

WJTA Jet News

Water Jet Technology
Association



OCTOBER/NOVEMBER 1993

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Association
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members

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WJTA Celebrates Tenth Anniversary

Over 450 engineers, scientists, educators, contractors, manufacturers, and suppliers from 32 states and 21 countries gathered in late August to celebrate the Tenth Anniversary of the Water Jet Technology Association (WJTA).

William C. Cooley, who chaired the first WJTA board meeting in 1983, kicked off the WJTA anniversary celebration during the Dinner Cruise and Awards Banquet held aboard the *Spirit of Puget Sound* on Monday evening, August 30, 1993.



William C. Cooley cuts the first slice of a festive cake commemorating the WJTA's 10th Anniversary.

The dinner cruise was held in conjunction with the 7th American Water Jet Conference, August 28-31, 1993, in Seattle, Washington. See related Conference news and photographs throughout this issue of *Jet News*.

The WJTA was formed in May 1983 during the Second U.S. Water Jet Conference at the University of Missouri - Rolla. About 125 individuals attended that Conference. In just 10 years, attendance at the biennial WJTA Conferences has nearly quadrupled, as has the association membership.

The Association has striven during these ten years to serve the water jetting industry by providing a vehicle of communication within the industry. The promotion of safety has been a strong priority as shown by the publication, *Recommended Practices for the Use of Manually Operated High Pressure Water Jetting Equipment*.

The Association has kept the membership up-to-date with the rapidly evolving art and science of water jet technology through biennial water jet conferences, by the publication of the *Jet News*, and by establishing an office in St. Louis which is open daily during regular business hours.

The American Water Jet Conference has steadily grown in attendance and stature so that

these conferences are now recognized as preeminent among the several water jet conferences that are held around the world.

Water Jet technology has grown from a curiosity to a standard method in a wide variety of industries, including mining, construction, industrial cleaning, manufacturing, food processing, and machining. The Water Jet Technology Association serves all of these industries by providing a forum where innovative people from these industries can share new insights and learn from each other. This relationship of colleagues from the various segments of the water jetting industry results in a beneficial transfer of knowledge which in turn enhances productivity and increases the state of living in our society.

It All Started With Them!



Ten years ago in Rolla, MO, the Water Jet Technology Association's first board of directors was elected during the Second U.S. Water Jet Conference. Elected were: (front row, left to right) Dr. David Eddingfield, secretary; Dr. Fun-Den Wang, president; Dr. William Cooley, chairman of the board; Dr. George Savanick, board member; (back row, from left to right) Dr. David Summers, vice president; and Dr. James Riechman, board member. Robert Evans, treasurer, is not pictured.

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Fun-Den Wang Receives 1993 Pioneer Award

The Water Jet Technology Association's (WJTA's) highest honor was bestowed on **Dr. Fun-Den Wang** in recognition of his significant contributions to the advancement, development, and application of fluid jet technology.

Dr. Wang, a professor at the Colorado School of Mining in Golden, Colorado, is a founding member of the WJTA and served as its first president.

Due to an emergency, Dr. Wang had to leave the 7th American Water Jet Conference and was unable to attend the August 30, 1993, award ceremony held aboard the yacht, *Spirit of Puget Sound*.

Reprinted below are the comments of **Dr. George Savanick**, who presented the 1993 Pioneer Award to Dr. Wang.



Fun-Den Wang

Presentation of Pioneer Award

I rise to recognize a person of vision and energy and to present our most prestigious award, the Pioneer Award. This award is given to those people who have used their vision of the future to determine the history of water jet technology.

I have the privilege to present the seventh of these awards. We are honored to have in the audience today two previous winners of this award, Dr. William Cooley from Virginia and Dr. Norman Franz from British Columbia.

I admire people like these gentlemen who have an idea and then turn this idea into reality. They have a vision of a desirable future and the strength of character to strive mightily to bring this vision to reality. I like to think of our Pioneer Award winners as combinations of prophets and workaholics.

Our awardee this year, Dr. Fun-Den Wang of the Colorado School of Mines, foresaw a great future for water jet technology and has worked assiduously for the last 20 years to advance the state-of-the art.

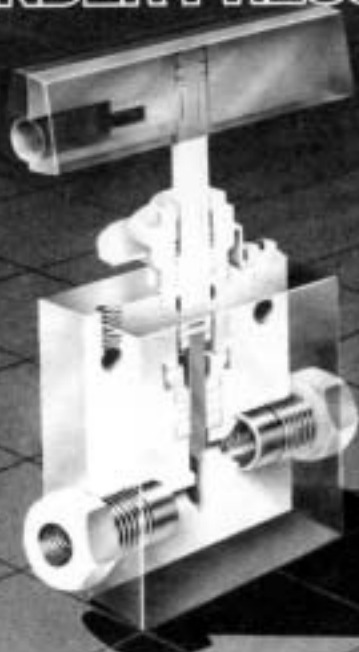
It must give him great satisfaction when he reflects on the great advances that have taken place in water jetting since he first championed this technology in early 1970.

Let me tell you about Dr. Wang. He was born in 1934 in Darien, China. He received a B.S. in mining engineering in Taiwan in 1957. He then earned a M.S. and Ph.D. in mining engineering from the University of Illinois.

He worked at the Denver Research Center of the U.S. Bureau of Mines from 1965 to 1972. In 1972 he joined the faculty of the Colorado School of Mines where he began his involvement with water jets. He worked with Robbins Corporation to develop a water-jet-assisted tunnelling machine and developed a water-jet-assisted rock drill for the Bureau of Mines. Jerry Zink and John Wolgamott worked with Dr. Wang on this drill and then left the University to found StoneAge, Inc., which markets the water-jet-assisted rock drill.

(continued on page 4)

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Four Authors Recognized For Technical Papers

John H. Archibald, Richard H. Hollinger, R.J. Mannheimer, and Arthur L. Miller were honored during the August 30, 1993, WJTA awards ceremony in recognition of outstanding papers presented at the 1991 American Water Jet Conference in Houston.

Dr. William A. Lees of Rogan and Shanley, sponsor of the Best Paper Awards, presented plaques to Richard H. Hollinger and Arthur L. Miller. Messrs. Mannheimer and Archibald were unable to attend the ceremony.



R.H. Hollinger (left) and Dr. William Lees



Arthur Miller (left) and Dr. William Lees

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1993 WJTA Pioneer Award, from page 2

It was at this time that Dr. Wang began his extensive work in the international application of water jet technology. He worked with Bergbau Forschung in Germany and the National Coal Board of England.

He has been heavily involved for years in water jetting in China. Dr. Wang acts as a bridge between water jetters in the U.S. and those in China. He is an honorary professor at the Ministry of Coal and the Ministry of Metallurgy in the People's Republic of China.

The success of this Seventh American Water Jet Conference is evidence of Dr. Wang's foresight. He and Dr. Summers originated the idea of creating an American Water Jetting Association and of holding water jet conferences in America. Dr. Wang organized the first conference in 1981 and hosted this conference at the Colorado School of Mines. He also hosted the organizational meetings which led to the formation of the Water Jet Technology Association. He wrote the charter and the first bylaws of the organization.

He was a member of the board of directors of the association from the beginning until yesterday when he stepped down. He served two terms as president and two terms as the chairman of the board of directors.

He believed from the beginning that water jets were the way of the future and has worked effectively to make this belief a reality. The success of the WJTA in growing from an infant idea in 1981 into the strong, vibrant organization that you see today is a testament to Dr. Wang's vision and perseverance.

It is my high honor, therefore, to present the Seventh Pioneer Award of the Water Jet Technology Association to Dr. Fun-Den Wang of the Colorado School of Mines.

— George A. Savanick, Ph.D.

Dr. Mohan Vijay, accepting the award on behalf of Dr. Wang, read from a statement Dr. Wang prepared before leaving the Conference. The text of Dr. Wang's acceptance speech will appear in the December issue of *Jet News*.

1993 WJTA Awards and Honors

SERVICE AWARD RECIPIENTS:

George A. Savanick, Ph.D. • Mohan Vijay, Ph.D.



George A. Savanick, Ph.D., (left) and Thomas J. Labus



Mohan Vijay, Ph.D., (left) and Thomas J. Labus

SAFETY AWARD RECIPIENTS:

David A. Summers, Ph.D. • NLB Corporation



David A. Summers, Ph.D., tells his one and only joke!



Forrest Shook (right) of NLB Corporation, and Thomas J. Labus

TECHNOLOGY AWARD RECIPIENTS:

Mohamed Hashish, Ph.D.
Autoclave Engineers Group
Hammelman Corporation



Mohamed Hashish, Ph.D., (left) and Thomas J. Kim



Gisella Hammelman of Hammelman Corporation and Thomas J. Kim



Paul Bowser of Autoclave Engineers Group (left) and Thomas J. Kim

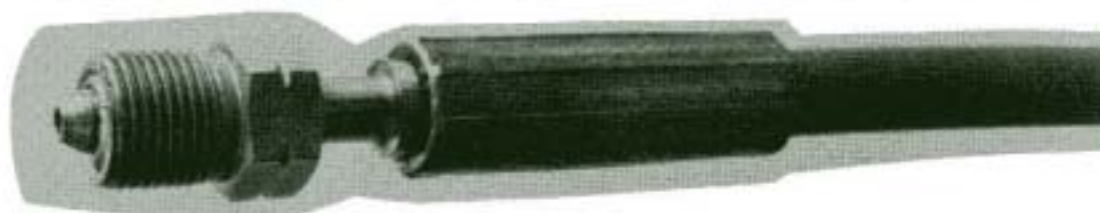
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PHILLIPS Machining *wishes to thank everyone who attended the 7th American Water Jet Conference in Seattle, WA on August 28-31, 1993. Your presence and support of your organization is what makes it great. Our special thanks to all those in the WJTA who worked so hard on all the projects to help make this the best ever Conference. We look forward to seeing you all in Houston in 1995 for another great event. If you need new membership applications please contact us at the phone number above. Best wishes!*

- Joe Phillips

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Murder Suspect Disarmed By Water Jet Welding Robot

By Andrew F. Conn, Conn Consulting, Inc.

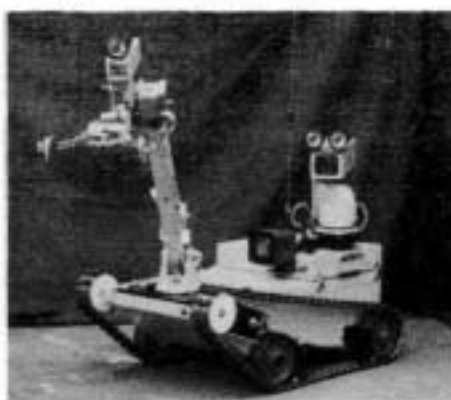
Baltimore, MD – The police in Prince George's County, Maryland, adjacent to Washington, DC, used a remotely controlled robot monitored by video cameras to knock the shotgun out of the hands of a man who was later charged with killing his girlfriend. After the slaying, the man barricaded himself inside their apartment. After trying for five hours to get the man to surrender, the police sent the robot in to see if it could disarm him.

The robot, similar to that shown in the photograph above, was borrowed by the police from the local fire department. The fire department normally uses their robot for destroying the mechanisms in suspected bomb packages. As seen in the photograph, this type of robot has stairway climbing treads, lights, several video cameras, and arms affixed with mechanical claws. A laser-pointer shows where to aim the water jet disrupter.

As used by the police, the robot entered the apartment and found the suspect hiding in a closet under a pile of clothes. On the monitoring TV screen, the robot's claws were seen reaching out and pulling away the clothes covering the man. A single shot water blast was then unleashed, knocking the shotgun out of the man's hand and disorienting him. Officers then rushed in and arrested the man.

A typical bomb disrupting water jet uses a special shotgun-like shell affixed to the back end of a chamber filled with about 100 ml of water. The charge is set off by an electrically ignited primer, sending a shock wave into the water, which then jets out at velocities on the order of 620 ft/sec. Thus the total kinetic energy delivered by this single pulsed jet is over 1,300 ft-lb – the amount of energy equivalent to dropping a 100 lb weight from a height of 13 feet.

It is no surprise that bomb mechanisms can be destroyed with this technique before the bomb has a chance to detonate. And it is easy to see why the police in Prince George's County, Maryland, had no trouble capturing their man.



Robocop. The MPR-150 multipurpose robot manufactured by OAO Corporation of Greenbelt, MD.

New 8005St Jet Cutting Hose Available

Rogan and Shanley, Inc., a Polyflex company, has introduced a new 8005St hose for ultra high pressure applications. The hose has a 5mm (0.17") bore, and a burst pressure of 120,000 psi. It is rated to 48,000 psi working pressure for general applications, and can be rated at up to 60,000 psi working pressure when fitted with the optional burst shield. With a minimum bend radius of 12" and a weight of only 0.35 pounds per foot the hose is rapidly gaining popularity in the water jet cutting industry. Standard end fittings are 3/8" and 9/16" stainless steel high pressure tubing nipples.

For more information contact: Rogan and Shanley, Inc., 4263 Dacoma, Houston, TX 77092, phone: (800)446-5236, fax: (713)686-1292.

Autoclave Receives ISO 9001 Certificate

The Quality Management System of **Autoclave Engineers Group** has been registered as compliant with the international standard ISO 9001 and its national equivalents. Bureau Veritas Quality International (BVQI) certified Autoclave's processes as being consistent with the 9001 standard, the most comprehensive of the ISO classifications.

Receipt of ISO 9001 certification is part of Autoclave's ongoing commitment to continuous improvement. In preparing for the BVQI audit, Autoclave Engineers conducted a sixteen-month program addressing all aspects of its business, including sales, contract review and entry, design, manufacturing, assembly, testing, delivery, service and purchasing.

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For more information, contact Autoclave Engineers Group, 2930 West 22nd Street, Box 5051, Erie, PA 16512, (814)838-5700.

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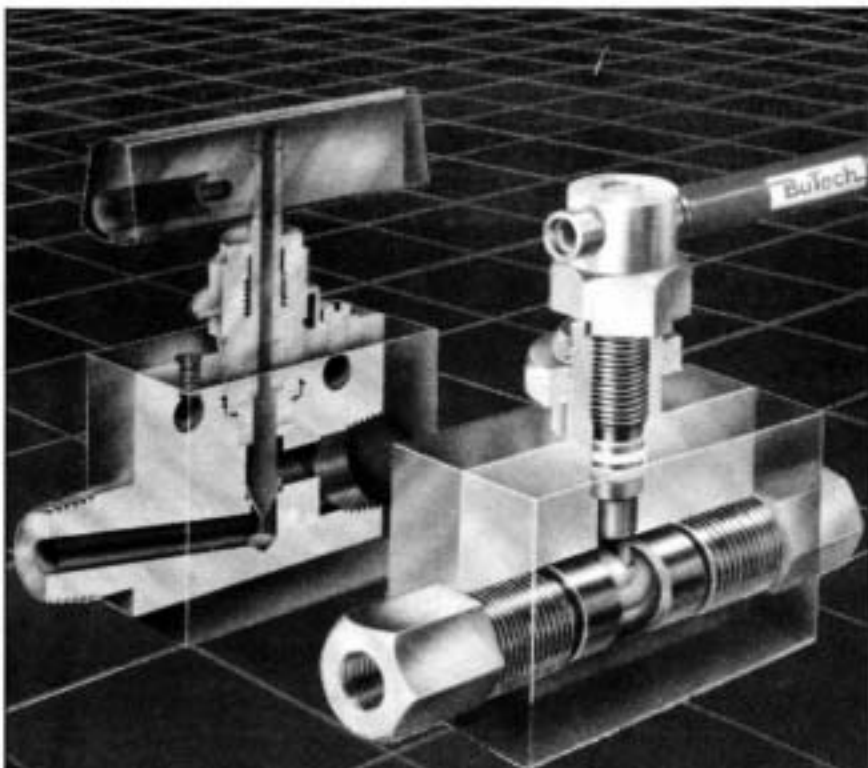
Industry News

Butech Pressure Systems' new condensed catalog is a helpful reference for Butech's complete line of high pressure valves, fittings, tubing and accessories. The catalog includes an overview of connection options, stem types, and body styles available for each Butech valve line - needle valves for working pressures from 10,000 to 150,000 psi; NPT pipe valves for pressures up to 15,000 psi; and ball valves for working pressures up to 20,000 psi. Remote actuators and special applications are also reviewed. To obtain a free catalog, contact Butech Pressure Systems, 4928 Pittsburgh Avenue, Erie, PA 16509, phone: (814)833-4904, fax: (814)833-2612.

NLB Corporation's new multi-gun flow control valve allows users to operate two water-jetting lances from a single high-pressure pumping unit at full pressure. The NLB Model MG10-1000 is rated for pressures from 4,500 to 10,000 psi, with flows up to 32 gpm (16 gpm per lance). Four or more lances can be operated from a single pump with the connection of additional valves. The maximum number of lances and valves depends on the capacity of the pump and lances. Each lance's loading and dumping is controlled independently by its operator. The valve is adjustable for nozzles of different sizes, and the nozzles in lances operating simultaneously need not be the same. For information, contact NLB Corp., 29830 Beck Road, Wixom, MI 48393-2824, (313)624-5555, fax: (313)624-0908.

The Japan Association for Construction-Industry Water Jet Technology (JACIJET) has been organized to promote the dissemination of construction and civil engineering technologies that employ jets of highly pressurized water. Major general contractors, other construction and civil engineering companies, manufacturers of water jet equipment and trading companies established the JACIJET in December 1992.

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76-77-78	\$10.00	\$15.00
78-79-80	\$10.00	\$15.00
80-81-82	\$10.00	\$15.00
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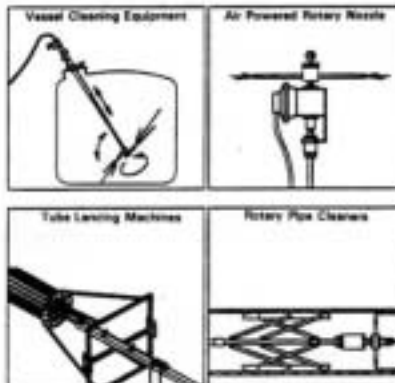


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