

## Bulk Sampling With A Borehole Miner

See article on page 2.



**A borehole mining tool undergoing a surface test at a manganese borehole mining site near Emily, Minnesota.**

Photos courtesy of Dr. Grigori Abramov of Borehole Mining International, Inc.

### On the inside

StoneAge Top Colorado Manufacturing Company For 2010 .....	pg. 4
Nominations Open For WJTA-IMCA Board of Directors .....	pg. 6
Wisconsin Metal Fabricator Adds Jet Edge Waterjet To Expand Capabilities .....	pg. 8
Flow Partners With USG Robotics .....	pg. 10
Candidates Sought For 2011 WJTA-IMCA Awards.....	pg. 12

### 2011 WJTA-IMCA Conference and Expo

The WJTA-IMCA 2011 Conference and Expo will be held September 19-21, 2011, at the George R. Brown Convention Center in Houston, Texas. The Conference and Expo will focus on precision waterjet cutting, industrial waterjet cleaning, waterblasting, hydrodemolition, surface preparation, and industrial vacuum equipment and trucks. The program will include:

- Paper Presentations Featuring Emerging Technology and New Applications (Tuesday and Wednesday)
- Exhibits (Monday evening, Tuesday, and Wednesday)
- Live Demonstrations (Tuesday and Wednesday)
- Boot Camp Sessions (Tuesday and Wednesday)
- Pre-Conference Workshop (Monday)

Contact Ken Carroll to reserve exhibit space or live demonstration space. Call (314)241-1445 or email: [wjta-imca@wjta.org](mailto:wjta-imca@wjta.org). Watch your mail and email for details, and visit [www.wjta.org](http://www.wjta.org) for updates.

## Bulk Sampling With A Borehole Miner, from page 1

By George A. Savanick, Ph.D.

**W**aterjet technology, in the form of borehole mining, is being used to collect a bulk sample of 1,200 cubic yards from an iron-manganese deposit in Crow Wing County, Minnesota. This site, near the town of Emily, contains the largest known deposit of high grade manganese ore in North America.

Borehole mining, also known as slurry mining, is a process in which a tool incorporating a waterjet cutting system and a downhole slurry pumping system is used to mine ore through a cased borehole drilled from the surface to the ore zone. In this instance, the borehole mining tool is an 8-5/8 inch diameter cylinder containing ports for a nozzle and a down hole slurry pump (an eductor).

A waterjet emitted from the nozzle erodes the ore deposit to form a slurry. The slurry flows into the slurry pump at the base of the borehole mining tool. The slurry is then pumped to the surface in a form suitable for pipeline transfer to a screening line and filter plant where the solids are separated from the water. The water is clarified and recycled to the high pressure pumps at the surface which provide pressurized water to the down hole waterjet cutting system and the down hole slurry pump.

A vacuum filter recovers the solids as fines and a mineral filter cake. The recovered fines and cake are stored in bins, loaded onto trucks, and transported to a laboratory for analysis.

### WJTA-IMCA ListServ - A Free Service To WJTA-IMCA Members

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

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

# WWW.IWPWATERJET.COM

## Better Parts - Better Pricing



- PARTS FOR ALL MAKES OF MACHINES
- SAME DAY SERVICE
- UNSURPASSED QUALITY
- VALUE PRICING
- SATISFACTION GUARANTEE

**ADDITIONAL 5% DISCOUNT  
ON PARTS ORDERS FROM  
OUR WEB SITE**

INTERNATIONAL WATERJET PARTS INC.  
A Division of WGI

3882 N. SCHREIBER WAY, SUITE 204  
COEUR D'ALENE, ID 83815



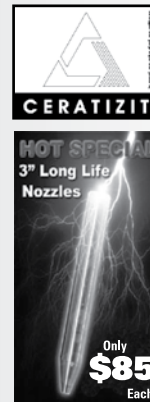
Phone: 509-754-3284  
Toll Free: 866-302-3284  
Fax: 509-754-3292  
Toll Free: 866-883-3292  
Email: [iwp@iwpwaterjet.com](mailto:iwp@iwpwaterjet.com)

**VISIT OUR WEB SITE WITH OVER 400 PRODUCTS, INSTALLATION  
PROCEDURES, EXPLODED VIEWS AND SERVICES**

Additional 5% discount on parts orders from our web site.

We offer Ceratizit brand nozzles to fit most cutting heads.

**Don't settle for less when you can have the best!!!!**



**WANT TO CUT YOUR GARNET  
USAGE UP TO 30%?  
CALL US TO ASK US HOW.**

# The New 22k psi 2" Badger®

Our Smallest Badger® is Both Powerful and Maintenance Free



BADGER® BA-L9™ field tests.



Tool was tested on coke (above), rubber and wood.



Solid wood no problem for the BA-L9™.

PIPE CLEANING

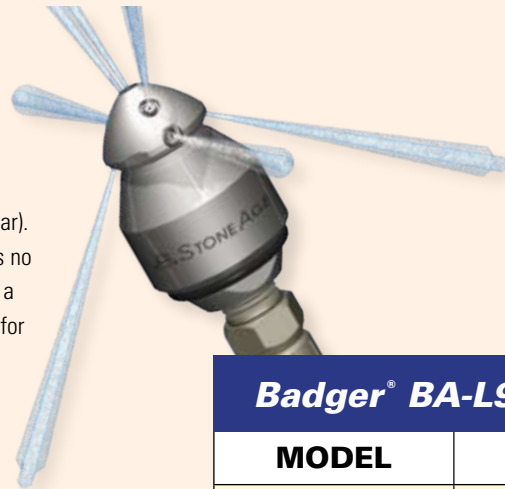
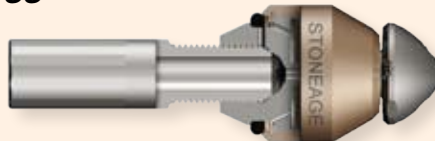
## The Perfect Tool for Small Pipes with Long Sweeping Elbows

The **BADGER® BA-L9™** is a self-rotating tool designed for cleaning 2" - 4" pipes with long sweeping elbows, and can handle pressures up to 22k psi (1500 bar). This model does not use any bearings, seals or lubricating fluid, therefore requires no maintenance. It features seven **OD3M™** nozzles. The patented design also has a 9/16" medium pressure inlet with left-hand threads. Ask our technical specialists for more information when you call in your order.

- Up to 22k psi Pressure
- 5-15 gpm Flows
- 7 Powerful Jets
- Maintenance Free

## Inlet Connection

The **BADGER® BA-L9™** offers a convenient 9/16 left-handed medium pressure female inlet connection. There is no need for gland nuts or collars as contractors can simply thread their 20k psi high pressure hose directly into the **BA-L9™** as shown above.



**Badger®  
BA-L9™**

US Patents No.  
7,635,096  
5,964,414  
D 617,871  
D 622,810  
D626,624

## Badger® BA-L9™ Specs

MODEL	BA-L9™
Maximum Pressure	22k psi 1500 bar
Rotation Rate	High Speed
Flow Range	
<b>BA-R05 Offset</b>	5-15 gpm 19-56 lpm
Flow Rating	0.8 Cv
Weight	.45 lbs 0.20 kg
Diameter	1.3 in. 33 mm
Length	2.0 in. 50 mm
Inlet Port	9/16 LH
Outlet Ports	7 x OD3M™



970-259-2869 • FAX: 970-259-2868 • 466 S. Skylane Dr. • Durango, CO 81303 USA

Email: [sales@stoneagetools.com](mailto:sales@stoneagetools.com) • 1-866-795-1586 (Toll Free in U.S.) • [www.stoneagetools.com](http://www.stoneagetools.com)



# StoneAge Named Top Colorado Manufacturing Company For 2010

By Mike Taylor, Managing Editor, Colorado Biz

**C**olorado Biz magazine has named StoneAge, Inc., the top Colorado manufacturing company for 2010.

StoneAge, Inc. is one of the world's leading providers of tools and equipment for waterblast cleaning, with 55 employees and 170 distributors in 35 countries.

But the Durango-based company didn't start out the way co-founders Jerry Zink and John Wolgamott envisioned when they set out to develop their product in Zink's garage in 1979.

Zink was a graduate student at Colorado School of Mines, and Wolgamott was working at the school's research facility when they decided to collaborate on a waterjet drill that would enable uranium miners to drill holes in rocks rather than blasting them. But just as the duo had perfected the technology, the uranium mining market collapsed, leaving Zink and Wolgamott with a great waterjet tool but no place to sell it.

But the two persevered, and their waterjet tool proved ideal in the cleaning of pipes, tubes and plugged heat exchangers. Their small company followed up with other high-pressure equipment using similar technology.

Today all of the design, research and development, prototyping and short production runs are handled at StoneAge's Durango facility. Because of the large quantities of products StoneAge sells, the company outsources the machining of its parts to vendors all over the United States.

Manufacturing all the parts in-house would require a facility 10

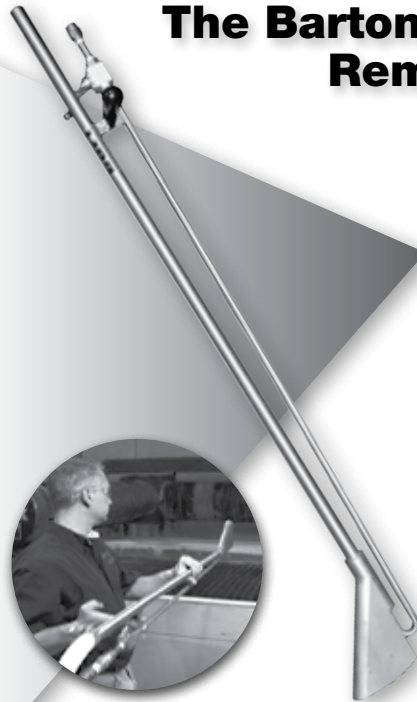
times its current size and machinists working two or three shifts. So the parts StoneAge outsources are shipped back to Durango where they are assembled into products that are tested before being shipped to customers.

"Outsourcing has worked really well for us, to allow us to stay in this community," says CEO Kerry Petranek, who is also a Colorado

(continued on page 9)

# BARTON

## Introducing BART - The Barton Abrasive Removal Tool



BART is the first truly convenient, cost-effective and totally portable abrasive removal system available to the waterjet industry. ***The BART system achieves removal rates of over 2000 lbs./hr.***

US and Foreign Patents Pending.

- Simple
- Convenient
- Effective

See a demo video at  
[www.barton.com/BART](http://www.barton.com/BART)

**Barton**  
USA/Canada 800.741.7756  
Phone 518.798.5462  
Fax 518.798.5728  
[info@barton.com](mailto:info@barton.com)

**bart**  
BARTON ABRASIVE REMOVAL TOOL

[www.barton.com](http://www.barton.com)



# TOUGH JOBS TOUGHHER TOOLS

## ONE CALL

# 1-800-231-3628

For all your water jetting needs.  
**ALL of them.**

**GD**

**GARDNER DENVER**  
WATER JETTING SYSTEMS, INC.

(1) 281-448-5800 Phone  
(1) 281-448-7500 Fax  
(1) 800-231-3628 Toll-free U.S. & Canada

[www.waterjetting.com](http://www.waterjetting.com)

# Nominations Open For WJTA-IMCA Board Of Directors

Nominations for the WaterJet Technology Association (WJTA)-Industrial & Municipal Cleaning Association (IMCA) Board of Directors are now open.

The terms of office of **Pat DeBusk**, Inland Industrial Services Co.; **Grzegorz J. Galecki, Ph.D.**, Missouri University of Science and Technology; **Larry Loper**, High Pressure Equipment Company; **Forrest A. Shook**, NLB Corporation; **Paul Webster**, Parker Hannifin-EPD; and **John Wolgamott**, StoneAge, Inc., will expire in September 2011. Therefore, nominations are sought for six board members, each to serve a four-year term of office beginning September 19, 2011.

The WJTA-IMCA bylaws provide that no more than one of the elected board members may be from the same company or organization. Therefore, board members may not be nominated from the same company or organization already represented on the board by individuals whose terms expire in 2013, including the **Colorado School of Mines** (Hugh B. Miller, Ph.D.), **Flow International Corp.** (Mohamed Hashish, Ph.D.), **Jetstream of Houston, LLP** (Bill Gaff), **Vacuum Truck Rentals** (B.T. Steadman), and **Veolia Environmental Services** (Gary Noto). George A. Savanick, Ph.D., is a consultant, and he is not affiliated with any company or organization.

According to the WJTA-IMCA bylaws, any WJTA-IMCA member in good standing (2010 membership dues paid) may submit a nomination(s). A nominee who has not paid his/her dues by **March 31, 2011**, shall be declared ineligible to run for office in the 2011 election. The deadline for making nominations is March 31, 2011. Your nomination(s) should reach the WJTA-IMCA office **no later than March 31, 2011**.

To submit a nomination(s), complete the **Nomination Form** and return, **along with biographical information and a brief statement of your nominee's mission and vision for WJTA-IMCA**, to:

**WJTA-IMCA**  
**906 Olive Street, Suite 1200**  
**Saint Louis, MO 63101-1448**  
**Phone: (314) 241-1445**  
**Fax: (314) 241-1449**

Remember, nominations must be received **no later than March 31, 2011**.

## Nominations/Elections Procedures

In accordance with the WJTA-IMCA bylaws, revised in 2002, nominations and elections to the Board of Directors include the following procedures:

- At least two calls for nominations to the board of directors will be published in *Jet News*. The first call for nominations appears in this issue. **Nominations will be accepted through March 31, 2011.**
- An official ballot listing the eligible nominees and a brief biographical sketch for each individual will then be forwarded by mail to all eligible voting members of the Association on **June 28, 2011**. **Signed and executed ballots must be mailed to the WJTA-IMCA office for tallying by July 26, 2011.**
- The names of newly elected board members will be announced in the *Jet News* and on the WJTA-IMCA website.

Only WJTA-IMCA members in good standing (2010 membership dues paid) may submit a nomination(s). A nominee who has not paid his/her dues by March 31, 2011, shall be declared ineligible to run for office in the 2011 election.

### Nomination Form

Name of Nominee \_\_\_\_\_  
Title \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_  
Country \_\_\_\_\_ Postal Code \_\_\_\_\_  
Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
Email \_\_\_\_\_

\_\_\_\_\_ *Attach biographical information with a brief statement of your nominee's mission and vision for WJTA.* \_\_\_\_\_

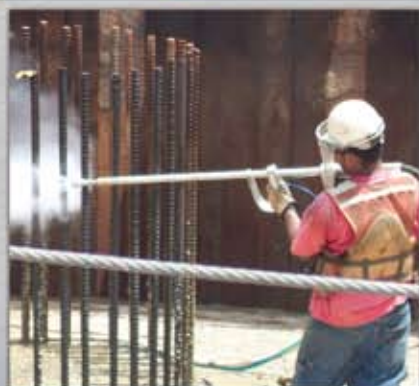
Name of Nominator \_\_\_\_\_  
Title \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_  
Country \_\_\_\_\_ Postal Code \_\_\_\_\_  
Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
Email \_\_\_\_\_

**Return completed Nomination Form and supporting information to:  
WJTA-IMCA, 906 Olive Street, Suite 1200, Saint Louis, MO 63101-1448**



# EasyX

**to operate • to maintain • to work with**



**Jetstream waterblasting equipment is easy to operate and easy to maintain. More than that, our units, parts and accessories are backed by knowledgeable, approachable people who understand that our business is your business.**

"We always use Jetstream because they have less downtime and they are easier to work on. The people are knowledgeable and helpful. You tell them your problem, and they help you fix it. They'll even drill special nozzles for you."

*Steve Johnson, Division Manager  
CCS, Longview, WA*

"They worked with us until the operation was up and running smoothly. With Jetstream's help, we finished what would have been a two-week project in six days."

*Charlie Underwood, Operations Manager  
Midwest Waterblasting, Clinton, MI*

**It's easy to choose Jetstream.**

For more information or a demonstration  
call **1-800/231-8192** or visit **[www.waterblast.com](http://www.waterblast.com)**.

©2008 Federal Signal Corporation, listed on the NYSE by the symbol FSS.

**Jetstream®**  
Subsidiary of Federal Signal Corporation



# Wisconsin Metal Fabricator Adds Jet Edge Waterjet To Expand Capabilities

National Metals is now offering precision waterjet cutting services at its metal processing and fabrication plant in DeForest, Wisconsin. National Metals is capable of processing complex parts from virtually any material with its new 60,000 psi Jet Edge Mid Rail Gantry waterjet cutting system, which features an 5-foot x 13-foot work envelope and is capable of maintaining +/- 0.001 inch linear positional accuracy (over 12 inches) and +/- 0.001 inch repeatability (bi-directional).



A sister company of Suncor, Inc., a Florida structural steel and miscellaneous metals subcontractor, National Metals specializes in metal sales, metal processing and specialty fabrication. It offers a wide range of services, from concept to final assembly.

The Wisconsin metal fabricator uses its Jet Edge waterjet to cut a variety of materials, including aluminum, carbon steel and stainless steel. The company offers waterjet job shop services, and also cuts parts for its own specialty aluminum and stainless steel products, which include stainless steel tabletops and sinks, as well as custom brackets.



A steel gear cut from 3/4-inch steel plate.

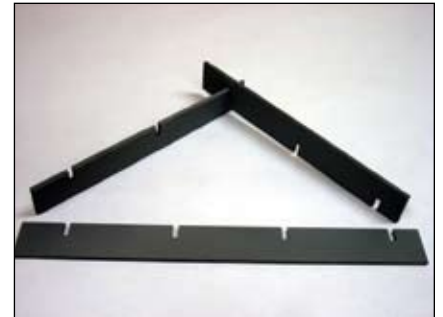
National Metals added its waterjet to custom cut stainless steel sheets for its own products and to expand its business by offering waterjet cutting services to other firms, explained Douglas Kuiper, National Metals senior partner.

"We have already been able to take in new types of work thanks to our waterjet," Kuiper said. "As

an example, we were able to fabricate specialty egg-crate grating products that are impossible to make without equipment similar to a waterjet. We hope to expand into other markets, such as glasswork, stonework, woodwork, and more."



For more information about National Metals, visit [www.nationalmetals.com](http://www.nationalmetals.com) or call 1-866-518-9548. For more information about Jet Edge, visit [www.jetedge.com](http://www.jetedge.com), or call 1-800-JET-EDGE (538-3343).



# NEED IT? RENT IT!

AIR MACHINES • LIQUID VACS • ROLL-OFFS • LIQUID RINGS  
NATIONWIDE • 24 HOURS A DAY • 7 DAYS A WEEK



1-888-955-2087

[www.vactruckrental.com](http://www.vactruckrental.com)

**VACUUM  
TRUCK  
RENTALS**



## StoneAge Named Top Colorado Manufacturing Company for 2010, from page 4

School of Mines graduate. "If we didn't, I don't think there's any way we could stay here."

At StoneAge every employee is a designated member of the "customer service team," and during regular business hours phones are answered by live receptionists, not automated phone directories. The company's website, [www.stoneagetools.com](http://www.stoneagetools.com), provides access to maintenance manuals, research papers and videos.

After slogging through the recession in 2009 – sales were down about eight percent compared with 2008 – StoneAge has rebounded with a projected 35 percent revenue increase this year. And the company did it without laying off any employees.

"We decided that if we could make it work, we were going to keep everybody, because when we came out of it, we would be struggling to rehire and retrain, and we just didn't want to lose the talent that we had," says Petranek, 31, who was named one of *ColoradoBiz* magazine's 25 Most Influential Young Professionals for 2010.

"We didn't make any capital purchases, which really increased our cash flow. We came out much, much stronger. We invested in research and development, and we invested in marketing. And I think that's why we're seeing this 35 percent increase in sales."

Indeed, in keeping with its mantra that R&D is its lifeblood, StoneAge introduced 12 new products in 2008-2009.

And even though the effects of the recession may not be over, Petranek points out, "We're



**For over 38 years, KMT Aqua-Dyne has been supplying water blasting equipment to the water jetting industry.**

**KMT Aqua-Dyne can provide a total solution for any industrial cleaning or surface preparation needs.**

**Join the thousands of customers worldwide who come to depend on KMT Aqua-Dyne to do the job right!**

**BLASTMAX™**  
Water Blasting Dump Gun used for cleaning & surface preparation

**BLASTMAX™ is Our Most Popular & Versatile Pumping Unit for Industrial Cleaning, Surface Preparation & Petro-Chemical!**

**KMT Aqua-Dyne**  
[aqua-dyne.com](http://aqua-dyne.com)  
713 864 6929

Water-blasting Rotary Gun used for ship cleaning

**KMT**  
**Aqua-Dyne**

fortunate to be in an industry where things have to be cleaned."

Petranek cites the company's people and its culture as two qualities that have made it a top company. For that she credits the founders, Zink and Wolgammott.

"They wanted to create really good jobs for themselves where

they had flexibility and a good work environment when they first started the company in 1979, and that's just carried over to all the employees as the company has grown over the last 30 years," Petranek says. "And then, it helps that we have a really great product to sell."

*Reprinted by permission from Colorado Biz magazine, November 2010, [www.cobizmag.com](http://www.cobizmag.com).*

## Flow Partners With USG Robotics

**F**low International Corporation has announced a new partnership with USG Robotics, Inc. designed to provide stone industry fabricators new capabilities to improve their productivity.

"We are excited that this partnership between Flow and USG Robotics will provide machinery that combines waterjet cutting technology with that of saw cutting. This partnership also provides the opportunity to bring powerful software capabilities to the stone industry," says Tim Fabian, product manager, Flow International. "USG Robotics has many years of experience in the industry and has exclusive capabilities that are uniquely suited to the stone industry."

"We wanted to align with a leading waterjet supplier to ensure our innovations reached the broadest audience," says Tom Gust, owner of USG Robotics. "Joining forces with Flow means that we can be assured that our customers have the finest waterjet technology as well as an extensive support service network."

Flow and USG Robotics will be collaborating to bring new products to the stone market within the Mach Series of Flow waterjets.

For more information, visit [www.FlowWaterjet.com](http://www.FlowWaterjet.com) or [www.USGRobotics.com](http://www.USGRobotics.com).

*Jet News* is published by the WaterJet Technology Association (WJTA)-Industrial & Municipal Cleaning Association (IMCA) and is a benefit of membership in the Association.

©2010 *Jet News*. All rights reserved. Reproduction in any form forbidden without express permission.



TurtleSkin® MFA  
**WaterArmor**

## UHP WATERJET PROTECTION



Designed to safeguard water jet operators from injuries caused by accidental UHP water jet swipes.

**TurtleSkin MFA  
WaterArmor** provides protection up to 40,000psi / 5.5gpm with a swipe speed of 1.6 feet/second. Ventilated open back design reduces heat stress.

For more information:

**1 888 477 4675**

[inquires@warwickmills.com](mailto:inquires@warwickmills.com)

[turtleskin.com](http://turtleskin.com)







# GMA GARNET GROUP

*when your abrasive matters!*

GMA Garnet is the global leader of high quality waterjet cutting abrasives. It consists of totally natural almandite garnet known for its superior hardness and abrasive ability. GMA Garnet provides a perfect balance of grain shape (sub angular) size and density.

## U.S. Warehouses

Atlanta, GA  
Chicago, IL  
Cleveland, OH  
Dallas, TX  
Denver, CO  
Houston, TX

Kansas City, KS  
Los Angeles, CA  
Oakland, CA  
Philadelphia, PA  
Phoenix, AZ  
Reserve, LA

Seattle, WA  
St. Louis, MO  
Tampa, FL  
Tulsa, OK  
Worcester, MA

***GMA also operates the world's largest garnet recycling facility.***



**Recycling: It's efficient—It's cost effective—  
It's environmentally friendly.**

We've developed in-house expertise and technology to convert spent garnet into clean, reusable garnet products.

Companies in the US now have the option of returning their used Garnet to GMA's Reserve, Louisiana facility.

GMA GARNET in the Americas  
(Houston)

Phone: + 1 832-243-9300

Fax: + 1 832-243-9301

[gmausa@garnetsales.com](mailto:gmausa@garnetsales.com)

GMA GARNET Worldwide  
(Perth)

Phone: + 61 8 9287 3250

Fax: + 61 8 9287 3251

[sales@garnetsales.com](mailto:sales@garnetsales.com)

**[www.garnetsales.com](http://www.garnetsales.com)**

# Candidates Sought For 2011 WJTA-IMCA Awards

**Y**ou are invited to submit candidates for the special awards that are presented biennially by the WJTA-IMCA 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-IMCA award recipients appears at right.

**Candidate nominations must be received no later than August 1, 2011.** The award recipient(s), to be selected by the Awards Committee of the WJTA-IMCA, will be honored at a presentation ceremony on Monday, September 19, 2011, in conjunction with the 2011 WJTA-IMCA Conference and Expo in Houston, Texas.

An official form for candidate nominations appears on page 20. 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 WJTA-IMCA, 906 Olive Street, Suite 1200, St. Louis, MO 63101-1448, USA.

## WJTA Administration

**Chairman of the Board**  
Bill Gaff  
(815)673-3835

**President/Jet News Editor**  
George A. Savanick, Ph.D.  
(952)432-7594

**Vice-President**  
Pat DeBusk  
(281)680-0660

**Treasurer**  
Larry Loper  
(800)289-7447

**Secretary**  
Paul Webster  
(281)566-4509

### 2009-2011 Directors

Greg Galecki, Ph.D.  
(573)341-4938

Gary Noto  
(713)307-2145

Mohamed Hashish, Ph.D.  
(253)850-3500

Forrest Shook  
(248)624-5555

Hugh B. Miller, Ph.D.  
(303)273-3558

B.T. Steadman  
(601)933-4650

John Wolgamott  
(970)259-2869

### Emeritus Members

Andrew F. Conn, Ph.D.  
(410)532-3452

Thomas J. Labus  
(262)245-9702

Thomas J. Kim, Ph.D.  
(401)874-5991

Fun-Den Wang, Ph.D.  
(303)279-9415

### Association Managers

Mark S. Birenbaum, Ph.D. • Kenneth C. Carroll  
(314)241-1445

## 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.

**2009 Pioneer Award**  
John Wolgamott

**Safety Award**  
Gary W. Toothe  
Philip Stein

**Service Award**  
Bill McClister

**Technology Award**  
Seiji Shimizu, Ph.D.





Are you tired of slow production?  
Looking to get more return on your equipment investment?

# PROBLEM SOLVED.

GATTI ORIFICES OUTLAST  
AND OUTPERFORM ANY OTHER  
ORIFICE ON THE MARKET.

Maximize your waterjet productivity.  
Choose to use GATTI sapphire orifice  
assemblies in your waterjet system.



524 Tindall Avenue • Trenton, NJ 08610  
609-396-1577 • 877-AMGATTI • Fax : 609-695-4339

**[www.gattiam.com](http://www.gattiam.com)**

- GATTI nozzle designs are recognized as the industry standard
- Our core business is manufacturing waterjet orifice assemblies and has been for over 30 years
- We are specialists in sapphire processing
- Same day shipping, excellent service, unmistakable quality



**CALL TODAY**  
**And We Will Ship You**  
**FREE Samples To Try In**  
**Your Own System!**

## Complimentary WJTA-IMCA Conference and Expo Registration

To be considered for a complimentary registration, complete this form and return to the WJTA-IMCA office by email: [wjta-imca@wjta.org](mailto:wjta-imca@wjta.org), fax: (314)241-1449, mail: WJTA-IMCA, 906 Olive Street, Suite 1200, Saint Louis, MO 63101-1448, or call Ken Carroll at (314)241-1445. Please submit your request **NO LATER THAN JULY 15, 2011**.

**Many thanks to VLN Advanced Technologies, Inc. and to VLN President Dr. Mohan M. Vijay for his generous sponsorship activity.**

[illegible]

December 2010



## TECHNI Waterjet™ Wins Award For Innovation In Germany At Euroblech 2010

**T**ECHNI Waterjet™ received an award for innovation at Euroblech 2010 Germany. The award represents innovation in the field of separation technology and was won with the newly developed Electric Servo Pump also known as the Quantum ESP™. Quantum ESP is setting a new standard for the waterjet industry with focus on efficiency and accuracy.



From left to right: Victor Stepien, Darren Reukers, the Euroblech presenter, Glenn Langdon, and Michael Burns.

For more information, visit [www.techniwaterjet.com](http://www.techniwaterjet.com), email: [sales@techniwaterjet.com](mailto:sales@techniwaterjet.com) or call 1-888-TECHNI-3.

## Terydon Reaches Agreements For Global Distribution

**T**erydon, Inc., has reach agreements with Asia Waterjet Equipment of Dubai and Singapore, Jetstream Europe, Ltd., and Metco of Australia making these companies exclusive distributors of Terydon products in their respective global areas. This will create a world-wide expansion in innovative tooling based on "Common Sense and Technology." For more information, visit [www.terrydon.com](http://www.terrydon.com) or call 1-330-879-2448.

### IMPORTANT NOTICE REGARDING SPAM

Email addresses and other member contact information published in the WJTA-IMCA Membership Directory are meant to encourage helpful, informative communication between members. The information is not provided to circulate spam or junk mail.

The WJTA-IMCA 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-IMCA membership.

**NEW!**  
**ULTRA HIGH PRESSURE**  
PROTECTIVE CLOTHING - WITH THE STRONGEST FIBER IN THE WORLD!

• CE CERTIFIED FOR SINGLE AND ROTOR NOZZLE!

• EASY IDENTIFICATION OF PROTECTED AREAS!

**PROTECTION LEVEL 20/30**

— SINGLE 2000 bar/30000 psi

— ROTOR 3000 bar/43500 psi

CE 89/686/EEC

**PROTECTION LEVEL 10/28**

— SINGLE 1000 bar/15000 psi

— ROTOR 2800 bar/40000 psi

CE 89/686/EEC

UNIQUE PROTECTION EQUIPMENT

For US distributors and e-catalogues:  
**WWW.TST-SWEDEN.COM**

**Your Complete Source for All of Your High Pressure Needs**

- Needle Valves, Ball Valves and Check Valves
- Working pressure up to 60,000 psi
- Variety of body styles and thread forms

**Exclusive Distributor for SAMI Instruments High Pressure Valves**

Contact your SPIR STAR representative for more information  
10002 Sam Houston Center Drive • Houston TX 77064  
Toll Free: (800) 890-7827 • Fax: (888) 893-1255  
Phone: (281) 664-7800 • Fax: (281) 664-7850  
Web: [www.spirstarvalves.com](http://www.spirstarvalves.com) • ISO 9001:2008 Certified

© 2010 SPIR STAR

## StoneAge Introduces New 22k psi Badger®

**T**he BADGER® BA-L9™

is a self-rotating tool designed for cleaning 2-inch to 4-inch pipes with long sweeping elbows, and can handle pressures up to 22k psi (1500 bar). This model does not use any bearings, seals or lubricating fluid, and therefore requires no maintenance. It features seven OD3M™ nozzles.



The Badger offers a convenient 9/16-inch left handed medium pressure female inlet connection. There is no need for gland nuts or collars. Contractors can thread their 20k psi high pressure hose directly into the BA-L9.



For more information, visit [www.stoneagetools.com](http://www.stoneagetools.com) or call 1-866-795-1586 (toll free in the U.S.) or call 1-970-259-2869.



**The Badger BA-L9 blasting through 6 inches of coke.**

**2011 WJTA-IMCA Conference and Expo**  
September 19-21, 2011

### **Announcement and Call for Papers**

**Deadline date: January 10, 2011**

**For more information, see page 23.**

## Barton Now Offers Online Ordering Of Waterjet Parts

**B**arton Mines Company has added web ordering to their online parts catalog. The newly designed e-catalog features photos and complete descriptions of hundreds of waterjet parts with cross referencing to OEM part numbers. The catalog includes Genuine Flow® and OMAX® parts as well as Barton exclusives such as HydroBloc bricks and the TRIDENT-2 Diamond Cutting Head. Competitively priced parts are also available for Jet Edge® and KMT® equipment.

Updated continuously, the e-catalog offers a host of functions to allow customers to find the right product quickly. Barton accepts payment by MasterCard, Visa, American Express, PayPal, or on terms with approved credit.

The e-catalog can be accessed from the Waterjet Parts link at [www.barton.com](http://www.barton.com). A customer account is required to place online orders. Call the Barton sales department at 1-800-741-7756 to set up a secure account.

For more information visit [www.barton.com](http://www.barton.com), e-mail: [info@barton.com](mailto:info@barton.com), or phone 1-800-741-7756.

### **WJTA-IMCA Corporate Member Happenings**

WJTA-IMCA Corporate Members can list their grand opening, open house, sale or other special event on the WJTA-IMCA Corporate Member Happenings page of the WJTA-IMCA website. This page is designed specifically for listings of corporate member events.

In order to list your event, please submit your company name, event, date, time and the location via email to [wjta-imca@wjta.org](mailto:wjta-imca@wjta.org), attention: LeAnn. A link from the listing to your website will be included. This service is limited to WJTA-IMCA corporate members.

#### **Not a WJTA-IMCA Corporate member?**

Contact the WJTA-IMCA office today to upgrade your individual membership to a corporate membership and take advantage of the many benefits available to WJTA-IMCA corporate members. If you have already renewed your individual membership, you can still upgrade for 2011 by remitting the balance.

**WJTA-IMCA, 906 Olive Street, Suite 1200, Saint Louis, MO  
63101-1448, telephone: 314-241-1445, fax: 314-241-1449,  
email: [wjta-imca@wjta.org](mailto:wjta-imca@wjta.org), website: [www.wjta.org](http://www.wjta.org).**



# 2011 WJTA-IMCA Conference and Expo

**New Date**  
**September 19-21, 2011**

**Monday-Wednesday, September 19-21, 2011**

**George R. Brown Convention Center, Houston, Texas**

Network with professionals from around the world at the WaterJet Technology Association (WJTA) and the Industrial & Municipal Cleaning Association (IMCA) 2011 Conference and Expo.

The 2011 WJTA-IMCA Conference and Expo is dedicated to high pressure waterjet technology and related industries, including precision waterjet cutting, industrial and municipal cleaning and maintenance services, surface preparation, waterblasting, chemical cleaning, wet and dry vacuum services, tank cleaning, waste handling, spill response, hydro-excavation, environmental solutions, catalyst recycling, and the cleaning, inspection and repair of storm, sanitary, fresh water and process sewer systems.

## Exhibit Space

Don't miss this opportunity to showcase your products and services at the event that focuses on high pressure waterjet technology and related industries.

To reserve exhibit space, call Ken Carroll at (314) 241-1445.

## Comments from past attendees

*"The live demos are great! I saw first-hand how well the tube bundle cleaning systems operate, and I got to compare different systems before making a buying decision."* – Mark Blanchard, Waterworks

*"This is the only meeting I know of that focuses on the things I need to serve my plant customers better – safety information, industry contacts, and new products and equipment."* – Denny Barton, Heintzmann Corporation

*"Safety is so important to my business, and these guys know safety. I learn new safety practices at every meeting."* – Sean Benoit, PSC

*"I really like the fact that the meeting centers around jetting and industrial cleaning. I don't have to spend hours trying to pick out vendors who actually know something about my business."* – Jerry Biehl, IVS Hydro, Inc.

*"I listened in on some of the R & D paper presentations out of curiosity and ended up coming away with a solution to a hydroblasting problem. The paper presentations are a real bonus."* – Dave Whitlock, CEDA-Reactor Ltd.

*"I enjoy the new topics and research we learn and meeting other people in our business."* – Victor Zenon, Pelichem Industrial Cleaning Services

## The Preliminary Program Includes:

- **LIVE DEMONSTRATIONS**  
of abrasive waterjet cutting, equipment/system conversions, industrial vacuuming and offloading, rotary line cleaning, sewer line cleaning, tank/vessel cleaning, tube and bundle lancing, waterblasting, waterjet gun operations, and waterjet pumps. These live demonstrations give you an opportunity to see the results and ask questions about equipment and applications.
- **NEW HIGH-TECH PRODUCT AND EQUIPMENT** displays by exhibitors representing leading industry manufacturers and suppliers from around the world.
- **BOOT CAMP FOR CONTRACTORS AND END USERS** – Learn new business ideas, safety recommendations, and tips and techniques to improve workforce productivity and stay competitive in today's marketplace.
- **PRE-CONFERENCE WORKSHOPS** on waterjet technology and industrial cleaning.
- **EMERGING TECHNOLOGY, NEW APPLICATIONS** – Hear some of the world's leading engineers and researchers share new developments in applications, mechanics, equipment, and procedures.

The WJTA-IMCA Conference and Expo is presented by the WaterJet Technology Association and the Industrial and Municipal Cleaning Association. For more information, an abstract submission form, or application for exhibit space, visit [www.wjta.org](http://www.wjta.org) or contact the WJTA-IMCA, telephone: (314)241-1445, fax: (314)241-1449, email: [wjta-imca@wjta.org](mailto:wjta-imca@wjta.org), mailing address: 906 Olive Street, Suite 1200, St. Louis, MO 63101-1448.

# 2011 WJTA-IMCA Conference and Expo

Monday-Wednesday, September 19-21, 2011 • George R. Brown Convention Center, Houston, Texas

## Call for Papers

The WJTA-IMCA invites you to submit an abstract to the WJTA-IMCA 2011 Conference and Expo. This program offers an excellent opportunity to highlight your work and research. Submit an abstract, network with the world's top waterjet professionals, and see and learn about new and innovative tools and equipment.

The 2011 WJTA-IMCA Conference and Expo will focus, from a practical and scientific viewpoint, on the most up-to-date advances in waterjetting and industrial cleaning equipment, techniques, and applications. Abstracts accepted for the 2011 Conference and Expo will be published in the official proceedings.



## Hotel Reservations

The Hilton Americas, 1600 Lamar, Houston, TX 77010, is directly connected to the George R. Brown Convention Center via two indoor sky-bridges. The room rates are \$142 single/\$152 double occupancy. Make your reservations online at [www.wjta.org](http://www.wjta.org) or call toll-free (800)236-2905 or contact the Hilton directly at (713)739-8000. When calling, be sure to identify yourself as a participant in the 2011 WJTA-IMCA Conference and Expo.



For more information, an abstract submission form, or application for exhibit space, visit [www.wjta.org](http://www.wjta.org) or contact the WJTA-IMCA, telephone: (314)241-1445, fax: (314)241-1449, email: [wjta-imca@wjta.org](mailto:wjta-imca@wjta.org), mailing address: 906 Olive Street, Suite 1200, St. Louis, MO 63101-1448.

## Preliminary Schedule of Events

### Monday, September 19, 2011

- 8:00 a.m.-5:00 p.m.  
Waterjet Technology – Basics and Beyond Pre-Conference Workshop
- 6:00 p.m.-6:30 p.m.  
Awards Presentation in Exhibit Hall
- 6:30-8:30 p.m.  
Industry Appreciation Reception – Exhibits Open

### Tuesday, September 20, 2011

- 8:00-10:00 a.m.  
Live Demonstrations
- 10:30 a.m.-5:00 p.m.  
Exhibit Hall Open
- 10:30 a.m.-5:00 p.m.  
Boot Camp Sessions
- 1:00 p.m.-5:00 p.m.  
Paper Presentations
- 5:30 p.m.  
WJTA-IMCA General Membership Meeting

### Wednesday, September 21, 2011

- 8:00-10:00 a.m.  
Live Demonstrations
- 10:30 a.m.-2:00 p.m.  
Boot Camp Sessions
- 10:30 a.m.-3:00 p.m.  
Exhibit Hall Open
- 1:00 p.m.-3:00 p.m.  
Paper Presentations





## Gardner Denver Introduces New Line Of HC Inline Fluid Ends

**G**ardner Denver Water Jetting Systems has introduced a new line of HC Inline Fluid Ends, which save substantially in time, parts costs and labor by converting swiftly from 10,000 to 15,000 to 20,000 psi without changing valve sets or stuffing boxes, and without relaxing any torqued bolts.



**The 330 HP Gardner Denver TF-450HC pump features the new HC Fluid End. Four plunger sizes allow for pressures of 10,000 psi to 20,000 psi and flows from 10 GPM to 52 GPM.**

Some other pumps typically require the operator to change out each of the pump's stuffing boxes and suction/discharge valve assemblies. This involves un-torquing the manifold bolts, removing the manifold, changing out all the stuffing boxes, plunger and valve assemblies, then replacing the manifold, and finally re-torquing the bolts in two steps, first to 50% and then to 100%. Three complete sets of parts must be maintained for each pressure rating.

The HC Fluid End utilizes the same valve sets and stuffing boxes for each pressure range, and only requires the exchange of plunger assemblies to achieve the shift from one pressure range to the other; these parts are much smaller and less expensive to stock. The savings from not having to stock three sets of stuffing

boxes and valve assemblies to cover requirements for each pressure range is substantial.

The new Gardner Denver HC design further saves time and money by allowing a typical machine operator with minimal training to make these changes in the field using common and supplied tools, instead of an experienced mechanic.

Gardner Denver also offers this feature in a quintuplex pump for applications to 600 HP, as well as the triplex pump line in 300 and 330 HP ratings.

For more information, visit [www.waterjetting.com](http://www.waterjetting.com) or call toll free at 1-800-231-3628.

### Comments Solicited On Improvements To Recommended Practices

**C**omments are solicited regarding improvements to the WJTA-IMCA publications, *Recommended Practices for the Use of Manually Operated High Pressure Waterjetting Equipment* and *Recommended Practices for the Use of Industrial Vacuum Equipment*. While both publications are reviewed periodically at the WJTA-IMCA conferences and throughout the year, your comments and suggestions for improving the publications are invited and welcome anytime.

The *Recommended Practices for the Use of Manually Operated High Pressure Waterjetting Equipment* is being revised and is scheduled for release soon.

Please address your comments and suggestions to: WJTA-IMCA, 906 Olive Street, Suite 1200, St. Louis, MO 63101-1448, phone: (314)241-1445, fax: (314) 241-1449, email: [wjta-imca@wjta.org](mailto:wjta-imca@wjta.org). Please specify which publication you are commenting on.



# 2011 WJTA-IMCA Awards Nomination Form

**Instructions:** Complete sections below and submit a narrative (300-word maximum) to support your nomination on a separate sheet of paper. Please print or type all information.

I nominate the following company, organization, or person as a candidate to receive a 2011 WJTA-IMCA Award  
(please print or type full individual, company or organization name):

\_\_\_\_\_  
company, organization, or person

## ☐ Distinguished Pioneer Award

The nominee must:

- Have made contributions to the waterjet industry;
- Have made contributions to the achievement of the goals of WJTA-IMCA;
- Have high moral character;
- Have strong personal and business ethics;
- Be dedicated to the future of the waterjet industry and to the growth of WJTA-IMCA.

## ☐ Service Award

How has the nominated company, organization or individual contributed in time and talent toward improvement in the WJTA-IMCA?

## ☐ Technology Award

What has the nominated company, organization or individual done to introduce new and innovative ideas in engineering or manufacturing? This could include, but is not limited to, new products, new manufacturing techniques, patents . . . any unique activity that advanced the technology of the waterjet industry.

## ☐ Safety Award

What has the nominated company, organization or individual done to introduce new and innovative ideas in safety? This could include, but is not limited to new products, new concepts, new safety techniques . . . any unique activity which increases the overall safety of waterjet equipment.

**CANDIDATE** \_\_\_\_\_ Company \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_

State \_\_\_\_\_ Country \_\_\_\_\_ Postal Code \_\_\_\_\_

Phone In US/Canada (\_\_\_\_\_) \_\_\_\_\_ Fax (\_\_\_\_\_) \_\_\_\_\_  
area code area code

Phone Outside US/Canada [\_\_\_\_\_] (\_\_\_\_\_) \_\_\_\_\_ Fax [\_\_\_\_\_] (\_\_\_\_\_) \_\_\_\_\_  
country code city code country code city code

**CANDIDATE SUBMITTED BY** \_\_\_\_\_ Company \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_

State \_\_\_\_\_ Country \_\_\_\_\_ Postal Code \_\_\_\_\_

Phone In US/Canada (\_\_\_\_\_) \_\_\_\_\_ Fax (\_\_\_\_\_) \_\_\_\_\_  
area code area code

Phone Outside US/Canada [\_\_\_\_\_] (\_\_\_\_\_) \_\_\_\_\_ Fax [\_\_\_\_\_] (\_\_\_\_\_) \_\_\_\_\_  
country code city code country code city code

**Nominations must be received no later than August 1, 2011.**

**For a prompt response, fax completed form to (314)241-1449, or mail to the WJTA-IMCA, 906 Olive Street, Suite 1200, St. Louis, MO 63101-1434, USA.**



## Jet Edge Introduces 'Milestone' 5 Axis Waterjet Cutting Machine

**J**et Edge, Inc., has introduced the Milestone 5 axis precision waterjet cutting machine. Capable of cutting virtually any material, the Milestone is available in three sizes, 5.5-feet x 6.5-feet nominal (1700 mm x 2000 mm), 5.5-feet x 13-feet nominal (1700 mm x 4000 mm) and 6.5-feet x 13-feet nominal (2000 mm x 4000 mm). It features the innovative IKC 5 axis waterjet cutting head, which is capable of making inclined cuts and controlling kerf to ensure optimal part quality. The IKC's capabilities include 600° rotation, a maximum angle of +/- 60°, and dynamic precision from +/- 0.2 to +/- 0.5 mm/m, depending on the tilt of head.

The Milestone's high-precision ground rack and pinion X and Y axes and ball-screw-driven 5.9-inches (150 mm) Z axis, make it one of the most accurate waterjet systems available. It maintains a cutting tolerance +/- 0.004-inch (0,1 mm/m) and repeatability accuracy tolerance of +/- 0.001-inch (0,025 mm) and supports a contouring and rapid feed rate of 0-1575 ipm (0-40000 mm/min.) Motion components are protected by steel covers with labyrinth lip seals to ensure lasting performance.

The Milestone is equipped with programmable contact height sensing and comes standard with one 5 axis cutting head; a second 5 axis or 3 axis cutting head can be added. Its many options include a rotating axis for pipe cutting, fire jet etching system, a drill and twin shuttles. Free software updates are included for the life of the machine. The Milestone's monolithic design expedites installation and makes it easy to relocate if necessary. The machine can support material up

to 2,200 lbs/10.8 sf (1000 kg/meter squared). Its rigid fixed upright bridge structure can be moved out of the way for forklift or crane loading.

For more information, visit [www.jetedge.com](http://www.jetedge.com), e-mail [sales@jetedge.com](mailto:sales@jetedge.com), or call 1-800-JET-EDGE (538-3343).



**Save \$900  
a year on  
cartridge  
changes –  
on 19 NLB  
accessories**



### NLB accessories feature long-life, quick-change seals

If you're changing water jet seals every 40 hours, the cost of replacements adds up fast. But most NLB lances and foot controls (and other accessories: 19 in all) have a cartridge seal that typically lasts 280 hours. That can save you over \$900 a year.

The change itself takes only 60 seconds — just unscrew the cartridge and screw in a new one. You'll also like our patented instant pressure dump and a host of operator-friendly features.

For productivity that quickly pays for itself, choose NLB water jet accessories. Call 1-877-NLB-7988 or visit [www.nlbcorp.com](http://www.nlbcorp.com).

**NLB. The Leader in Water Jet Productivity.**



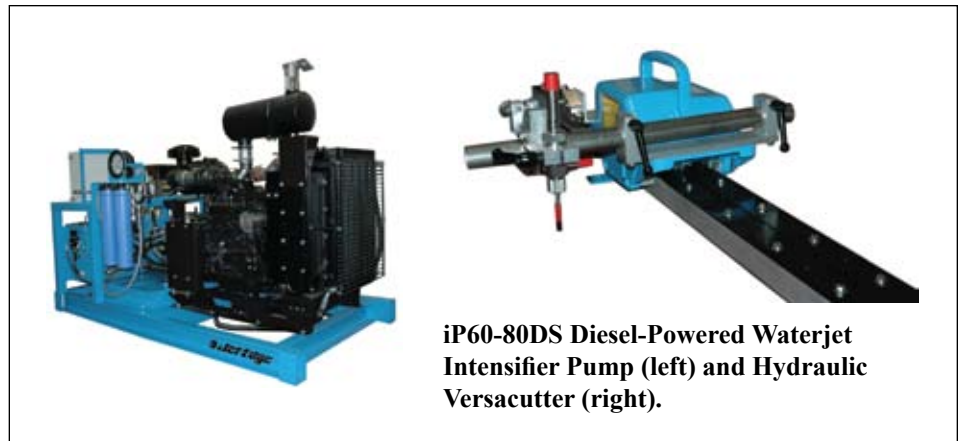
29830 Beck Road, Wixom, MI 48393 • [www.nlbcorp.com](http://www.nlbcorp.com)  
MI: (248) 624-5555, TX: (281) 471-7761, NJ: (856) 423-2211,  
LA: (225) 622-1666, CA: (562) 490-3277, e-mail: [nlbmktg@nlbusa.com](mailto:nlbmktg@nlbusa.com)

## Waterjet Cutting, Surface Preparation Technology Ideal For Marine Environments, Hazardous Areas, Undersea Operations Exhibited At International WorkBoat Show

**W**aterjet technology companies Jet Edge and Chukar Waterjet exhibited the latest innovations in portable ultra-high pressure waterjet cutting and surface preparation technology at the International WorkBoat Show, Dec. 1-3 in New Orleans.

Waterjet manufacturer Jet Edge and its applications partner Chukar Waterjet have developed numerous waterjetting tools crucial to the workboat and shipyard industries, including portable waterjet cutting machines, precision waterjet cutting systems, ultra-high pressure water blasting tools, undersea waterjetting equipment and electric and diesel-powered water jet intensifier pumps. Most recently, in emergency response to the Gulf oil spill, the two companies partnered to develop the first-known waterjet intensifier pump capable of operating at depths below 5,000 feet. BP used the subsea waterjetting system to blast away hydrates that were clogging a containment system.

During the International WorkBoat Show, Jet Edge and Chukar displayed several water jet tools that are ideal for use in environmentally sensitive marine environments or potentially hazardous areas, including the Jet Edge Hydraulic Versacutter portable linear and pipe cutting system; Gyra Jet LP ultra-high pressure lance for surface preparation, coating and corrosion removal; Ultra Deckblaster walk-behind deck blasting system for removing coatings and corrosion; and the 80hp 60,000 psi iP60-



80DS diesel-powered portable waterjet intensifier pump.

### Commercialization Partner Sought for Subsea Waterjet Equipment

Jet Edge and Chukar Waterjet are seeking an existing underwater operations technology company with which they can partner to bring their undersea waterjetting equipment to

the commercial market. For more information, contact Bruce Kivisto at Chukar Waterjet at 763-497-8731 or [brucek@chukarwaterjet.com](mailto:brucek@chukarwaterjet.com).

For more information about Jet Edge, visit [www.jetedge.com](http://www.jetedge.com), e-mail [sales@jetedge.com](mailto:sales@jetedge.com) or call 1-800-JET-EDGE (538-3343). For more information about Chukar Waterjet, visit [www.chukarwaterjet.com](http://www.chukarwaterjet.com), or call 1-888-497-8749 or (763) 497-8749.

### Only One Of The Best SMT Diamond Orifices



800 hours\* of usage is guaranteed, as long as it is properly used.

\*We even have a customer that has used over 1,000 hours

**SMT** Shinhan Micron Tech

[www.smttool.com](http://www.smttool.com)  
[admin@smttool.com](mailto:admin@smttool.com)



# 2011 WJTA-IMCA Conference And Expo

September 19-21, 2011 • George R. Brown Convention Center • Houston, Texas, USA

## Announcement and Call for Papers

Impressive progress and a fast-growing understanding of the diversified applications of waterjet technology are generating a growing excitement in the industry. New techniques and applications are being developed and current ones are being improved. Waterjet technology, now being used in nearly all types of industry — manufacturing, mining, construction, concrete, stone, aerospace, engineering, oil and gas, power plants, process, and medical industries — continues to expand at a rapid pace.

The **2011 WJTA-IMCA Conference And Expo** will focus, from a practical and scientific viewpoint, on the most up-to-date advances in waterjetting equipment, techniques, and applications. The areas to be addressed include, but are not limited to:

**Deadline  
Extended to  
January 10, 2011**

- Abrasives, Water, and the Environment
- Advanced Industrial Applications
- Automotive and Aerospace Applications
- Cleaning and Coating Removal
- Components and Systems
- Construction and Non-Manufacturing Applications
- Contractor Applications and Processes
- Demilitarization, including Removal of Land Mines (Demining)
- Drilling Applications
- Excavation, Tunneling, and Mining Applications
- High Pressure Technology and Equipment
- Hydrodemolition
- Hydroexcavation
- Jet Mechanics and Visualization
- Jet-Material Interaction
- Manufacturing Processes
- Market and Future Needs
- Novel Jets and Applications
- Process Modeling and Control Studies
- Rock Cutting
- Safety, Training, and Environmental Protection
- Vacuum Equipment

Commercial and academic authors are encouraged to submit titles and abstracts for consideration. To submit an abstract(s), please complete the abstract submission form on page 24, attach a copy of your abstract(s), and forward to the attention of the Conference Coordinator at WJTA-IMCA. **The deadline date for submission of abstracts is January 10, 2011.**

An Abstract Review Committee consisting of four referees will review the abstracts. Authors will be advised beginning **February 28, 2011**, regarding the decision of the Abstract Review Committee.

The 2011 WJTA-IMCA Conference And Expo is organized by the **WaterJet Technology Association (WJTA)** and **Industrial and Municipal Cleaning Association (IMCA)**. WJTA-IMCA looks forward to providing this forum and to your involvement and participation.

## Authors - Please Note

- Papers must be original. Papers must not have been published elsewhere or be pending publication.
- **Publication Fee.** A nonrefundable publication fee of \$399 (equal to the price of a member Full Conference registration) is required. **This publication fee will be waived if at least one author registers (Full or Combo) for the WJTA-IMCA Conference and Expo.** (Authors must pay the applicable member or nonmember price.) Also, one registration is good for 2 (two) papers. Your paper will **NOT** be included in the *Proceedings* if the publication fee or registration fee is not paid.
- Papers and presentations must be in English. Papers should be no longer than 15 printed pages. A "Paper Guide" containing directions for submitting papers will be forwarded to you after your abstract is accepted. Papers that do not follow the "Guide" will be returned to the author(s) for correction(s) or charged a fee for revisions made by the WJTA-IMCA office.
- Papers should be free of commercialism.
- Papers should be submitted as a Word file and a PDF file.

### 2011 Conference Committee

#### Pat DeBusk

Co-Chairman  
Inland Industrial Services

#### Bill McClister

Co-Chairman  
Veolia Environmental Services

#### Mohamed Hashish, Ph.D.

Editor  
Flow International Corporation

#### Bill Gaff

Jetstream of Houston, LLP

#### Hugh B. Miller, Ph.D.

Colorado School of Mines

#### Kerry Petranek

StoneAge, Inc.

#### Jeff Shook

NLB Corp.

#### B.T. Steadman

Vacuum Truck Rentals, LLC

## Abstract Submission Form

For each paper to be submitted for consideration, please complete this form, **attach a copy of the abstract**, and mail, fax or email to WJTA-IMCA by **January 10, 2011**. Authors will be advised beginning **February 28, 2011**, regarding the decision of the Abstract Review Committee.

### Paper Information

Paper Title \_\_\_\_\_

Authors \_\_\_\_\_

### Contact Person

(Please print or type)

Name \_\_\_\_\_  
(First Name) (Surname/Family Name)

Position/Title \_\_\_\_\_

Company/Organization \_\_\_\_\_

Street Address \_\_\_\_\_

City, Province \_\_\_\_\_ State \_\_\_\_\_

Country \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_

Business Telephone \_\_\_\_\_ Fax \_\_\_\_\_

Email \_\_\_\_\_ Website \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

Please check the category that best describes the general nature of your paper. ☐ Applications ☐ Research

**Key words** (Check the boxes under the different categories that apply to your paper):

#### Type of Study

- ☐ Modeling
- ☐ Experimental study
- ☐ Hardware development
- ☐ Contractor case study
- ☐ Manufacturing case study
- ☐ Software development
- ☐ Economic analysis
- ☐ Legal and Safety
- ☐ Other \_\_\_\_\_

#### Process

- ☐ Cutting
- ☐ Drilling
- ☐ Surface preparation
- ☐ Cleaning
- ☐ Stripping
- ☐ Safety
- ☐ Milling
- ☐ Jet-assisted
- ☐ Other \_\_\_\_\_

#### Related Industry

- ☐ Generic
- ☐ Shipyard
- ☐ Mining
- ☐ Construction
- ☐ Aerospace/Aircraft
- ☐ Automotive
- ☐ Oil/Gas/Refinery
- ☐ Quarrying
- ☐ Other \_\_\_\_\_

#### Jets

- ☐ Waterjet
- ☐ Abrasive-waterjet
- ☐ Abrasive suspension jet
- ☐ Pulsed
- ☐ Cavitation
- ☐ Polymer Jets
- ☐ Other \_\_\_\_\_

#### Material

- ☐ Metal
- ☐ Rock
- ☐ Glass
- ☐ Ceramic
- ☐ Composite
- ☐ Concrete
- ☐ Other \_\_\_\_\_

#### Environment

- ☐ Field work
- ☐ Factory work
- ☐ Submerged
- ☐ Nuclear
- ☐ Demilitarization
- ☐ Offshore
- ☐ Other \_\_\_\_\_

Mail completed form and abstract, **NO LATER THAN JANUARY 10, 2011**, to: Conference Coordinator, 2011 WJTA-IMCA Conference and Expo, WJTA-IMCA, 906 Olive Street, Suite 1200, St. Louis, MO 63101-1448, USA, telephone: (314)241-1445, fax: (314)241-1449, email: [wjta-imca@wjta.org](mailto:wjta-imca@wjta.org), website: [www.wjta.org](http://www.wjta.org)



## Aquajet Debuts New Generation Hydrodemolition Robots

**A**quajet Systems AB will introduce the latest version of Aqua Cutter hydrodemolition robots at World of Concrete, January 18-21, 2011, in Las Vegas, Nevada.

“Without changing the winning concepts that have made Aquajet Systems AB a leading innovator in the hydrodemolition business, we still retain our general core principles,” said Stefan Hilmersson, Aquajet Systems.

The new Aqua Cutter 710 model robot was launched at BAUMA 2010 and is the culmination of more than 25 years of experience in hydrodemolition.

The Aqua Cutter HVD was already considered to be one of the most

versatile robots available, performing horizontal, vertical, and up to 6 m (approximately 20 feet) overhead operations, as standard.

The latest generation features a sturdier base and an extended free vertical reach up to 7 m (approximately 23 feet) and a 4 m (approximately 13 feet) operation width option.

The patented Aqua Cutter advantages, such as the Equal Distance System (EDS), the Intelligent Sensing Control (ISC), and Smart Lance System, have been updated and are integrated in the new version.

Additional features include extended track length and width, increased



engine power with fuel saving function, optional hybrid drive, gull-wing opening hood, and a new system design for easier service.

For more information, visit [www.aquajet.se](http://www.aquajet.se) or email: [aquajet@aquajet.se](mailto:aquajet@aquajet.se).

### Index of Advertisers

A.M. Gatti, Inc.....	<a href="http://www.gattiam.com">www.gattiam.com</a> .....	pg. 13
Barton Mines Company, LLC.....	<a href="http://www.barton.com">www.barton.com</a> .....	pg. 9
GMA Garnet.....	<a href="http://www.garnetsales.com">www.garnetsales.com</a> .....	pg. 11
Gardner Denver Water Jetting Systems, Inc. ....	<a href="http://www.waterjetting.com">www.waterjetting.com</a> .....	pg. 5
High Pressure Equipment Co. ....	<a href="http://www.highpressure.com">www.highpressure.com</a> .....	OBC
IGEMS Software.....	<a href="http://www.igems.se">www.igems.se</a> .....	pg. 19
International Waterjet Parts, Inc. ....	<a href="http://www.iwpwaterjet.com">www.iwpwaterjet.com</a> .....	pg. 4
Jetstream of Houston, LLP .....	<a href="http://www.waterblast.com">www.waterblast.com</a> .....	pg. 7
KMT Aqua-Dyne, L.P. ....	<a href="http://www.aqua-dyne.com">www.aqua-dyne.com</a> .....	pg. 2
MaxPro Technologies .....	<a href="http://www.maxprotech.com">www.maxprotech.com</a> .....	Insert
NLB Corp.....	<a href="http://www.nlbcorp.com">www.nlbcorp.com</a> .....	pg. 21
S.M.T. ....	<a href="http://www.smttool.com">www.smttool.com</a> .....	pg. 24
SPIR STAR, Ltd.....	<a href="http://www.spistarvalves.com">www.spistarvalves.com</a> .....	pg. 15
StoneAge, Inc. ....	<a href="http://www.stoneagetools.com">www.stoneagetools.com</a> .....	pg. 3
TST Sweden.....	<a href="http://www.tst-sweden.com">www.tst-sweden.com</a> .....	pg. 15
TurtleSkin WaterAmor by Warwick Mills.....	<a href="http://www.turtleskin.com">www.turtleskin.com</a> .....	pg. 10
Vacuum Truck Rentals, LLC .....	<a href="http://www.vactruckrental.com">www.vactruckrental.com</a> .....	pg. 8

# WJTA-IMCA Welcomes New Members

## Corporate

### Asia Waterjet Equipment PTE

*Chris Dickeson*  
*Wendy Ong*  
1 Bukit Batok Crescent #07-52  
WCEGA Plaza  
Bukit Batok 658064  
Singapore  
Phone: [65]85339633  
Fax: [65]65708024

### Bandlock-Amesbury

*Jonathan Caprio*  
1734 South Vineyard Ave.  
Ontario, CA 91761  
Phone: (909)947-7500  
Fax: (909)930-2551

### Bluestar Environmental Engineering Co., Ltd.

*Jiao Yong Tao*  
*Zhang Ji Yu*  
*Wang Li Jie*  
No. 5 Anxiang Road  
Airport Industry Development  
Zone B  
Beijing, 101318  
China  
Phone: [86](10)80482771  
Fax: [86](10)80483219

## Corporate Individual

### Sherry Alford

Inland Industrial Services  
Group, LLC  
974 N Sixth Street  
Steubenville, OH 43952  
Phone: (740)283-2860  
Fax: (740)283-2861  
Email: sherrie.alford@  
teaminland.com

### Linda Bisbee

Chariot Robotics  
4398 SW Port Way  
Palm City, FL 34990  
Phone: (772)403-2194  
Fax: (772)403-2376

### Jimmy A. Broyles

Vactor Manufacturing  
1621 S. Illinois Street  
Streator, IL 61364  
Phone: (815)673-6081  
Email: jbroyles@vactor.com

### Vito Buonavolonta

Inland Industrial Services  
Group, LLC  
974 N Sixth Street  
Steubenville, OH 43952  
Phone: (330)545-0413  
Email: vito.buonavolonta@  
teaminland.com

### Brad Davis

Inland Industrial Services  
Group, LLC  
38435 N Robert Wilson Road  
Gonzales, LA 70737  
Phone: (225)647-1824  
Fax: (225)647-1825  
Email: brad.davis@  
teaminland.com

### Bill Disanza

Vacuum Truck Rentals, LLC  
45 Edison Avenue  
Oakland, NJ 7436  
Phone: (201)651-1550  
Fax: (201)651-1552

### Mitchell Higgins

PSC  
P.O. Box 1147  
Calvert City, KY 42029-1147  
Phone: (270)395-7226  
Fax: (270)395-4704

### Darryl Pelchat

Inland Industrial Services  
Group, LLC  
2021 S. Schaefer Hwy  
Detroit, MI 48217  
Phone: (313)841-5800  
Fax: (313)841-5270  
Email: darryl.pelchat@  
teaminland.com

### Rhett Petite

Inland Industrial Services  
Group, LLC  
38435 N. Robert Wilson road  
Gonzales, LA 70737  
Phone: (225)647-1824  
Fax: (225)647-1825  
Email: rhett.petite@  
teaminland.com

## Individuals

### Patrik Andersson

Aquajet Systems AB  
Brunnsvägen 15  
Holsbybrunn 57015  
Sweden  
Phone: [46](383)467499  
Fax: [46](383)50730

### Grant Broeckel

18 Glenda Court  
Guelph, ON N1H 5K1  
Canada

### Damian J. Daigle

Mallett Buildings  
511 East Frontage  
Iowa, LA 70647  
Phone: (337)304-2548

### Gerard A. Dann

Petrofac Engineering and  
Construction  
Petrofac House  
Al Khan Road  
Sharjah 23467  
United Arab Emirates  
Phone: [971](6)5740999  
Fax: [971](6)5740099  
Email: gerard.dann@  
petrofac.com

### Chris Johnston

Red-D-Arc Inc  
9810 E 223rd Street  
Carson, CA 90810  
Fax: (714)388-3891

### Steven Y.C. Kang

GFC Int'l Corp  
17918 Pioneer Boulevard  
Suite 200  
Artesia, CA 90701  
Phone: (562)865-5048  
Fax: (562)865-2760  
Email: syckanggfc@  
hotmail.com

### Harold Muller

TRHC Pty Ltd T/as  
ThoroughClean  
P.O. Box 2232  
North Ipswich 4305  
Australia  
Fax: [61](07)5467-2026  
Phone: [61](07)5467-2025  
Email: info@thoroughclean.  
com.au

### Jason Parks

Peak Industrial Services  
3525 Tanner  
Nederland, TX 77627

### Glen Probasco

PacHB, Inc.  
27475 Ynez Road #117  
Temecula, CA 92591

### Ronnie Stamey

C & R Compliance  
3361 Martha Berry Hwy NW  
Suite 100 #131  
Rome, GA 30165  
Phone: (678)848-5836  
Fax: (706)243-4903  
Email: ronniestamey@  
bellsouth.net

***Wishing you a healthy,  
happy and prosperous  
New Year!***

***WJTA Officers, Board of  
Directors & Staff***



# WJTA-IMCA Order Form for Publications/Products

7-10

Name \_\_\_\_\_ Member # \_\_\_\_\_  
 Company \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_  
 Country \_\_\_\_\_ Postal Code \_\_\_\_\_  
 Phone # [ ] ( ) \_\_\_\_\_ Fax # [ ] ( ) \_\_\_\_\_  
 Email \_\_\_\_\_  
 (to receive shipping confirmation)

## Billing Address (if different from above):

Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_  
 Country \_\_\_\_\_ Postal Code \_\_\_\_\_

## Payment Method

☐ Check or Money Order to WJTA  
 (U.S. DOLLARS ONLY)  
☐ PO # \_\_\_\_\_ (Enclose PO)  
☐ Please charge my ☐ MC ☐ VISA  
☐ AMEX ☐ Discover  
 Credit Card # \_\_\_\_\_  
 Exp. Date \_\_\_\_\_ CVC \_\_\_\_\_  
 Card verification code \_\_\_\_\_  
 Print name as it appears on card \_\_\_\_\_  
 Cardholder's signature \_\_\_\_\_

## WAYS TO ORDER

**Online:** Go to [www.wjta.org](http://www.wjta.org) and click on "Online Store."

**Phone:** Call (314)241-1445 and have your credit card information ready.

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

**Mail:** Fill out the order form and mail with applicable payment to: **WJTA-IMCA, 906 Olive Street, Ste. 1200, St. Louis, MO 63101-1448.**

**Shipping and Handling Charges** are calculated on a per pound basis that is based on shipping by FedEx Express Saver within the United States or United States Postal Service International Priority Mail for international destinations. When ordering online at [www.wjta.org](http://www.wjta.org) the shipping is calculated automatically. If ordering by fax, phone or mail, contact the WJTA-IMCA office for a shipping and handling total.

		WJTA-IMCA Member Price	Non Member Price	
____ Proceedings CD of The 2009 American WJTA Conference And Expo.....	@	\$ 109.00	\$ 129.00	= \$ _____
____ Proceedings CD of The 2007 American WJTA Conference And Expo.....	@	\$ 49.00	\$ 69.00	= \$ _____
____ SPECIAL OFFER - Proceedings CDs of The 2005, 2003, and 2001 WJTA American Waterjet Conferences .....	@	\$ 19.95	\$ 29.95	= \$ _____
____ Proceedings CD of The 2005 WJTA American Waterjet Conference .....	@	\$ 10.00	\$ 15.00	= \$ _____
____ Proceedings CD of The 2003 WJTA American Waterjet Conference .....	@	\$ 10.00	\$ 15.00	= \$ _____
____ Proceedings CD of The 2001 WJTA American Waterjet Conference .....	@	\$ 10.00	\$ 15.00	= \$ _____
____ An Overview of Waterjet Fundamentals And Applications, Fifth Edition (2001) .....	@	\$ 55.00	\$ 70.00	= \$ _____
____ An Overview of Waterjet Fundamentals And Applications (8/17/03 PowerPoint presentations in printed format).....	@	\$ 30.00	\$ 35.00	= \$ _____
____ Waterjet Technology: Basics and Beyond (8/21/05 PowerPoint presentations in printed format) .....	@	\$ 20.00	\$ 25.00	= \$ _____
____ Waterjet Technology: Basics and Beyond (8/19/07 PowerPoint presentations in printed format) .....	@	\$ 20.00	\$ 25.00	= \$ _____
____ Waterjet Technology: Basics and Beyond (8/18/09 PowerPoint presentations in printed format) .....	@	\$ 20.00	\$ 25.00	= \$ _____
____ Industrial Vacuum Equipment Seminar (8/18/09 PowerPoint presentations in printed format) .....	@	\$ 20.00	\$ 25.00	= \$ _____

☐ Waterjet Equipment Recommended Practices. *Specify:* ☐ English Edition or ☐ Spanish Edition

☐ Vacuum Equipment Recommended Practices. *Specify:* ☐ English Edition or ☐ Spanish Edition

Prices below are for Waterjet and Vacuum Equipment Recommended Practices

1 - 10 copies _____ # of copies .....	x	\$ 7.00 ea.	\$ 12.00 ea.	= \$ _____
11 - 99 copies _____ # of copies .....	x	\$ 6.00 ea.	\$ 10.00 ea.	= \$ _____
100 or more copies _____ # of copies .....	x	\$ 5.00 ea.	\$ 8.00 ea.	= \$ _____

☐ Waterjet Equipment Recommended Practices Video. *Specify:* ☐ VHS Video or ☐ DVD

☐ Vacuum Equipment Recommended Practices Video. *Specify:* ☐ VHS Video or ☐ DVD

Prices below are for Waterjet and Vacuum Equipment Recommended Practices Videos

1 - 4 copies _____ # of copies .....	x	\$ 49.95 ea.	\$ 99.95 ea.	= \$ _____
5 - 10 copies _____ # of copies .....	x	\$ 39.95 ea.	\$ 89.95 ea.	= \$ _____
11 or more copies _____ # of copies .....	x	\$ 29.95 ea.	\$ 79.95 ea.	= \$ _____

Baseball Cap \_\_\_\_\_ # of caps..... x \$ 7.95 ea. \$ 7.95 ea. = \$ \_\_\_\_\_

Executive Organizer \_\_\_\_\_ # of organizers ..... x \$ 10.00 ea. \$ 10.00 ea. = \$ \_\_\_\_\_

Navy Blue Polo Shirt Size \_\_\_\_\_ (S, M, L, XL, 2X) \_\_\_\_\_ # of shirts..... x \$ 33.00 ea. \$ 38.00 ea. = \$ \_\_\_\_\_

Medical Alert Cards *Specify:* ☐ English ☐ Spanish

1-10 cards _____ # of cards.....	x	.30 ea.	.50 ea.	= \$ _____
11-99 cards _____ # of cards.....	x	.25 ea.	.45 ea.	= \$ _____
100-249 cards _____ # of cards.....	x	.20 ea.	.40 ea.	= \$ _____
250 or more cards _____ # of cards.....	x	.17 ea.	.35 ea.	= \$ _____

**TOTAL ENCLOSED \$**



# Count on HiP for Reliable High Pressure Flow Control

**HiP... Our Name is High Pressure**

**Call 800-289-7447 or visit  
[www.highpressure.com](http://www.highpressure.com)**



#### **High Pressure Valves**

Six valve patterns in six pressure classes (up to 150,000 psi) for reliable and flexible shut-off

#### **High Pressure Fittings**

Complete range of elbows, tees and crosses for all pressure classes and tubing connections

#### **Air Operated Valves**

Five lines of air operators accommodate remote operation of high pressure valves up to 100,000 psi

#### **High Pressure Tubing**

Tubing is cold drawn, seamless 316 S/S and supplied in 1/8 hard conditioned (not annealed)

#### **Specialty Valves**

Ball, high temperature, micro-metering, relief, pipe connection and male bottom connection valves. Special materials available.