



New Protective Suit For Waterjetters



DuPont's high tenacity, air-textured nylon well known for its unmatched performance in durability and strength, and three underlayers of Turtle Skin®, a new patented technology from Warwick Mills that features the latest Kevlar® technology combined with a unique weaving process.

Field and laboratory tests for this patent pending system show significant

improvements in all facets of waterjet protection. Data and additional information were available at the Pumper and Cleaner Environmental Expo International in Nashville, Tennessee, February 26-28, 1998.

While developing Aquashield, DuPont engineers were frustrated by the lack of precision in testing the

(continued on page 4)

DuPont announces a major break-through in protective apparel for the waterjetting market. Aquashield® is a new family of products specifically designed to significantly reduce injuries and the severity of injuries to water-jetting workers. The initial offering includes jacket, pants, apron and spats.

Aquashield features an outer layer of 1,000 denier Cordura Plus®,

(continued top of next column)

Walt Disney's Waterjets



The Innovations Fountain at Future World in the Epcot Center in Florida performs every 15 minutes with 264 jets of water that shoot up to 100 feet in to the sky "dancing" in time to the music. "Spaceship Earth" is in the background. Photograph courtesy of the Walt Disney Company.

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MPW Is Pace Award Finalist

M PW Industrial Services, Inc., of Hebron, Ohio, is a finalist in the 1998 Premier Automotive suppliers' Contribution to Excellence (PACE) Awards programs by Ernst & Young LLP and *Automotive News*. The PACE Awards recognize standout automotive suppliers who have excelled in adapting and reinventing their companies or their products to meet the growing service and quality demands of their customers — the world's major automotive manufacturers.

"It is an honor to be part of this distinguished group of finalists for the 1998 PACE Awards," says Ira Kane, president of MPW. "The people who work for MPW deserve this recognition. Their ingenuity, hard

work and dedicated efforts have delivered unprecedented levels of value to our customers and, ultimately, to the automotive consumer."

MPW is honored for its process of cleaning portable paint containers by high pressure solvent blasting which addresses a crucial issue in the automotive industry today.

MPW developed the high pressure cleaning technology for reusable portable paint tanks. This innovation replaces manual tank entry and scrubbing with a remotely operated, high pressure system. This technology also reduces the number of contaminants going into the tank, resulting in a faster final rinse process. Overall lower operating costs result

from less time required to clean each tank, less labor and a cleaner tank.

Fourteen finalists and eight semifinalists were selected from a record-setting 65 applicants. MPW moves on to the second stage in the application process, which includes a site visit to evaluate both the innovation and the management team. An independent panel of distinguished judges, consisting of industry, academic and civic leaders, will determine the winners of the 1998 PACE Award.

Winners are scheduled to be announced at an awards ceremony at the Henry Ford Museum in Dearborn, Michigan, in late February.



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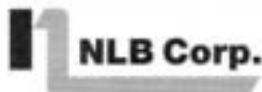
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to remove product build-up, prepare surfaces and solve tough cleaning problems. For efficiency and economy, NLB waterblasting is hard to beat.

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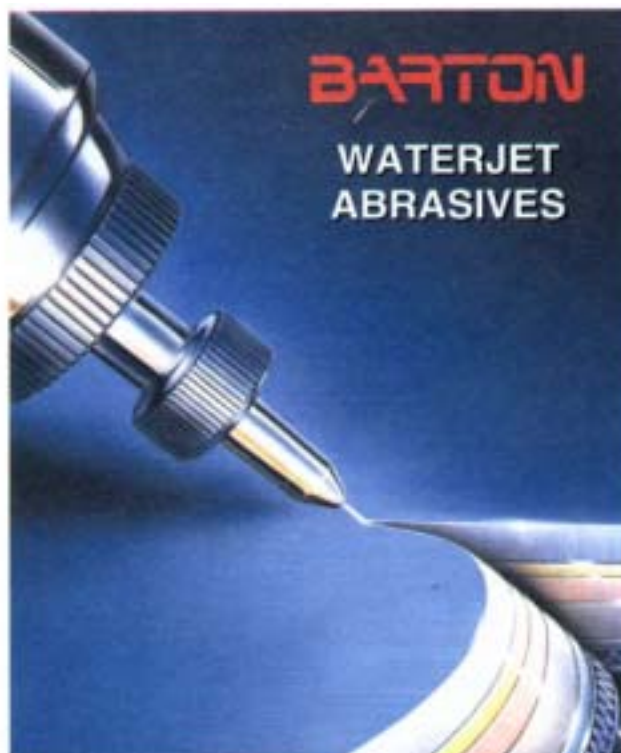
Hydrodemolition Robots

Aquajet Systems AB of Sweden, a manufacturer of robotic hydrodemolition equipment, has recently launched a comprehensive new line of hydrodemolition robots. The new range of machines features a variety of improved features that have not been seen before on previous units. The new self-propelled robots, with fully hydraulically operated functions, can rotate the power head through 360 degrees, tilt it 90 degrees and it can slide in all directions, which provides improved flexibility and reach in situations where access can be limited. The solid and simple-to-assemble mast system also means vertical works can be carried out with ease — an operating height to six meters is standard on the machines. Additional operating height is available as an accessory.



All robots are computer controlled and have a built-in control system for high efficiency concrete removal.

A wide range of accessories and cutting nozzles are also available. For more information, contact: **Henrik Lundel, Aquajet Systems AB** at telephone: 0383-50801, fax: SE556314617301, or e-mail: aquajet@aquajet.se.



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(continued on page 9)

Waterjet Surface Preparation Featured In New NLB Brochure

A new brochure from NLB Corporation documents the performance of high pressure waterjetting in surface preparation applications, as well as its environmental and economic benefits. The eight-page, four-color brochure also details U.S. and international standards for surface preparation, with photographs of the various condition levels, and includes a pull-out guide to these standards.



High pressure and ultra high pressure waterjetting (up to 36,000 psi, or 2,500 bar) can produce a "white metal" finish without the grit and dust of sandblasting. This improves efficiency and maximizes operator comfort and safety. Graphs and illustrations, with photographs of a painted surface before, during and after waterjetting, demonstrate the results that can be achieved.

The new brochure also features NLB's wide range of pump units and accessories with photographs and specifications. A comprehensive chart with volume, flow and pressure ratings helps the reader select the proper pump.

NLB Corp. is a leading provider of high pressure waterjetting systems and accessories for surface preparation, heat exchanger cleaning, paint and sludge removal, tank cleaning, concrete hydrodemolition, concrete and pipe cutting, and more.

Snow Jets



Oshkosh Truck Corporation of Oshkosh, Wisconsin, produces a truck mounted snowblower with a 52-inch-diameter auger and a blower with a 59-inch-diameter impeller. The giant snowblower creates an impressive snowjet.

Photograph courtesy of the Oshkosh Truck Corporation.

New Protective Suit For Waterjetters, from page 1

critical aspects of waterjetting, such as "stand-off" and "swipe." Both of these tests required a person to stand holding the nozzle at a specified distance from the test surface, then "swipe" the nozzle from side to side. Naturally, the force of the water made it impossible for a human to hold the nozzle at a precise distance from the test surface for accurate data. Therefore, DuPont developed a test machine that can accurately measure stand-off and swipe. This machine, dubbed the "Wiseman" Waterjetting Test Unit, was developed by Senior Research

Associate Timothy R. Wiseman Sr. Mr. Wiseman says, "For the first time, this unit enables us to repeat exact test conditions time after time which will help us to further enhance protective equipment and apparel today and in the future."

Aquashield is available for commercial sales as of March 1, 1998. It will be distributed by NLB Corporation. For more information, call Keith Watson at DuPont: (302)366-6826, Mr. Wiseman at DuPont: (804)383-2546, or Jeff Shook at NLB: (248)624-5555.

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polyflex™ has been the world leader in high pressure steel reinforced thermoplastic hose technology for over 27 years, and is recognized for the consistent reliability of its products and service.

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Other products include: Multi-Line Hose assemblies, Stainless Steel Valves, Fittings, and Quick Disconnect Couplings. **polyflex™** is staffed with knowledgeable high pressure specialists and engineers that are ready to answer your questions and to assist you with technical specifications.

For more information call or fax your local Parker distributor or Parker Hannifin's - Parflex Division - **polyflex™** Operations.

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1997: A Great Year For Waterjet Connection

A total of 2,261 leads were generated nationwide through Waterjet Connection, a waterjet contract cutting service group with over 80 systems throughout the United States. That's an average of almost 200 leads per month. For more information on how to take advantage of Waterjet Connection, please contact Paula Genova at (330)633-7698.

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Look For DynaFlow, Inc. On The Internet

DynaFlow, Inc. announces the availability of information on its patented DynaJets™ waterjet technologies on its web page at <http://www.dynaflow-inc.com>. DynaJets™ employ a number of fluid dynamic phenomena including cavitation and acoustic resonance to produce jets of increased erosivity. The web site provides an overview of these technologies and their applications, lists

of references, and information on other company capabilities and areas of expertise. DynaFlow, Inc. provides research development and testing services and products in the areas of waterjet technology, fluid dynamics, cavitation, filtration, acoustics, materials evaluation, and engineering and educational software. DynaFlow can also be reached by telephone at (301)604-3688.

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Automatic Waterjet Car Wash

PDQ Corporation of Green Bay, Wisconsin, manufactures and markets a computer controlled touchless car washing system that uses only waterjets to clean the cars. This system, the Laserwash® 4000, senses the position of each vehicle and adjusts itself to the optimum cleaning distance.

The system generates high pressure jets of 1,100 psi with a flow rate of 39 gallons per minute. A low pressure presoak system operates at 175 psi and 2.5 gallons per minute.

This car wash system was developed in New Zealand by Allen Jones who is a partner in PDQ. PDQ is a leader in the touchless car wash market in the United States.



For more information contact David Johnson, PDQ Manufacturing Inc., 320 Packerland Drive, Green Bay, Wisconsin 55303, telephone: (920)494-1110.

The Ultra Blast 36

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WJTA Request For Proposals

The Waterjet Technology Association (WJTA) is requesting proposals for the preparation of reports on topics of interest to our membership. These reports will be literature searches, surveys, and data gathering activities only, not research and development work. These reports will then be made available to WJTA members at a minimal cost.

The following topics are of interest:

1. Spark hazard, or lack of, with abrasive waterjets.
2. The use of pipe threads and other pipes found in high pressure connections.
3. Concrete demolition rates using waterjets.

4. Market size for waterblast equipment or services.
5. An index of papers in WJTA publications, cross-referenced by subject and author.
6. Types of abrasives — characteristics and applications.

Please submit your proposals to:
WJTA, 917 Locust Street, Suite 1100,
St. Louis, MO 3101-1413.

Include a description of the scope of work to be performed, total cost, author's credentials and anticipated time to complete the work. Proposals will be evaluated and funds committed

by the WJTA Monograph Committee (John Wolgamott, Thomas J. Kim, Ph.D., Lydia Frenzel, Ph.D., and Mohamed Hashish, Ph.D.). Once a topic has been assigned, it will be announced in *Jet News* and members will be encouraged to submit information to the author(s). Proposals for reports on other topics will also be considered.

A total of \$5,000 has been budgeted for the first reports. The number of topics this will fund will depend on the cost of each report. If the initial reports are judged as worthwhile, more funding will be made available and additional reports will be solicited. WJTA members are encouraged to submit ideas for other topics to study.

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When safety matters,
Don't send men
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WJTA New Members, from page 3

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Safety Committee Solicits Comments On *Recommended Practices*

The WJTA Safety Committee solicits comments regarding improvements to the publication, *Recommended Practices for the Use of Manually Operated High Pressure Waterjetting Equipment*. While the *Recommended Practices* is reviewed periodically at the biennial conferences of the Waterjet Technology Association, your comments and suggestions for improving the publication are welcome anytime. We invite your comments and suggestions.

Please address your suggestions to:

Safety Committee
c/o WJTA
917 Locust Street
Suite 1100
St. Louis, MO 63101-1413

1998 Calendar Of Events

- **March 20-23:** PWNA 6th Annual Conference & Exposition, Phoenix, Arizona. For more information call: (800)393-7962.
- **April 1-4:** Stonetech Shanghai '98, the 5th China International Stone Processing Machinery, Equipment and Products Exhibition, will be held at the Shanghai Exhibition Centre in Shanghai, China. For more information call 39-585-833445/832108 or fax: 39-585-833447/833449.
- **April 20-25:** Hannover Fair '98, Hannover, Germany. For more information call: (609)987-1202.
- **June 1-5:** The Spanish National Association of Mining Engineers organizes the Mining and Metallurgy International Congress every four years in Spain. This year's event takes place in Valencia, Spain. For more information, call 96-333-28-18, fax: 96-333-27-76, or e-mail: factoria@bemarnet.es.
- **September 21-23:** 14th International Conference on Jetting Technology, Brugge, Belgium. For more information call: 44(0)1234 750422.
- **September 24-26:** Pumper and Cleaner Environmental Expo, Long Beach Convention Center, Long Beach, California. For more information, contact: Phil Lane, Cole Publishing, 1720 Maple Lake Dam Road, P.O. Box 220, Three Lakes, WI 54562-0220, phone: (800)257-7222, fax: (715)546-3786.
- **October 5-8:** PowerClean '98, Las Vegas, Nevada. For more information call: (800)441-0111.

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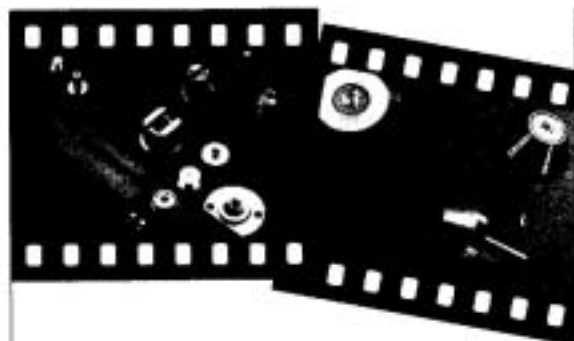
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High Pressure Equipment Company Introduces New Three-Way Ball Valve

High Pressure Equipment Company has expanded their line of specialty valves with a new three-way ball valve. This valve provides effective shut-off of liquid or gas flow at pressures up to 20,000 psi.



The three-way ball valve is available in two styles. The standard configuration of the valve requires a one-half turn to change port outlets and allows for complete shut off. A second diverter style of the three-way ball valve allows for merely a one-quarter turn to change the port outlets.

All High Pressure Equipment ball valves are available with electric or pneumatic actuators and the components are nearly all stainless steel, guaranteeing consistent operation under the most severe applications. The three-way ball valve is constructed with Teflon packing which provides leak-free service up to 450 degrees Fahrenheit. Other packings, including Polypak and Grafoil, are available upon request.

Other features of the new three-way ball valve include a stainless steel handle, dual mounting holes, removal seat connections, replaceable PEEK

seats, a blowout-proof stem, and a high tensile 316 stainless steel body and ball.

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

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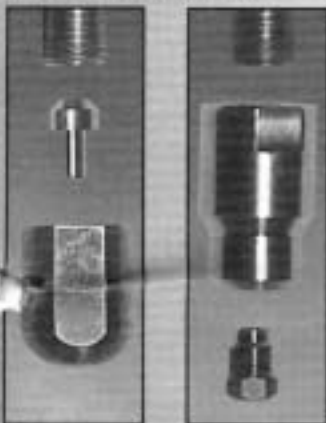
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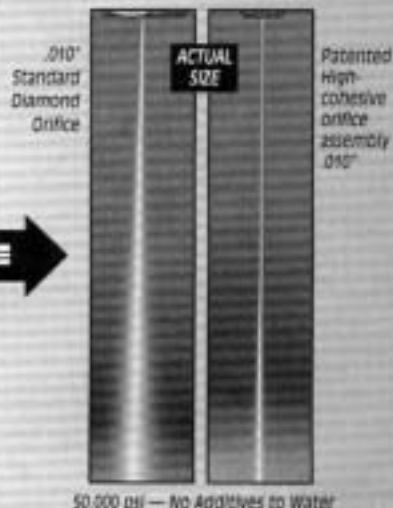
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MPW Goes Public

M PW Industrial Services Group of Hebron, Ohio, raised \$31.4 million on December 2, 1997, by selling 3.75 million shares at \$9 a share in an initial public offering. The stock trades on the NASDAQ stock market under the symbol MPWG. The company expects to use the proceeds to reduce debt, with any remaining funds used for general corporate purposes including possible acquisitions. The offering represents a 37.7 percent share in the company. Monte Black, the founder of the company, maintains a majority stake.

WJTA Seeks Action Photographs Of Waterjet Applications

The Waterjet Technology Association is seeking black and white or color photographs, negatives, or slides of a variety of waterjet applications. Selected photographs will be used in WJTA publications, newsletters and mailings. Any photographs that are published will include a full credit line recognizing the contributing company or individual.

Possible applications include, but are not limited to, safety, industrial cleaning, cutting and hydrodemolition in a variety of industries. Our goal is to promote the technology and industry in general, so avoid sending promotional prints of showroom equipment or supplies that are on display and not in use.


Photographs will be interesting and informative to your colleagues, but more importantly, the photographs will help demonstrate to potential users the possibilities and advantages of waterjet technology versus traditional methods for a variety of industrial and other uses.

For more information, contact LeAnn Hampton at the WJTA office.


Waterjet Cutting Techniques Course Scheduled May 3-6, 1998

Richel, Inc., a waterjet consulting firm, is offering a three-day (with an optional fourth day) hands-on waterjet cutting course, targeted at anyone exploring opportunities in this, an exploding business. Mornings are devoted to theory and afternoons to hands-on work, giving attendees the opportunity to operate a system. Attendees are encouraged to bring

samples of materials they want tested. Specific attention to starting up and operating a waterjet business, including marketing, administration, how to price work, and typical selling rates is always popular with entrepreneurs who attend. A full and complete understanding of the industry, how it relates to your business and your opportunities is assured. For more information, call (330)633-7698.



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