informative communication between members. The information is not provided to circulate spam or junk mail. The WJTA leadership requests that members respect the contact information of fellow members and not use that information for the dissemination of spam or junk email. Membership information is not meant to be circulated beyond the WJTA membership.

# New Single And Double Block And Bleed Needle Valves Deliver Dependable Service Up To 20,000 Psi

High Pressure Equipment Company has developed a new line of block and bleed needle valves delivering safe, reliable operation to 20,000 psi. These new needle valves are offered in both single and double block and bleed configurations. Both valve styles have Type 300 stainless steel tee handles with a non-rotating stem design as well as with optional wetted parts and optional O-rings available.



HiP's (MVBB series) single block and bleed needle valves provide a small valve body/package and Teflon packing to 400°F (204°C) with tube sizes of 1/4", 3/8", 9/16" medium pressure and 1/4", 3/8" and 1/2" FNPT. The MVBB series is designed for calibration operations by providing controlled flow to high pressure hydraulic and pneumatic systems through both shut-off regulation and diversion.

HiP's (DBB series) double block and bleed needle valves are manufactured from cold worked stainless steel and 17-4-H1075 with 1/4" to 1" medium pressure, coned and threaded connections and Teflon packing from 0°F (-17.8°C) to 400°F (204°C). The DBB series is ideal for pressure monitoring and testing, chemical injection and drain line isolation applications.

High Pressure Equipment Company designs, manufactures, and markets products used in the chemical, petrochemical, oil and gas, waterjet cutting and blasting, industrial research and development, general industrial, university and pharmaceutical industries. These

products include high-pressure valves, fittings and tubing, reactors, pressure vessels, intensifiers, gauges, pumping systems, gas booster systems, and pressure generators.

The company's dedication to its core business has

earned High Pressure Equipment Company preferred supplier status in many markets. ISO 9001-certified, the company has shipped more than 2 million valves and fittings to its customers since its incorporation in 1954. See the entire catalog online at [www.highpressure.com](http://www.highpressure.com) or phone: (814)838-2028, fax: (814)838-6075, or email: [sales@highpressure.com](mailto:sales@highpressure.com).

**2009 American WJTA Conference And Expo**  
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## Recommended Practices Seminar for the Use of Industrial Vacuum Equipment

Tuesday, August 18, 2009

### Preliminary Schedule

7:30 a.m.-8:00 a.m.	Registration
8:00 a.m.-9:00 a.m.	<b>Overview of Vacuum Trucks and Components – Static Display of Trucks Onsite</b> By: <i>Phil Stein and Gary Toothe</i>
9:00 a.m.-9:30 a.m.	Break
9:30 a.m.-11:30 a.m.	<b>Understanding the Power of Vacuum and How Industrial Vacuum Loaders Work</b> By: <i>Phil Stein</i> Guzzler/Vactor Manufacturing Inc. Streator, Illinois
11:30 a.m.-12:30 p.m.	Lunch
1:30 p.m.-2:30 p.m.	<b>Getting the Most Out of Your Air Mover</b> By: <i>Gary W. Toothe, Training Manager</i> G.W. Training Sumter, South Carolina
2:30 p.m.-3:30 p.m.	<b>Electrical Safety Issues</b> By: <i>Ravel Ammerman</i> Colorado School of Mines Division of Engineering, Golden Colorado
3:30 p.m.-3:45 p.m.	Break
3:45 p.m.-4:30 p.m.	<b>“Ask the Experts” Panel</b> With Ravel Ammerman, Phil Stein and Gary Toothe

# The Barton Group Awarded Highest Honors From U.S. Green Building Council

The Barton Group joined with the New York State Energy Research and Development Authority (NYSERDA) in announcing that Barton has been designated LEED® (Leadership in Energy and Environmental Design) Platinum by the U.S. Green Building Council (USGBC) for its corporate headquarters located in Glens Falls,



NY. LEED Platinum is the highest rating under USGBC's system for designing and constructing the world's greenest, most energy efficient and highest performing buildings. The Barton building represents the first Platinum certified building in Warren County, the seventh in New York State, and the 105th in the United States.

"This accomplishment is a validation of Barton's ongoing efforts to promote environmental stewardship," says Charles Bracken, chairman of The Barton Group. "Our new headquarters illustrates the commitment of Barton to the residents of Glens Falls and the surrounding region and to the health and happiness of our employees."

"There is no greater commitment private businesses can make than a commitment to protect our environment and precious natural resources," says Francis J. Murray Jr., NYSERDA

president and CEO. "NYSERDA is proud to have worked hand-in-hand with Barton to achieve their environmental accomplishments, which are equally shared by Governor David A. Paterson, who has laid out the most ambitious and achievable environmental goals in the country. By investing in energy-efficient and sustainable new construction projects such as Barton, NYSERDA continues to fulfill its commitment to use innovation and technology to solve some of New York's most difficult energy and environmental problems in ways that improve the State's economy."

The new Barton headquarters is a complete renovation of a three-story

brick building dating from 1865. Improvements to the 16,000 square foot facility include a panelized green roof; a geothermal heating and cooling system; energy-efficient windows; a raised floor system to allow for air distribution and electrical and network cabling; and a rainwater collection system. LEED Platinum designation was based on a number of green design and construction features that positively impact the project itself and the broader community. These features include:

- Energy efficiency improvements that exceed New York State building code requirements by 49%;
- 100% wind-power source for electricity;
- A geothermal well field to generate energy-efficient heating and cooling;
- A vegetated green roof and storm water collection system that

significantly enhances water conservation;

- Parking spots set aside for bicycles and fuel-efficient vehicles and special shower rooms to accommodate bicycle commuters' changing needs;
- Office furniture made from recycled materials;
- An indoor environment free of chemicals with state-of-the-art ventilation and lighting systems.

Through NYSERDA's New Construction Program, Barton qualified for \$68,459 in financial incentives related to the building's improved energy efficiency, green building practices, and green building certification. The New Construction Program offers technical support to building design teams and financial incentives to building owners to effect a permanent transformation in the way buildings are designed and constructed.

"Buildings are a prime example of how human systems integrate with natural systems," says Rick Fedrizzi, president, CEO and founding chair, U.S. Green Building Council. "The Barton project efficiently uses our natural resources and makes an immediate, positive impact on our planet, which will tremendously benefit future generations to come."

"The headquarters of The Barton Group is a shining LEED Platinum example of what corporations can do to address the impact that buildings have on our environment and our natural resources," says Tracie Hall, executive director of the U.S. Green Building Council New York Upstate Chapter. "From the preservation of a historic

(continued on page 31)

# OMAX Model 80X

**D**esigned for large scale precision machining of larger parts or multiple parts from stock up to 6 feet 8 inches by 13 feet 4 inches (2 m x 4 m), the Model 80X JetMachining Center cuts complex flat parts out of most materials including metal, plastic, glass, ceramics, stone and composites directly from a CAD drawing or .DXF file. It can also cut extremely hard, reflective and non-conductive materials, making it a valuable addition to existing shop capabilities. No tool changes or complex fixturing reduces setup times and the smooth finish often eliminates the need for secondary machining.

## Standard Features

- OMAX Intelli-MAX® software offers higher average cutting speeds and greater precision with free upgrades for the life of the machine
- Programmable Motorized Z-axis with precision OMAX MAXJET® 5 Nozzle Assembly
- Ball screw drive inside the Y-axis bridge fully enclosed inside bellows
- Intelli-TRAX traction drive inside the X-axis beams fully enclosed inside coated steel covers
- Scissor-style hard plumbing
- Component protection against water, dirt, and grit
- High efficiency direct drive pump systems available in 30, 40, 60, 70 and 80 hp with pressures up to 55,000 psi
- Rapid Water Level Control for quiet and clean submerged cutting
- Bulk Abrasive Feed Assembly transports garnet from the assembly's large hopper into the small hopper located at the Z-axis



- Solids Removal System (SRS) designed for tough industrial use (available as an option)
- Tilt-A-Jet® taper compensating abrasivejet cutting head (available as an option)
- Shipped as a completely pre-assembled and factory-tested system

## Abrasivejet Benefits

- Machines a wide range of materials and thicknesses

- Does not create heat-affected zones or mechanical stresses
- Rapid setup, no tool changes required
- Minimal fixturing required
- Leaves behind a satin smooth edge, reducing secondary operations
- No noxious gasses, liquids or oils used in (or caused by) the machining process.
- Completes most work below 80 dBA at 1 meter for submerged cutting.
- Environmentally "green" system with quiet and clean operation, low electrical and abrasive consumption

For more information, contact OMAX Corporation, phone: (800)838-0343, fax: (253)872-6190, web: [www.omax.com](http://www.omax.com).

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21 foot x 13 foot Waterjet Gantry Features Exposed Tank for Easy Overhead Loading

## Jet Edge Introduces New Large Format Waterjet Cutting Machine

Jet Edge, Inc., has introduced its new large-format Mid Rail Gantry Waterjet System featuring a 21 foot by 13 foot work envelope with an exposed tank that easily accommodates overhead loading. It comes standard with one abrasive jet cutting head; a second cutting head can be added to increase productivity.

The Mid Rail Gantry is ball-screw driven for higher accuracy. Its sturdy heavy-wall tubular steel construction eliminates vibration and increases longevity. The Mid Rail Gantry utilizes an industrial PC controller and can be configured so that all three axes are fully programmable (Z optional). It also features direct-couple AC brushless digital servo motors and single or double carriages. Critical



bearing components are protected with heavy metal covers with brush seals.

The Mid Rail Gantry waterjet machine also is available in an 8 foot by 13 foot size.

Like all Jet Edge products, the Mid Rail Gantry is proudly made in the U.S.A.

For more information, contact Jet Edge, Inc., phone: (800)538-3343, fax: (763)497-8701, email: sales@jetedge.com, web: www.jetedge.com.

The **NEW** 40k Banshee Answers the Call

## Plastics & Plugs Have Met Their Match!



40k Banshee Field Test



Stack-up of Plastics & Wood



Superior Results in Seconds



Most Powerful Banshee Yet



Introducing the **NEW**  
Maintenance-Free  
40k psi Banshee

Shown with Unplugger  
Jetting Configuration

### Banshee Tube Cleaning Nozzles

- Five Powerful Models for Tube I.D.'s from 5/8" - 2"
- Patented Maintenance-Free Design - 10k - 40k psi
- Polisher or Unplugger Heads\* - Up to 50 gpm Flows
- Perfect for Our Sabertooth Dual Hose Reel System



The Banshee Family



\* Universal Head Available on Some Models

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## OMAX Introduces MAXJET 5i, Rotary Axis Nozzle

**W**arranted to last 500 hours, the OMAX MAXJET 5i combines OMAX precision with rugged durability and convenience. This one-piece integrated nozzle eliminates the need for rebuilding the nozzle assembly – simply replace the whole assembly when needed. The MAXJET 5i also provides for more accurate and consistent jet alignment, which prolongs mixing tube life and gives you better quality cuts over the life of the nozzle assembly.

The OMAX Rotary Axis uses a robust, waterproof rotary head to cut parts with incremental index rotations. The Rotary Axis is powered by common table controls, and no external power supply is required.

For more information, visit [www.omax.com](http://www.omax.com) or call (800)838-0343.

---

### The Barton Group Awarded Highest Honors From U.S. Green Building Council, from page 28

building to the inclusion of renewable energy, the building embodies the essence of sustainability and serves as a model for others to follow. The corporate commitment and involvement of key partners for design, construction, operations and maintenance, as well as the incentives afforded by NYSERDA, demonstrate that Barton has invested in a more sustainable future for the benefit of all."

All aspects of the design-build project, including the demolition, construction and architectural planning were undertaken by construction firm Bette & Cring. Construction began late in the fall of 2006 and Barton staff moved into their new headquarters in August 2007.

The Barton Group headquarters, designed by Mahota Associates, was a finalist in ED+C's 2008 Excellence in Design Award in the Commercial, Office, Industrial, and Corporate Building Category.

The Barton Group is the parent company of Barton Mines Company, LLC, Virginia Abrasives Corporation, B-L Holding Company and Barton International Inc.

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August 18-20, 2009  
Marriott Houston Westchase Hotel  
Houston, Texas

(as of May 1, 2009)

# WJTA Welcomes New Members

## Corporate

### ANT Applied New Technologies AG

Marco Linde, Dipl.-Ing.  
Hans-Jurgen Poort  
Jochen Kleimann  
Hinter den Kirschkatzen 32  
23560 Lubeck Germany  
Phone: [49](451)58380-0  
Fax: [49](451)58380-99

### Aimm Technologies, Inc.

Brooks Bradford  
111 35<sup>th</sup> Street S.  
Texas City, TX 77590-8044  
Phone: (409)945-5414  
Fax: (409)945-6022

### Florida Waterblasting, LLC

Mike Collins  
Frank Daniels  
PO Box 22698  
West Palm Beach, FL 33416  
Phone: (561)644-3814  
Fax: (561)629-8329

### Lemasa Ind. e Com. Ltda.

Frank Veen  
Leonard Rudolf  
Mark Willian  
Av. Juscelino Kubitschek  
de Oliveria  
563 Rec. Campestre Joia  
Indaiatuba, SP 13346-600 Brazil  
Phone: [55](19)3935-8755  
Fax: [55](19)3935-8516

### Lishi Cleaning System Co. Ltd.

Zhai Fengming  
Sheng Qin Guo  
Zhai Eri  
Room 1002, #22, 88<sup>th</sup> Lane  
Hailun Road, Hongkou District  
Shanghai City 200086 China  
Phone: [86](021)65626057  
Fax: [86](021)65620853

### Redi Services, LLC

Gary Condos  
PO Box 310, 225 W. Owen Street  
Lyman, WY 82937  
Phone: (307)787-6333  
Fax: (307)787-3124

### Sim Aimone

PO Box 21  
Mountain View, WY 82939  
Phone: (307)747-4049  
Fax: (307)787-3124

### Jim Broderick

2143 Airport Road  
Rifle, CO 81650  
Phone: (970)625-0233  
Fax: (970)625-0232

### Shenyang Academy Instrumentation Science

Zeng Yan Li  
Liu Guang Hong  
Sun Zhen  
242 Beihai Street, Dadong District  
Shenyang Liaoning 110043 China  
Phone: [86](24)88710601  
Fax: [86](24)88713012

### Southland Painting Corp.

Denis Taslidzic  
Cliff Dykes  
Jozef Kamiel Verhelst  
2635 NW 4th Street  
Fort Lauderdale, FL 33311  
Phone: (954)748-2770  
Fax: (954)748-2901

### Terra I/S, LLC

Keith W. Schillo  
Steven A. Taplin  
Richard Walsh  
5100 West Michigan Avenue  
Kalamazoo, MI 49006-5731  
Phone: (269)375-9595  
Fax: (269)375-2830

### Total Clean

Tomas d'Escrivan  
Av. 17, Los Haticos  
No. 113-250, Galpones Riese  
Maracaibo, Estado Zulia  
Venezuela  
Phone: [58](261)7650553  
Fax: [58](261)7652555

### UGL-Unicco

#1 Cargill Drive  
Eddyville, IA 52533  
Fax: (641)969-7024

### David D. Rubel

Phone: (641)969-3537

### James R. Anderson

Phone: (641)969-7226

### Erika Williams

Phone: (641)969-7059

## Corporate Alternates

### Tony Douglas

Pressure's On, Inc.  
2360 St. Rte. 58 E  
Clinton, KY 42031  
Phone: (270)653-5000  
Fax: (270)653-5005

### Joel Ferguson

Pressure's On, Inc.  
2360 St. Rte 58 E  
Clinton, KY 42031  
Phone: (270)653-5000  
Fax: (270)653-5005

### David Henderson

Power Prep Limited  
1 Myrtle Street  
Bolton, Lancashire BL2 3AY  
United Kingdom  
Phone: [44](1204)382481  
Fax: [44](1204)411643

## Corporate Individuals

### Virgilio Alves

Lemasa Ind. e Com. Ltda.  
Av. Juscelino Kubitschek de  
Oliveria  
563 Rec. Campestre Joia  
Indaiatuba, SP 13346-600,  
Brazil  
Phone: [55](19)3935-8755  
Fax: [55](19)3935-8516

### Scott Coleman

IVS Hydro, Inc.  
P. O. Box 457  
Institute, WV 25112  
Phone: (304)768-4307  
Fax: (304)768-5596

### Rich Haggard

HydroChem Industrial Services,  
Inc.  
900 Georgia Avenue  
Deer Park, TX 77536-2518  
Phone: (713)393-5600  
Fax: (713)393-5975

### Malcolm Mulholland

Redi Services, LLC  
803 7th Street  
Evanston, WY 82930  
Phone: (307)747-0999  
Fax: (307)787-3124

### Kerry Petranek

StoneAge, Inc.  
466 S. Skylane Drive  
Durango, CO 81303  
Phone: (970)259-2869  
Fax: (970)259-2868

### Christie Stevenson

B.C. Master Blasters, Inc  
#4, 19585 96th Avenue  
Surrey, BC V4N 4C5 Canada  
Phone: (604)888-8776  
Fax: (604)881-2585

### Rick Wolla

Redi Services, LLC  
6800 Westland Road  
Casper, WY 82604  
Phone: (701)509-1114

## Individuals

### Wade Brandon

Innovative Pressure Technologies  
4922 Pittsburgh Avenue  
Erie, PA 16509-6207  
Phone: (814)833-5200  
Fax: (814)836-1824

### Kevin Breuche

Candlewood Management Service  
31 Newbury Road  
Howell, NJ 07731  
Phone: (732)363-5541  
Fax: (732)363-4371

### Aaron Comeau

Atlantic Industrial Cleaners  
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(continued on page 33)

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# WJTA Welcomes New Members,

from page 32

## Individuals

### Salomon de Snaijer

Salomon Jetting Parts B.V.  
Hoeksedijk 109  
NL-3299 AE Maasdam  
Netherlands  
Phone: [31](88)126-1900  
Fax: [31](88)126-1999

### Kyle Hardin

A & T Industrial Services  
3514 Mattingly Road  
Buckner, KY 40010-8801  
Phone: (502)222-8881  
Fax: (502)222-8810

### Joseph M. Hauk

Quality Water Blasting  
PO Box 10935  
Tampa, FL 33679-0935  
Phone: (813)690-1477  
Fax: (813)949-0343

### Steve Hontz

Ace Pipe Cleaning, Inc.  
4000 Truman Road  
Kansas City, MO 64127-2290  
Phone: (816)241-2891  
Fax: (816)241-5054

### Stefanita Iorga

Multiserv 2002 SRL  
Dr. Taberei 35, F5, ap 35, Sector 6  
Bucharest-061357  
Romania  
Phone: [40](21)767-161-133  
Fax: [40](21)440-1912

### Jerry MacNeil

Mac & Mac Hydrodemolition  
Services  
18101 94th Avenue  
Surrey BC V4N 4A3  
Canada  
Phone: (800)665-7772

### Bianca Carrasco Nontecinos

Senavin, Ltda  
Avenida 3 Poniente 1147  
MaiPu  
Santiago 928-0001  
Chile  
Phone: [56](2)5352355  
Fax: [56](2)5352359

### Rod Tredgold

Ultra High Waterblasters (Aust)  
Pty Ltd  
9 Deebling St  
West Ipswich  
Brisbane QLD 4305 Australia  
Phone: [61](07)38121112  
Fax: [61](07)38121115

### Frederic Tremblay

Ani-Mat Inc.  
284 Chemin Godin  
Sherbrooke QC J1R 0S6  
Canada  
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Fax: (819)821-2879

### Paul van Rooyen

TMS Group  
Linbro Business Park  
16 Galaxy Avenue  
Sandton, Johannesburg 2090  
South Africa  
Phone: [21](11)579-1000  
Fax: [21](11)608-3777

## Student

### Rui Santos

R. Nova da Lage, 55  
Apt. 7  
Maia, 4470-022  
Portugal  
Phone: [35](191)2145601



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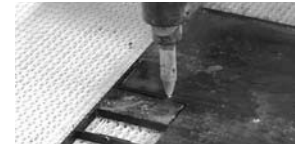
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## WJTAListServ - A Free Service To WJTA Members

The **WJTAListServ** enables you to take advantage of prompt email interaction with your colleagues. **WJTAListServ** is a **FREE** email broadcast system developed by WJTA to help you communicate and network with other waterjet professionals.

Participation is limited to WJTA members in good standing. You must sign up in order to participate. To sign up for the **WJTAListServ**, contact Beth at the WJTA office by email: [wjta@wjta.org](mailto:wjta@wjta.org), phone: 314-241-1445, or fax: 314-241-1449.

# Seven Easy Ways To Attend The 2009 American WJTA Conference And Expo

## 1. FULL CONFERENCE

Includes admission to all research and applications sessions (except pre-conference seminars on Tuesday, August 18), onsite live demonstrations, boot camp presentations, pass to welcoming reception in exhibit hall (Tuesday, August 18), exhibits, luncheon on Wednesday, August 19, and Thursday, August 20, coffee breaks, and cocktail reception on Wednesday, August 19. Each full registration also receives one copy of the Conference *Proceedings* on CD-ROM.

## 2. COMBO

Includes everything listed under full conference **PLUS** a pre-conference workshop on Tuesday, August 18: Waterjet Technology - Basics and Beyond **OR** Industrial Vacuum Equipment Recommended Practices Seminar.

## 3. SAVE \$ - MULTIPLE EMPLOYEE FULL/COMBO REGISTRATIONS

Companies that purchase three or more full or combo registrations receive a special discount for each additional employee registered after the first two. To take advantage of the special discount, register the first two (2) employees from your company at the regular FULL/COMBO rate and receive the discounted rate for the third and subsequent employee registrations.

## 4. DAILY ATTENDANCE

Includes admission to all research and applications sessions, onsite live demonstrations, boot camp presentations, exhibit hall, coffee breaks, and luncheon on that day. Tuesday, August 18, daily registration includes welcoming reception. Wednesday, August 19, daily registration includes cocktail reception. Register for one day and receive a "50% off" coupon for the 2009 Conference *Proceedings* on CD-ROM. Register for two days and the *Proceedings* are included.

## 5. PRE-CONFERENCE SEMINARS - Tuesday, August 18, 2009

**Choose one:** Waterjet Technology - Basics and Beyond **OR** Industrial Vacuum Equipment Recommended Practices Seminar.

Includes handout materials for seminar selected, coffee breaks, luncheon, and August 18 Welcoming Reception in exhibit hall.

## 6. EXHIBIT HALL and/or LIVE DEMO PASS

A \$30 exhibit hall and/or live demonstration pass for one day includes admission to the WJTA exhibit hall where you'll see waterjet and industrial vacuum equipment, supplies, and services, onsite live demonstrations between the hours of 8:00 a.m.-10:00 a.m., and WJTA boot camp presentations. Passes do **NOT** include luncheon in the exhibit hall. Tickets for lunch can be purchased separately.

You must purchase a ticket to attend the welcoming reception in Exhibit Hall A on Tuesday, August 18, or the cocktail reception in Exhibit Hall B on Wednesday, August 19, if you are not registered as a full or combo, or if you are not registered for a pre-conference seminar.

## 7. STUDENTS

The registration fee for WJTA student members is \$20. Student registration includes admittance to technical programs, onsite live demonstrations, and the exhibit hall on Wednesday and Thursday, but does **NOT** include copies of the *Proceedings*, welcoming reception in exhibit hall on Tuesday, August 18, or admittance to any food/social functions. **NO** discount is available for students that are not members of the WJTA. WJTA student members must be enrolled **full-time** in a university graduate or undergraduate program.

**WJTA members and  
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WJTA members receive a special discount off the regular registration fees. You will also receive a discount if your registration is postmarked or received in the WJTA office by **August 2, 2009**. **TOTAL SAVINGS: UP TO \$120!**

## OPTIONAL TRIP - NASA'S JOHNSON SPACE CENTER

An optional trip to NASA's Johnson Space Center is scheduled for Monday, August 17, from 9:30 a.m.-4:30 p.m. Buses will begin boarding a half-hour prior to departure times listed. Trip includes bus transportation, entrance to the space center and 1-1/2 hour tram tour. Lunch is not included and will be on your own.



## HOTEL RESERVATIONS

It's not too early to make hotel reservations for the 2009 American WJTA Conference and Expo to be held August 18-20, 2009. The room rate is \$149, single or double occupancy. For room reservations at the central location of the Conference, call the **Marriott Houston Westchase Hotel** in Houston, Texas, toll free at 800-452-5110 or call the hotel direct at 713-978-7400. The Marriott is a smoke-free facility.

The **Hilton Houston Westchase**, an alternate hotel, also provides non-smoking rooms. The room rate is \$154, single or double occupancy. For room reservations, call (713)974-1000.

When calling either hotel, be sure to mention that you are attending the WJTA Conference.

## CANCELLATION POLICY

Fees will be refunded in full for cancellations received at least four weeks prior to the Conference. Cancellations received more than 10 days and less than four weeks prior to the Conference will be subject to a \$50 charge. No refund will be made for cancellations received less than 10 days prior to the Conference. However, substitutions may be made at anytime. Refunds will not be processed until after the Conference.

WaterJet Technology Association

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# 2009 American WJTA Conference And Expo Registration Form

Name \_\_\_\_\_ Member # \_\_\_\_\_  
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*Print name as you wish it to appear on your name tag*

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**By Fax:** Fill out the registration form with your credit card information and call our 24-hour fax number at: (314)241-1449.

**By Mail:** Fill out the registration form and mail with applicable payment to:

**WJTA**  
 906 Olive Street  
 Suite 1200  
 St. Louis, MO 63101-1448

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**Seven Ways To Register**

**Full Conference ONLY** ..... \$ 475 ..... \$ 535 ..... \$ 535 ..... \$ 595 ..... = \$ \_\_\_\_\_

**Combo** (Full Conference PLUS Pre-Conference Seminar) ..... \$ 645 ..... \$ 705 ..... \$ 705 ..... \$ 765 ..... = \$ \_\_\_\_\_  
**Pre-Conference Seminar** (choose one):  Waterjet Technology - Basics and Beyond  Industrial Vacuum Equipment Seminar

**Daily**

**Tuesday** - Pre-Conference Seminar (includes Luncheon) ..... \$ 280 ..... \$ 340 ..... \$ 340 ..... \$ 400 ..... = \$ \_\_\_\_\_  
**Pre-Conference Seminar** (choose one):  Waterjet Technology - Basics and Beyond  Industrial Vacuum Equipment Seminar

**Wednesday** (includes Luncheon and Cocktail Reception) ..... \$ 265 ..... \$ 295 ..... \$ 295 ..... \$ 355 ..... = \$ \_\_\_\_\_

**Thursday** (includes Luncheon) ..... \$ 265 ..... \$ 295 ..... \$ 295 ..... \$ 355 ..... = \$ \_\_\_\_\_

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**Wednesday** (does NOT include Luncheon or Cocktail Reception) ..... \$ 30 ..... \$ 30 ..... \$ 30 ..... \$ 30 ..... = \$ \_\_\_\_\_

**Thursday** (does NOT include Luncheon) ..... \$ 30 ..... \$ 30 ..... \$ 30 ..... \$ 30 ..... = \$ \_\_\_\_\_

**Student** (WJTA members ONLY) ..... \$ 20 ..... \$ 20 ..... N/A ..... N/A ..... = \$ \_\_\_\_\_

**MULTIPLE CORPORATE REGISTRATIONS** (Applies to third and subsequent registrants from same company)

**Full Conference ONLY** ..... \$ 425 ..... \$ 485 ..... \$ 485 ..... \$ 545 ..... = \$ \_\_\_\_\_

**Combo** (Full Conference PLUS Preconference Seminar) ..... \$ 595 ..... \$ 655 ..... \$ 655 ..... \$ 715 ..... = \$ \_\_\_\_\_  
**Pre-Conference Seminar** (choose one):  Waterjet Technology - Basics and Beyond  Vacuum Equipment Safety

WJTA MEMBERSHIP (US, Mexico, Canada)	<input type="checkbox"/> \$60 Individual	<input type="checkbox"/> \$20 Student	<input type="checkbox"/> \$400 Corporate ..... = \$ _____
WJTA MEMBERSHIP - International (all other countries)	<input type="checkbox"/> \$80 Individual	<input type="checkbox"/> \$40 Student	<input type="checkbox"/> \$460 Corporate ..... = \$ _____

**Conference Proceedings** \_\_\_\_ Copies x \$89.00 ..... = \$ \_\_\_\_\_  
 2009 American WJTA Conference registrants may purchase extra copies of the Conference Proceedings on CD-ROM for only \$89. Regularly priced at \$109, you will **SAVE \$20**. Offer valid through 8/31/09.

**SPECIAL OFFER!**

**EXTRA TICKETS** — The Full and Combo registrations include one ticket per registration for the Exhibit Hall Luncheons (Wednesday and Thursday), Welcoming Reception in Exhibit Hall (Tuesday) and Cocktail Party (Wednesday). Each Daily registration includes a luncheon ticket for the day registered: Tuesday, Wednesday and/or Thursday. Tuesday daily includes Welcoming Reception in Exhibit Hall and Wednesday daily includes the Cocktail Reception. Additional tickets may be purchased as follows:

**Welcoming Reception in Exhibit Hall** - Tuesday ..... \$ 60 ..... \$ 60 ..... \$ 60 ..... \$ 60 ..... = \$ \_\_\_\_\_

**Luncheon in Exhibit Hall** - Wednesday or Thursday or both (\$40) ..... \$ 20 ..... \$ 20 ..... \$ 20 ..... \$ 20 ..... = \$ \_\_\_\_\_

**Cocktail Reception** - Wednesday ..... \$ 40 ..... \$ 40 ..... \$ 40 ..... \$ 40 ..... = \$ \_\_\_\_\_

**TOTAL ENCLOSED** \$ \_\_\_\_\_

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