TRENCHLESS TECHNOLOGY™

Serving The Utility, Pipeline And Distribution Construction Markets.

June 1994

Avanti International's Headquarters & David Magill

Support Expanded Rehab Activities

Also in this Issue:

- Premier Issue: No-Dig Engineering
- Rehab Project Saves Flooded Basements
- Grouting Stabilizes 72-in. Pipe for Scott Paper

Bulk Rate
U.S. Postage
PAID
Shepherdsville, KY
Permit No. 75

Avanti Leads in Industry Development & Education

by Allen Thomas

In 1978 when Avanti International was formed by four rehabilitation contracting companies, David Magill was hired as its first employee and the company's first president.

In the 16 years since, he has guided the company to a position of dominance in the chemical grouting industry by following sound business principles and developing a leadership focus that has been instrumental in the growth of the industry and of the company. Magill has accepted leadership positions in key trade associations and has created company functions such as grouting seminars and a newsletter that add to the leadership focus.

In the early days of rehabilitation, chemical grouting was the primary method of trenchless repair. The National Association of Sewer Service Companies (NASSCO) was created in 1976 to serve the companies and contractors working in the field of wastewater collection system rehabilitation and maintenance. Magill has been active in the organization since the founding of Avanti. "It is important to be involved in all aspects of the industry," Magill said.

Under Magill's leadership, the company has grown by offering a wider variety of products and education about the use of the chemicals and customer service. Magill said, "We provide assistance to a customer if he is attempting a difficult job or if he is trying to do something new. A good example of this is the job that was done in Mobile. Both Jay Schrock and Rembco are very experienced in this type of grouting, but we had our technical director, Don Mack, spend a lot of time on the job to make sure that the grout was right." *(See separate story, page 32.)*

Magill said that in many cases it is necessary to have the grout tested to be sure that it performs the way they want it to. "We had an outside agency test the compressive strengths of various grout/soil mixtures. Then we developed a grout mix with the help of Rembco to match the job requirements."

In the early days of the business, there were only two grouts available—acrylamide gel and urethane foam. "Shortly after we started business we began offering both chemicals. Avanti was the first company in the USA to provide competing chemicals," Magill said. "Prior to that the chemicals were supplied by the equipment manufacturers, so the source of supply was limited. One of the main reasons Avanti was started was to offer a variety of products to the industry. We have continued to offer competing products, with good acceptance by engineers and municipal officials who appreciate a choice."

The choice has grown from the original two grouts to over 15. Avanti has expanded the product line by introducing and, in many instances, developing new grouts to help customers solve problems. An ongoing research and development program is devoted to creating new grouts in response to customer needs.

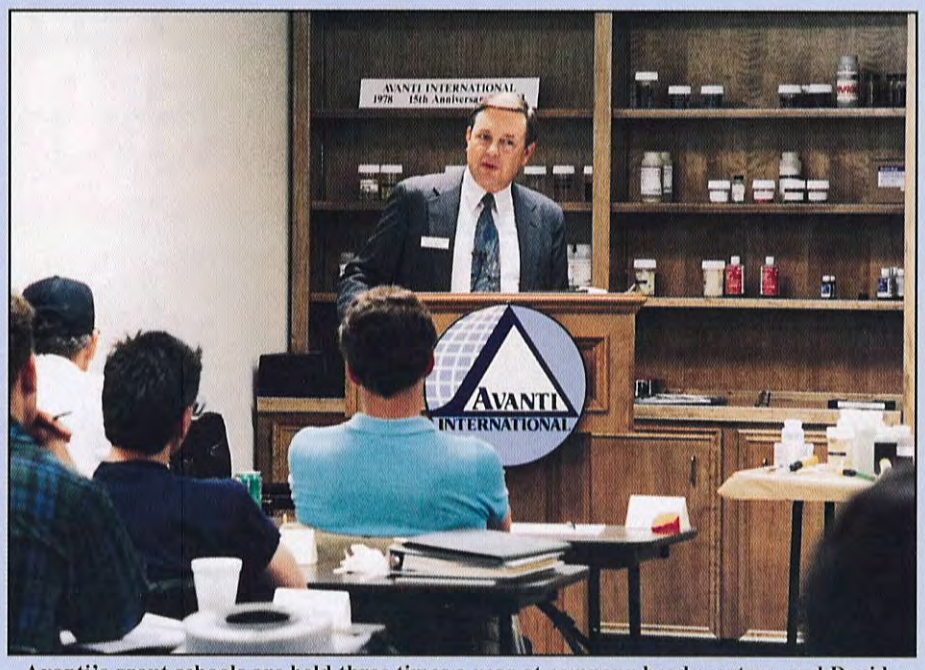
Avanti's strategy of focusing on the correct application of the grout, and not just on the equipment used to place it, allowed the company to expand into new markets. Magill explained that once they started selling the urethane products, they became aware of its ability to waterproof concrete structures.

"Traditional methods of waterproofing would create a grout barrier

Avanti International's three-year old headquarters builiding is presently under expansion to add 8000 sq. ft, primarily warehouse space, which is to be completed by early fall.

outside of the structure by injecting grout through probes into the soil. With urethane we developed a method of drilling the crack at an angle and placing the urethane in the center of the concrete. This opened up the subway market to us, and now over 35 percent of our business is in structural water control."

Education is one of the most important methods Avanti uses to sell its products. Magill said, "We conduct several training schools a year at our headquarters in the Houston area. The sessions are divided into two parts—one for pipeline and manhole grouting and one for structural waterproofing. We spend two days in the classroom and in the field showing students how to apply the grout. The focus is mainly on the application of the chemicals as well as the operation of the equipment."



Avanti's grout schools are held three times a year at company headquarters, and David Magill takes an active role in each one.

Magill pointed out that the proper operation, cleaning, and maintenance of the equipment is included. But the most important thing they want to accomplish during the training session is the correct application of the grout. "In many instances the equipment required is minimal. The critical thing is understanding how the chemical works and how it should be applied. If we get that done in the training, then chances are the job will be done correctly and the problem will be solved. This is the type of win-win situation we look for in all of our business transactions."

Customer service is a priority for Avanti. Company personnel work closely with clients to specify appropriate grouting gels. They are often found on the jobsites to assist customer/applicators with unforeseen problems. An important Avanti business practice is to avoid any competition with its customers. Avanti is not in the contracting business; job leads are passed on directly to clients.

Since the founding of the company in 1978, Magill has been instrumental in the growth of the rehab industry.

Additionally, Avanti publishes *Water Control Quarterly*, a 12 to 16-page newsletter which is distributed, free of charge, to over 10,000 engineers, contractors, maintenance managers and municipalities. The publication was started in 1983. Eleven years later, it's a quarterly publication with regular issue dates, useful information and articles of interest to the rehabilition audience, paid advertisements, and contributing writers.

The original wastewater collection system market remains the largest and most important market for Avanti. "The collection system rehabilitation business has always been the base of our sales," Magill said. "We have had steady growth in sales over the past 15 years and we expect that most of our growth in the future will be in the wastewater market."

In Magill's opinion, the wastewater industry has a cohesiveness that helps the industry grow. The reason, according to Magill, is that the original guidelines and funding for rehabilitation came from the federal government and it created a common bond among engineers, municipalities, contractors and suppliers. There are communication channels, trade associations, standard specifications and guidelines that all parties use and understand. This situation helps spread the word about new methods of doing things and supports the growth of the market.

One of the unifying forces in the wastewater market is NASSCO, and Avanti is one of the most active members of the association. Magill is currently serving as chairman of the grouting task force.

"The use of chemical grouting has not grown as fast as some of the other, newer, rehabilitation products," Magill said. "For many years grouting was the only 'trenchless' method of sealing leaking pipes. And there were some instances where it wasn't applied correctly. These occurrences caused some engineers to doubt the effectiveness of the product so they were not comfortable specifying it as a rehabilitation method."

The Environmental Protection Agency (EPA) has been studying the acrylamide product to determine if there is a potential health hazard to people handling it. They have not made a determination yet, but this situation has also caused some engineers and customers to be undecided as to the use of grout. Magill pointed out that there are substitute materials for acrylamide but if this is not understood, the entire family of grouts gets lumped together and the result is that none of them are used. When this happens, either the problem is not corrected or some other, more expensive, solution is specified.

"One of the most positive things that has happened in recent months which helps support the effectiveness of chemical grouting in I/I control, was the story on the Miami/Dade Wastewater Department's grouting program," Magill said (*TT*, May/June '93). "They are proving the results of their program by measuring the amount of flow before and after the joints are sealed. They are operating 14 television and sealing systems, two shifts per day and documenting the reduction in the flows, making this the largest sewer grouting program ever undertaken."

The grout being used by Miami/Dade crews is the Avanti product AV-118. Avanti regional sales manager Bill O'Donnell describes it as a water solution of acrylic resin with a low toxicity and physical characteristics that make it a safe-to-use grout that results in a gel that provides an effective seal.

"AV-118 was developed for Miami/Dade," O'Donnell said. "They wanted a product that had low toxicity and the physical characteristics of the original acrylamide so we formulated it with their assistance."

As chairman of the NASSCO grouting task force, Magill is working to pull other suppliers together to develop a campaign to promote the benefits of chemical grouting. The proposed message is that chemical grouting continues to be the most cost-effective method of correcting leaking pipe joints and that there is a variety of dependable materials available to do the job.

To support the reliability and provide information on the properties of chemical grouts, Magill has been volunteering his time to help establish a grouting institute at the University of Houston. A proposal for the formation of the Center for Innovative Grouting Materials and Technology (CIGMAT) states its mission: "To foster improved understanding of grouts and their applications and to conduct and participate in basic and applied research to better/improve current technology." The proposal is moving through the approval process within the university, and Magill anticipates that it will be in operation before the end of the year.

The CIGMAT is proposed as a result of growing demand from industry for better management of information on grouts, grout applications to meet the current demands in construction and rehabilitation of infrastructure, and in solving environmental problems.

During Avanti's field training, Dennis Parker, regional sales consultant for CUES, demonstrates the use of a television and sealing system.

The major goals and functions of the institute are to:

- Develop a data base for grouts and grout applications in infrastructure rehabilitation, construction and repair of other concrete structures, sewers and soils.
- Function as an information center on grouts and their applications.
- Develop a family of expert systems.
- Conduct research on concrete repair, sewer repair and soil stabilization.
- Develop a library on grouts and applications.
- Organize seminars, courses and workshops.
- Produce newsletters and an annual report.
- Develop a handbook for grouts and grouting techniques.

Dick Barry, president of Rembco Engineering in Knoxville, said that he was ready to support the center and help in any way possible. "Our company specializes in soil stabilization projects and we use a variety of chemical grouts. Over the years we have developed a number of ways of solving problems with chemical grouts. Our industry has not been able to grow as much as it should because of the lack of understanding about how the grouts work and how they should be applied. If this proposed institute could have been started 15 or 20 years ago, it would have changed the entire business."

David Magill has a background that seems to be tailor-made for the position of president of Avanti. His education includes an undergraduate degree in industrial engineering from Virginia Polytechnical Institute, Blacksburg, Va. and an MBA from Louisiana State University, Baton Rouge, La.

From 1970 to 1974 Magill worked for Albert Switzer and Associates, consulting engineers in Baton Rouge, where they pioneered sewer system evaluation studies (SSES) under the early EPA grant programs. The projects were done in Louisiana, Arkansas, Mississippi, and Texas. During this time, Magill became acquainted with the Naylor contracting company. In 1975 he accepted a position with them in Houston to manage their municipal contracting activity, which consisted of their own SSES work and the subsequent rehabilitation consisting primarily of chemical grouting and sliplining.

Since Naylor was one of the founding companies of Avanti, Magill was the logical choice as its first employee. The company now has almost 20 employees. In 1988 Magill purchased controlling interest in the company. Under his direction, Avanti has become the predominant supplier of chemical grouts, grouting pumps, accessory

equipment and structural water control products for North America.

Product sales are handled by six full time salesmen with four others serving in sales support roles. Approximately 50 dealers resell Avanti products, primarily in the structural water control market.

The company has been instrumental in introducing new products to the market. Since 1978, Avanti grouts have increased in number from two to fourteen, plus ancillary products.

Avanti is moving strategically to broaden its product lines. In the sewer market, Roo-Pru has been added to kill the roots in sewers, which is required prior to grouting. Root removal is also a maintenance requirement, but Avanti is providing the product for its tie-in to grouting. Magill stated, "To the best of our knowledge, we provide a root control product which is 100 percent in compliance with existing EPA and state regulations covering these chemicals."

"Many sewers are not grouted because the total length between manholes has one or more breaks in the pipe," said Magill. "That's why we added Econoliner to make point repairs possible in situ—the trenchless way! After repairing the breaks, the sewer can then be grouted at a fraction of the costs associated with total relining." Econoliner is a patented product from Australia, providing short to medium length structural repairs to damaged sewers, six to thirty inches in diameter and generally six to ten feet in length.

In the concrete market, Avanti took on the German-based BBZ products—Fuko Injection Hose, Duroseal Inject, Duroseal gaskets and pastes, and related chemical products. "Use of Fuko in initial construction eliminates the need to drill and pump grout in the construction joint area when leaks develop later on," said Magill. "The patented Fuko Hose is the only re-injectable hose on the market—truly a better idea for structural water control. Use of this new product eliminates the need for a waterstop, and that savings pays for the hose installation. The injection material is Duroseal Inject, a vinyl ester which swells on contact with water. So, Avanti can provide water control anwers for new construction as well as provide products to the rehabilitation market," explained Magill.

John Linquist (left) and Jeanne Griffin review product inventory in Avanti's well-stocked warehouse, which is now being expanded.

Magill talked about the new product introductions as a part of the company's business plan. "We want to grow to the point where we are offering a wide variety of products to our base markets. We would like to expand by selling more to our existing customers, which should help us to grow as well. But it also requires a tremendous effort to educate the industry about the proper use of the products," Magill said.

"We look for win-win situations. We offer a quality product and we help make sure it is used correctly, so that our customer is happy and the problem is solved. We believe this ensures longevity for Avanti and an excellent outlet for manufacturers' innovative products and processes."

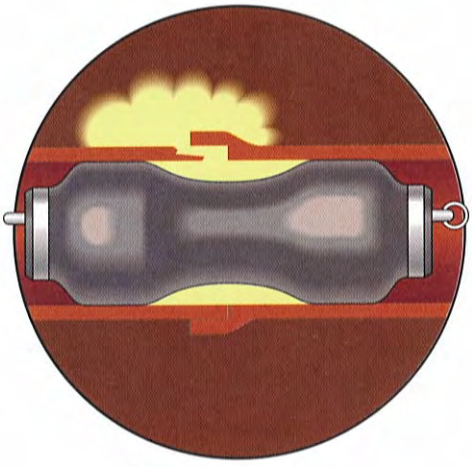
Allen Thomas is editorial and marketing consultant for ***Trenchless Technology.***

Reprinted from:

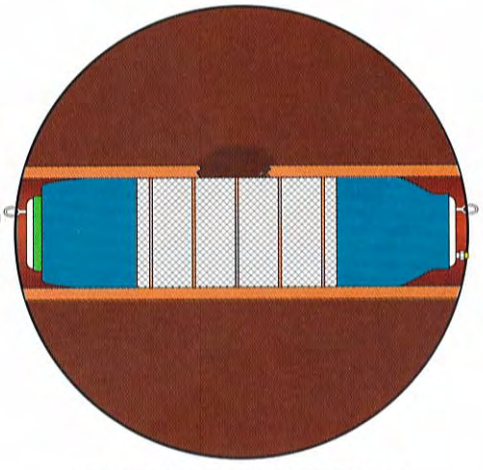
TRENCHLESS TECHNOLOGY

Serving The Utility, Pipeline And Distribution Construction Markets.

Superior technologies for superior results

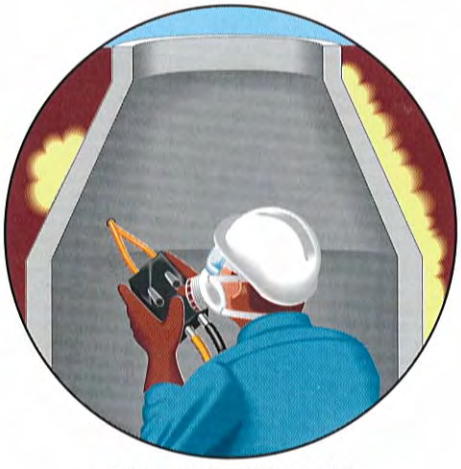


PIPELINE GROUTING



TRENCHLESS POINT REPAIR

SOIL STABILIZATION



MANHOLE GROUTING

CRACK INJECTION

STRUCTURAL WATER CONTROL

We've built our business on quality products and technologies delivered at the best possible prices, and we back them with outstanding service and technical support. So, no matter where you are in North America, if you have a water control problem, chances are very good we have a technology to solve it.

F. David Magill, Jr., P.E.
President

AVANTI INTERNATIONAL

822 BAY STAR BLVD. • WEBSTER, TX 77598-1528
(800) 877-2570 • (713) 486-5600 • FAX: (713) 486-7300