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JANUARY 2018
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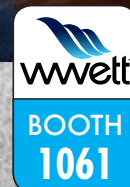
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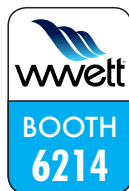


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Marvel Sewer and Drain co-owners Ben and Emily Smith launched their Fridley, Minnesota-based company in 2012. The company specializes in drain cleaning, lateral lining and point repair. (Photography by Brad Stauffer)

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Kayla Bisnette Jim Koshuta

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Luke Laggis

It Starts With Good Training

Seek out the resources that can improve your business and help your employees grow

One of the most enjoyable parts of my job is connecting with contractors who are excited about their work and the industry as a whole. Ben Smith certainly fits the bill.

Smith's company, Marvel Sewer and Drain in Fridley, Minnesota, is featured in this issue of *Cleaner*. I first met Smith at the WWETT Show, and we've emailed back and forth several times since.

I've even mentioned him in this column a couple times. You can't talk to him for a minute without recognizing his enthusiasm for his business and the work he is doing. His energy is contagious.

He wasn't always excited about the business. He didn't even view it as an industry, really. It was just a way to pay his bills. But the deeper he got, the more he grew to appreciate it and realized he could go into business for himself. It was a significant step, but he still thought of himself as nothing more or less than a drain cleaner. Then, he began to see the bigger picture.

After discovering this magazine and going to his first trade show, he realized there was much more to the industry and that there could be much more to his business, as well. There's also a lot more to his story, so I hope you'll read it. It's one that should be used to show new people the potential this industry offers.

The wastewater industry has so many positives, but it doesn't have a great track record of drawing in young, qualified workers. People like Smith could help change that.

Another important part of getting younger people involved is offering good training so they can see a good career path and opportunities to learn. That's part of the motivation behind the new series, Training for Success, beginning in this issue.

There's no drain cleaning apprenticeship program. Most states don't even require licensure, yet training and education are major keys to success. Providing new hires and existing employees with opportunities to learn and grow is a good investment for your business and the future of the industry as a whole. With that in mind, we'll profile a different training resource or opportunity in every issue over the next 12 months.

This month, it's on the National Association of Sewer Service Companies. NASSCO's training and certification programs are the industry standard. The organization's pipeline, manhole and lateral assessment certification programs are not only important for the standardization of the industry, but increasingly, they are required for jobs under bid. They are also continually updated to include new technology and processes.

NASSCO has been around since 1976, and its certifications and training continue to be at the forefront of training and education for the industry.

In the coming months, we'll have stories about other resources and opportunities. All have something unique and valuable to offer. Keep reading to find more ways to improve your business and help your employees grow.

Enjoy this month's issue. **c**

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MONEY MAKERS

Grout Rigs Prove Key for Manhole Rehab Contractor’s Profitability

Equipment breakdowns during deadline-sensitive projects hurt profitability and damage business reputations. That’s why manhole rehab specialist Kim Construction Company in Steger, Illinois, featured in the September 2017 issue, owns eight CG-570 progressive cavity grout pumping rigs made by ChemGrout. In this online exclusive, learn more about how they help the company’s bottom line. [»cleaner.com/featured](http://cleaner.com/featured)



ADDING EQUIPMENT

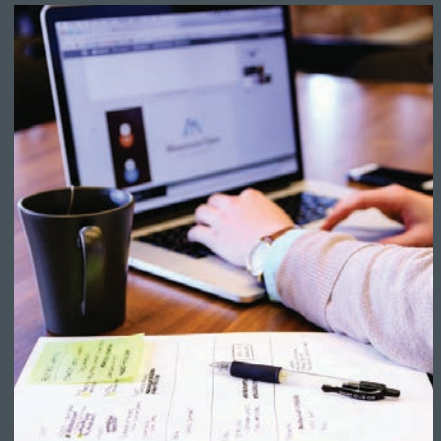
Companies Share Purchasing Strategies

You need certain pieces of equipment to effectively run your business. That part is obvious. But there is a lot to consider in how you go about acquiring that equipment. See if the experiences of the seven companies featured in this story can spark an idea you can incorporate into your own business. [»cleaner.com/featured](http://cleaner.com/featured)

BUSINESS PROMOTION

Year-Round Marketing Will Pay Off in 2018

There may be an ebb and flow to your workload during the course of a year, but you shouldn’t treat your marketing efforts in the same manner. Whether you’re smack in the middle of your busy season or experiencing a slow stretch, a balanced marketing approach throughout the year can give you the greatest benefit. Check out some tips on how to accomplish that in this online exclusive. [»cleaner.com/featured](http://cleaner.com/featured)



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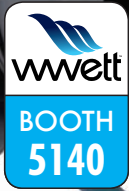
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contractor
PROFILE

« Marvel Sewer and Drain technician Alex Pannez pours resin into a transition liner with help from company co-owner Ben Smith.

Building a Support **NETWORK**

New technology and the advice of trusted industry veterans guide a sewer and drain company into new territory

By Ken Wysocky // Photography by Brad Stauffer

There are a lot of good drain cleaners. There are also a lot of good drain cleaners who don't know how to run a business. Ben Smith spent some time in the latter camp, but then he got educated.

When Smith struck out on his own in 2012 and established Marvel Sewer and Drain, based in Fridley, Minnesota, he considered himself a drain cleaner — nothing more, nothing less. Today, he's proud to be a drain cleaner and a businessman who has doubled his revenue every year for the last five years through key investments in technologically advanced equipment.

The story of how Smith evolved from a technically proficient contractor into a savvy entrepreneur illustrates the value of effectively using social media, such as Facebook and online reviews. It also underscores the importance of investing in equipment that both increases revenue and productivity and differentiates a company from its competitors.

"When I started out, I was a bad business owner," he admits. "I enjoyed the tools, and I enjoyed the work. ... I was a great drain cleaner, but I didn't know the first thing about doing invoices or accounting. I was basically just a dude at a job, making money so I could go on dates."

Smith says two things spurred his business awakening: *Cleaner* magazine and the Water & Wastewater Equipment, Treatment & Transport Show. He first saw the magazine in

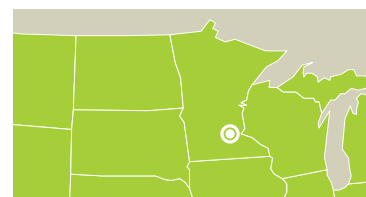


▲ Alex Pennaz feeds the end of a Clog Dog drain cleaning machine made by Clog Squad into a clogged sink drain.

the office of his former employer, where he worked part time while trying to establish his business. "At first, I thought it was a joke — the silliest thing ever," he recalls. "Then, I started reading it and realized what a huge industry this is.

"I subscribed right away and that's what really enlightened me — showed me there was more to this than just closing an invoice and moving on to the next job," he continues. "I saw there was so much more I could do to better myself."

While *Cleaner* jump-started his business education, the WWETT Show exposed Smith to the benefits of new technology. He attended his first show in 2016 and says it was a game changer. He invested in a PipePatch point repair system (made by Source One Environmental), which instantly diversified his business.



Marvel Sewer and Drain LLC

LOCATION: Fridley, Minnesota

FOUNDED: 2012

OWNER: Ben Smith

EMPLOYEES: One

SPECIALTIES: Drain cleaning and pipe lining

SERVICE AREA: Minneapolis-St. Paul metro area

WEBSITE: www.marvelseweranddrain.com



“When I started out, I was a bad business owner. I enjoyed the tools, and I enjoyed the work. ... I was a great drain cleaner, but I didn’t know the first thing about doing invoices or accounting.”

Ben Smith

Ben Smith sets up a Quik-Shot inversion system in the basement of a south Minneapolis home and the start of a lateral lining job.

“That really set me free ... because there weren’t a lot of people doing point repairs in my service area (Minneapolis-St. Paul metro area),” Smith says. “Going to no-dig technology was huge — probably doubled my revenue in my first year.”

Smith also learned another valuable lesson during his early years: Being the cheapest guy in town is a sure-fire path to failure. “When you start out, you feel like you have to be the cheap guy (to get established),” he notes. “But I believe that trying to deliver quality, speed and price isn’t possible — you can only have two of those things. You can drive yourself mental trying to do all three. So you have to choose, and I chose quality and speed.”

ROUNDABOUT ROUTE

Smith, 33, never intended to get into the drain cleaning field. But after about eight years working as a bartender, along with doing construction work during summers, he decided to make a drastic change. “The bar scene was getting disgusting, so I quit, even though I didn’t have a job,” he says.

Smith’s father, David, was working as a drain cleaner for a Twin Cities-based contractor. He agreed to pay Smith’s rent in exchange for working as an on-the-job helper — and getting some drain cleaning training along the way. “I found I really enjoyed it,” Smith recalls. “You get a lot of ‘attaboys’ from customers every day because you solve their problems and they get to go back to their normal lives. You feel like you’re contributing. It just sort of spiraled from there.”

While Smith established his company in 2012, he spent the first several years working primarily as a subcontractor for his father’s employer while trying to build his own customer base. Smith named the business Marvel Sewer and Drain because he’s a self-described “nerdy” comic-book enthusiast; he even named his yellow Labrador Marvel.

With financial assistance from his father, Smith bought some basic pieces of drain cleaning equipment: a MyTana Mfg. M844, a RIDGID K-45 and a Ken-Way Jr. (from Ken-Way).

Today, his roster of equipment includes a Quik-Shot lateral lining system made by Quik Lining Systems; a RIDGID K-3800 drain machine; a Cal Tube Packer point-repair system and a Clog Dog drain cleaning machine made by the Clog Squad; three RIDGID pipeline inspection cameras (a SeeSnake MAX rM200B, a standard SeeSnake and a SeeSnake microDrain); and a RIDGID NaviTrack Scout sonde locator.

EMBRACING SOCIAL MEDIA

Smith says social media has played an important role in his success, particularly online reviews that give his company a higher internet profile. While word-of-mouth referrals are the engine that drives much of his business, he also relies on an app called Real Time Reviews, which he says is a powerful marketing tool.

The process is fast and simple. After completing a job, Smith asks the customer if they're willing to provide a review of his work. If they agree, he calls



Ben Smith uses a large Clog Dog and a RIDGID SeeSnake to clean and inspect a customer's lateral line.

Strength in numbers: Facebook group helps drain cleaner grow

Facebook can be so much more than a way of keeping in touch with friends and family. Just ask Ben Smith — the owner of Marvel Sewer and Drain in Fridley, Minnesota — who says the social media platform has been instrumental in helping his company achieve significant growth over the past several years. It has also provided him with a tuition-free business education.

More specifically, Smith relies on the Sewer Roundtable, an informal group of roughly 75 drain cleaning and trenchless pipe-rehabilitation contractors, formed nearly two years ago by Ben Kohn, the owner of From Sink to Sewer in Ventura, California. He learned about the group from a representative at Allan J. Coleman, a Chicago-based distributor of RIDGID equipment.

From how to price services appropriately and the best ways to warranty work to learning about how to enter new markets and the best equipment to buy, Smith says the group has schooled him about all things drain cleaning — and inspired him, too. “It’s ridiculous how much I’ve learned from these guys,” he says. “It’s so great to be able to talk about problems we all encounter, and everyone feels free to give great advice because we’re located all over the country and not directly competing with each other.”

Smith says one group member, Tom Carlisle — the owner of Underground Connections, a trenchless pipeline rehabilitation company in Wooster, Ohio — encouraged him to get into pipe lining. He says he’s also built a strong relationship with Ken Beyer, owner of the Clog Squad in Hamilton, Michigan. “He’s one of my most valuable resources,” Smith says. “He’s given me an insane amount of knowledge, and his friendship has been incredible. If not for all these people, I wouldn’t be where I am now. They’ve provided me with a huge wealth of knowledge I otherwise wouldn’t have.”

In addition, another group member, Ted Puzio, the owner of Southern Trust Home Services in Roanoke, Virginia, led Smith to a business coach, Kenny Chapman, the head of The Blue Collar Success Group. “He’s also been invaluable to me,” Smith says.

What’s the takeaway for other drain cleaning contractors? “It wouldn’t be hard for others to form the same kind of group,” Smith says. “Too many people think they’re stuck, but they don’t have to be stuck. There are people out there who are way smarter than you are. Ask for and accept their help.”



Ben Smith (left) feeds the end of a liner into the inversion unit while technician Alex Pannez gets set to guide it into a lateral cleanout.

“You get a lot of ‘attaboys’ from customers every day because you solve their problems and they get to go back to their normal lives. **You feel like you’re contributing.**”

Ben Smith

up the Real Time Reviews app on his phone, types in the customer’s name and phone number, and sends the customer a text. “The message thanks the customer for using Marvel Sewer and Drain and asks if he or she would recommend us,” he explains. “They can hit ‘yes’ or ‘no.’ If they hit ‘yes,’ then it asks if they want to give a review on Facebook and/or Google. If they click on that, it walks them through some basic steps.”

The process doesn’t take more than a couple of minutes. That’s important because Smith doesn’t leave until the customer finishes the review. Why?

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Even if customers say they will do a review, research shows the vast majority won't do so after a contractor leaves the premises, he notes.

"From what I see, people in this industry don't generate enough online reviews," Smith explains. "That just doesn't make sense — you make all those clients happy and you don't ask them to give a review?"

When Smith first started using Real Time Reviews in February 2016, he had a grand total of 12 Google reviews. He sent Real Time Reviews texts to as many past clients as possible, which boosted the total to 40. Now, Marvel Sewer and Drain has 90 Google reviews — and counting. "For a one-man shop, that's a ton of reviews," he notes.

Smith pays a monthly fee of \$199 for access to the service, which doesn't require an annual contract. He concedes that at first it seemed like a lot of money. But it helped that there was no annual contract. "That was a huge selling point for me because it's so intimidating to pay for a product like that and be stuck with it for a year if it doesn't work so great," he says. Besides, he notes that one or two service calls a month cover the fee.

Moreover, Smith says the online reviews now generate about 20 percent of his service calls from new customers — about 10 jobs per month, he estimates. He knows this because he always asks customers how they heard about the company — a critical factor in assessing whether or not such marketing efforts are effective. "With more and more people saying they saw the online reviews, I know it's working," he says.

MORE GROWTH EXPECTED

As Smith assesses how far his company has come, he says he's proud of the fact that in 2017 he once again expects to double his revenue. He also points out that his wife, Emily, who handles the company's administrative details, is a key reason for the company's success — always willing to serve as a sounding

board for new ideas and keeping Smith grounded. "I'm a big dreamer, and she's a dream-crusher," he quips. "Without her on the team, it would be a pretty tough situation."

Ultimately, Smith envisions eventually employing a five-man crew for drain cleaning and two employees for sewer lining. "Years ago, I just wanted to work. Now, I want to keep growing. Your needs and wants change over time, but right now, that's what I'm aiming for. You have to keep taking calculated risks. The way I see it — if you're not moving forward, you're moving backward." **C**

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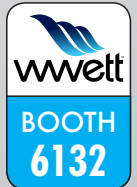
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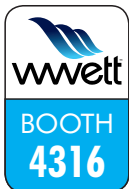
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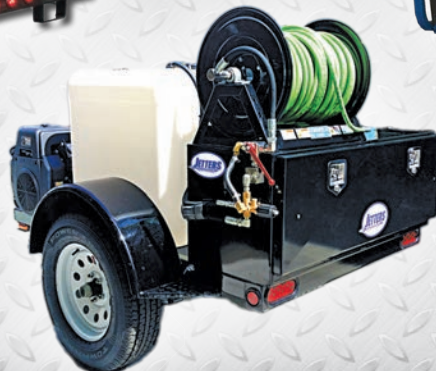
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Pipeline Magic

Little WIZARD boldly goes where other drain machines can't while improving productivity on tough cleaning projects

By Ken Wysocky

Elite Pipeline Services faced an interesting challenge about four years ago when a longtime customer — a nuclear power plant operator — asked the pipe cleaning and repair company if it could scour out and line a roughly 50-foot-long section of 3-inch-diameter pipe without using any water.

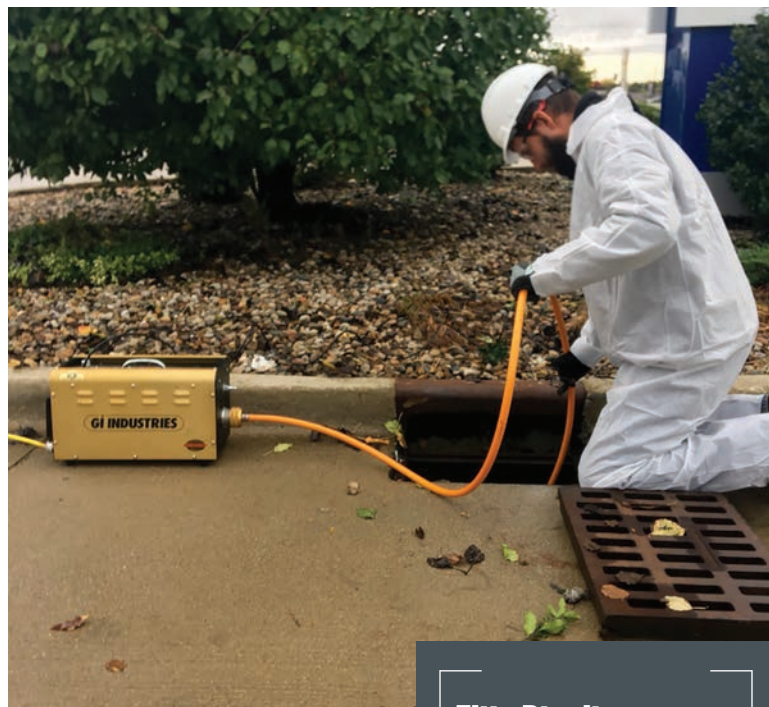
“They didn't want us to use water in this particular pipeline because it would generate a lot of radioactive contamination that's difficult — as well as very expensive — to clean up,” explains Carl Beitner, operations manager of the company, based in Allendale, Michigan.

The solution? The TCM-3000 Little WIZARD drain cleaning machine, which scrapes debris off pipe walls via high-torque, high-speed rotation of various scouring heads/tools. In addition, the little WIZARD can simultaneously flush out any resulting debris by using either compressed air or water that's disseminated just behind the cleaning head. In nuclear plants, however, Elite Pipeline Services crews use portable HEPA-rated vacuum machines to collect the debris, Beitner says.

“If we put air into the pipe, it creates dust particles that float around and pose another contamination issue,” he notes. “That project was the first time we had to dry-clean a pipe in order to prep it for lining and one of the first times we worked in a radiological-controlled area at the plant. We had worked at the plant before, doing a variety of nondestructive pipe cleaning and repair, but this time, they needed something different.”

The variable-speed Little WIZARD is powered by a 3/4 hp electric motor (7-amp draw) that can be plugged into a conventional 110-volt electrical outlet. It can spin cleaning tools at up to 1,750 rpm and can clean pipes ranging from 1/2 to 24 inches in diameter and up to 150 feet long. A pneumatic foot pedal activates the rotating cleaning head and also controls the air/water flow while a switch on the unit's cabinet controls forward, neutral and reverse functions. In neutral mode, the head stops spinning so the operator can apply either air or water pressure to move debris. The unit includes a fitting for attaching a compressor for air flushing and water is supplied by hooking the unit up to a conventional faucet bib with a garden hose.

The machine is housed inside a lightweight aluminum cabinet that weighs about 45 pounds and measures 18 inches long, 9 inches wide and 10 1/2 inches tall. The unit comes with two flex-shaft cables in 50- and 100-foot lengths, and to boost operator safety, the cable is housed inside a protective sheath made from a proprietary blend of nylon and plastic.



▲ The TCM-3000 Little WIZARD drain cleaning machine from GI Industries can use either water or compressed air to flush debris through a line after cleaning.

As the shaft spins faster, the cutting tools on the head expand to maximize cleaning power. “The faster you spin it, the more efficiently it cleans,” Beitner says. “It's similar to running a cable machine, but it's safer because of the jacket that covers the flex shaft. Your hand never comes in contact with the rotating cable. It also cuts down on the mess because you don't have that open cable throwing debris around. It's a much cleaner process.”

Moreover, the unit's compact size makes it easier to get in and out of tight spaces, which allows crews to complete jobs faster. That's not to say the company never uses water jetters; the company owns trailer jetters made by Sewer Equipment Co. of America and Spartan Tool and sometimes uses a jetter in conjunction with the Little WIZARD.

Beitner also praises the unit's versatility. The company owns six units and uses them for commercial/industrial work, too. Technicians have used the Little WIZARDS in a variety of applications, including cutting out a liner that cured before it fully inflated and removing tree roots. In one instance, employees even used it to cut through concrete that made its way into a cast-iron pipe during construction. “The carbide fingers started chewing on it and broke it out in chunks,” he says.

Elite Pipeline Services

LOCATION: Allendale, Michigan

MACHINES: TCM-3000 Little WIZARD drain cleaning machines

FUNCTION: Unclogging pipelines, prepping them for lining

FEATURES: 3/4 hp electric motor that generates cleaning-head rotation up to 1,750 rpm; cleans pipes 1/2 to 24 inches in diameter; water- and air-pressure capability for debris flushing; foot control to activate the spinning head and the air/water flow; and hand switch for controlling forward, neutral, and reverse functions

WEBSITE: www.elitepipeline.com

PRICE: About \$5,600

GI INDUSTRIES WEBSITE: www.giind.com

The company also uses the Little WIZARDs to reinstate pipes after completing lining projects. Without the Little WIZARD, the company would have to bring along additional reinstatement equipment. As such, Beitner says the unit saves customers thousands of dollars by using one machine to perform both services. “We also use what’s called honing brushes, which have little carbide balls that scour the pipe almost to its original condition,” he adds. “We do that when we need a really good seal for a new liner.”

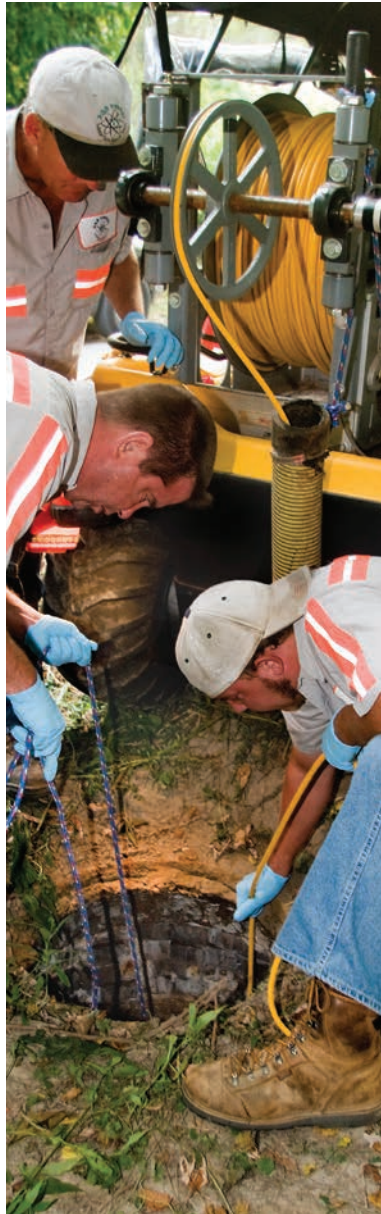
The unit also improves productivity because technicians can simultaneously run an inspection camera — the company relies on Verisight Pro inspection systems, made by EnviroSight — behind the cleaning head without worrying about getting it caught up in the cable. “When we follow with a camera, we’re 100 percent sure we cleaned what needed to be cleaned, without adding additional time to the process (by running a camera through after the fact),” he notes. Furthermore, when used at nuclear plants, the machine saves customers’ money because it eliminates the need to collect and dispose of contaminated water — an expensive service. “Reducing customers’ expenses makes us more attractive as a bidder,” Beitner says.

Overall, the Little WIZARD is a valuable productivity-enhancing and cost-reducing tool for Elite Pipeline Services, which was founded in 2004 and employs 20 full-time workers. Work at nuclear plants nationwide generates about 75 percent of the company’s business volume, while commercial work — performed primarily in western Michigan — accounts for the rest, Beitner says.

“They’ve done very well for us,” he says of the machines. “We’re very happy with them. And GI Industries provides us with great customer service. These machines have become essential on the nuclear side of our business and have definitely improved productivity on the commercial/industrial side. Our job turnaround times would be much slower without them, and they definitely help improve profitability because we win more projects by saving customers money.” **C**



▲ The Little WIZARD scrapes debris off pipe walls via high-torque, high-speed rotation of various scouring heads/tools.



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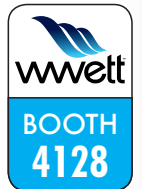


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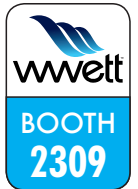
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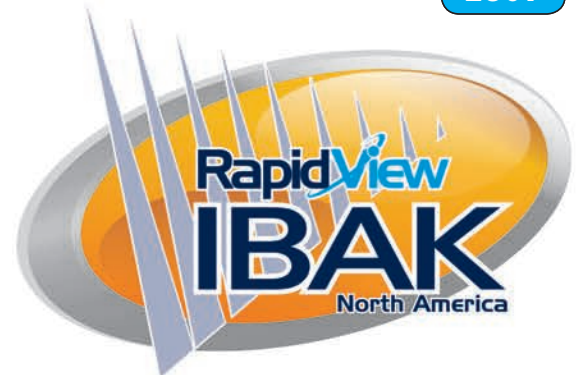
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Working From the Same Playbook

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By Jared Raney

Look at any bid on a municipal sewer project, and chances are pretty good that you'll see a specification for the Pipeline Assessment Certification Program, or PACP.

The flagship certification for the National Association of Sewer Service Companies, or NASSCO, it is the gold standard of pipeline assessment, often a prerequisite among engineers and contractors across the industry.

One of the first organizations to standardize inspection in the field of pipeline cleaning, inspection and rehabilitation, NASSCO is busy expanding their certification programs and updating existing courses to include new technology and processes.

"We need to keep these programs up to date based on current technologies — keep them relevant based on the things that are actually being done in the industry," says Ted DeBoda, executive director of NASSCO. "So it is important for the contractors and municipalities to keep their people informed and keep them up to date on the latest assessment techniques."

In addition to their long-standing pipeline assessment program, NASSCO is developing new courses for the Inspector Training and Certification Program, or ITCP, and is working on recertification requirements for MACP and LACP, the manhole and lateral assessment programs.

"Everything that we do really has to fall back and support the mission to set industry standards specifically for rehabilitation and assessment of underground infrastructure and to ensure continued acceptance and growth of trenchless technologies," DeBoda says.

PACP is a two-day program offered by NASSCO; MACP and LACP can be completed in a third day of training. Each program has its own test to complete at the end of the classroom training.

At this time, only PACP requires recertification, which can be completed online or live in a shortened, compact version of the full class. Soon, MACP and LACP will also require recertification. There is a one-year grace period after certification expires to complete the refresher.

"We want to make sure that not only are specifications done well so that the bar is set the same for all the contractors who are bidding on a project, but that it's also specified right — that we're using the right technology where it's meant to be used," DeBoda says.

ITCP consists of two classes so far: CIPP and manhole rehabilitation. The classes, which were recently updated, go over technologies that are available, the best use for those technologies, and specifications.

NASSCO is looking at developing more classes to fold into ITCP, including an injection grouting class that they are hoping to roll out toward the end of 2018.

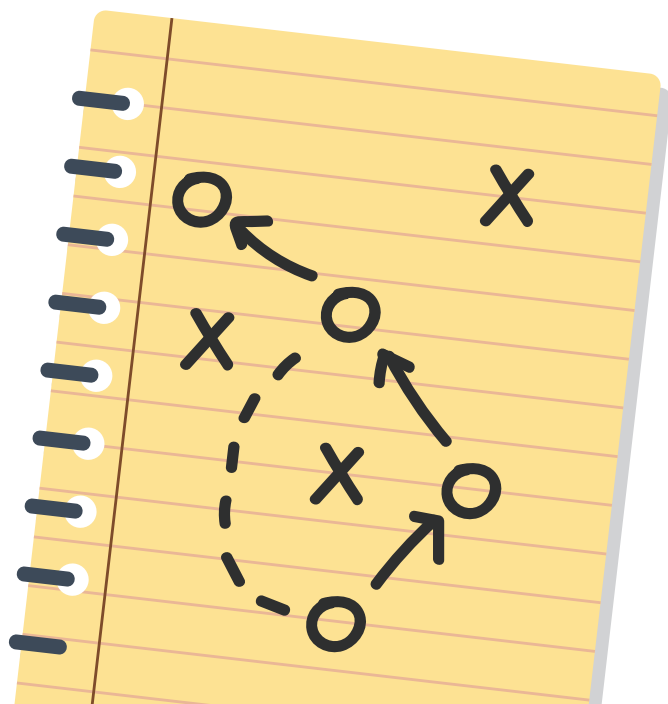
"One of the reasons why I have so much respect for the construction inspectors is because that's the person who actually needs to read and understand the specifications that the engineer developed and make sure they're being applied out in the field ... that the appropriate tests are being completed out in the field, and the contractor is taking the right samples and doing all the things that he needs to do," DeBoda says.

The base rate for PACP is \$800 with an additional \$175 for MACP and LACP. The training is sourced out to independent trainers, who may charge additional fees based on travel time and other expenses. The ITCP course is \$995 for NASSCO members and \$1,095 for nonmembers.

Not only are these programs important for the standardization of the industry, but increasingly, they are required for jobs under bid.

"We want to make sure that not only are specifications done well so that the bar is set the same for all the contractors who are bidding on a project, but that it's also specified right — **that we're using the right technology where it's meant to be used.**"

Ted DeBoda



“Most of the CCTV or the condition assessment specs that we see require PACP,” DeBoda says. “That’s one reason why it works so well for the industry. It kind of feeds itself in that engineers will spec PACP because that’s what they’re used to looking at, so all the contractors will make sure that their people are all certified in PACP.”

“It has kind of been a self-perpetuating thing. ... It is working so well for the engineering community, and contractors need it to bid on the job so we see a lot of engineers and operators taking the class. And that’s why it is so successful.”

Also available on their site are webinars and manufacturer specifications as well as FAQs, tools, and articles, such as the jetter manual — a code of practice for jetting equipment. They are also working on a similar manual for trenchless technology. Some features are available only to members, but there are also resources open to the public.

“If you don’t have anybody that’s PACP certified, you can’t bid on a PACP project. I mean it’s really that simple,” DeBoda says. “We’re seeing a lot of municipalities and engineers, in the same way with PACP, actually bidding out ITCP inspectors, so the inspectors that are on the job need to be certified in either CIPP or manhole rehab in order to inspect the job.”

Another important aspect of PACP is software certification — an idea that hasn’t fully caught on among municipalities.

“This is something that I would really like to see more municipalities have a better understanding of. We certify software for PACP,” DeBoda says. “As a municipality, if you bid a PACP job, you really don’t need to and should not specify a specific software. One of the benefits of NASSCO actually certifying PACP software is that when you bid a PACP job, you open up the bids to contractors that have any PACP-certified software.”

NASSCO has a list of around 15 certified software providers, and any one of them can function interchangeably in a PACP-specified job.

“Most contractors actually already have a PACP-certified software, and they don’t need to purchase or learn a new software. So it’s discouraging when we see CCTV contracts bid for PACP but specify a specific software because then they’re losing that benefit of opening up the bids and actually getting more competitive bids,” DeBoda says.

With a commitment to push the industry since 1976, NASSCO’s certifications and training continue to be at the forefront of training and education for the industry.

“It really does keep the field staff up to date, it keeps the engineers up to date, and it keeps everybody basically working from the same playbook.” **C**

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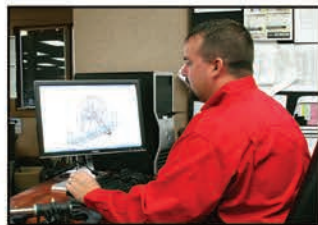
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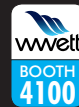
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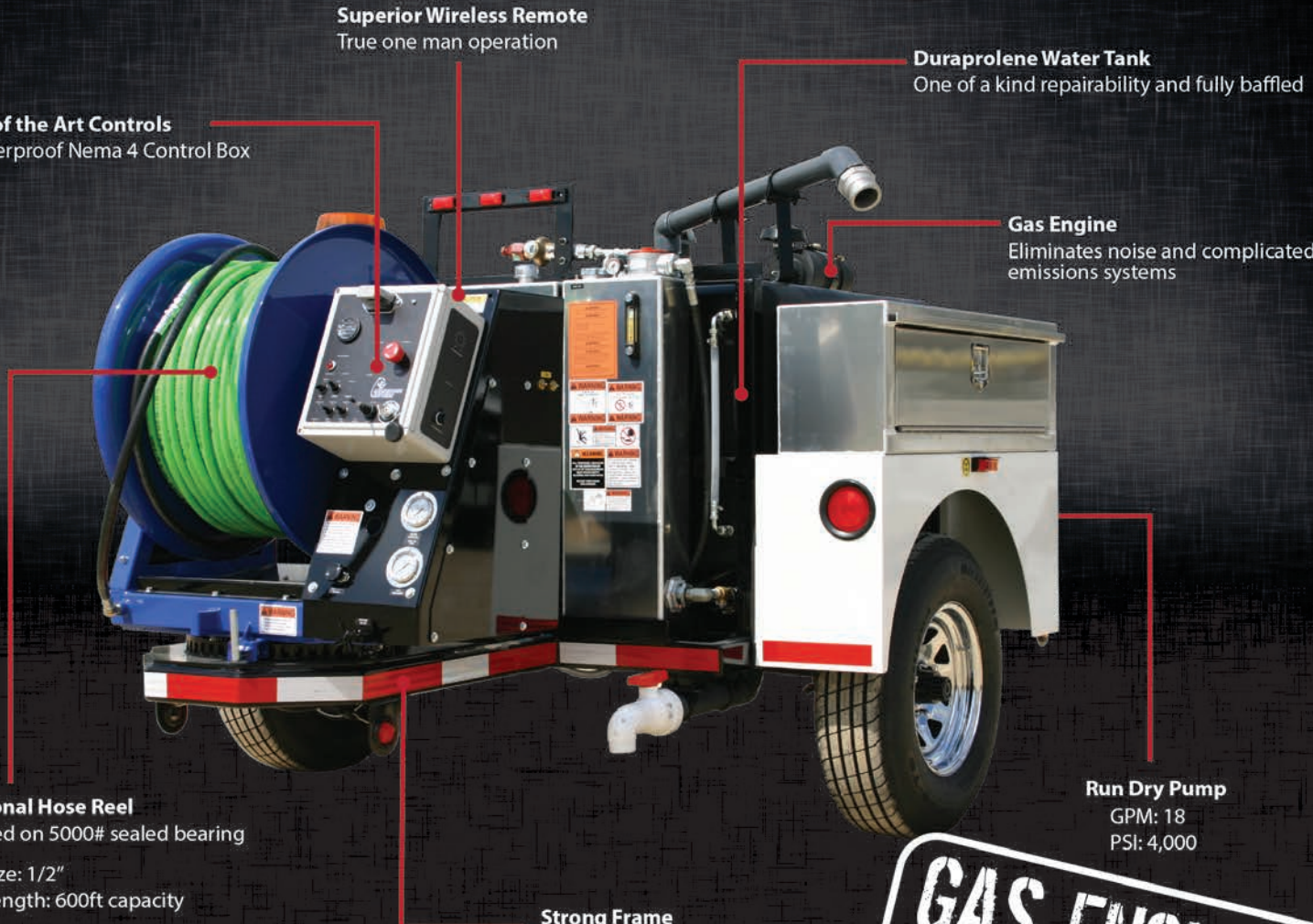
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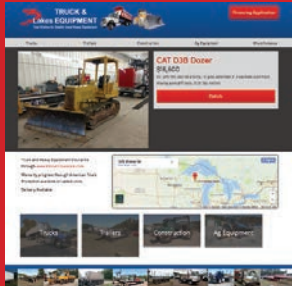




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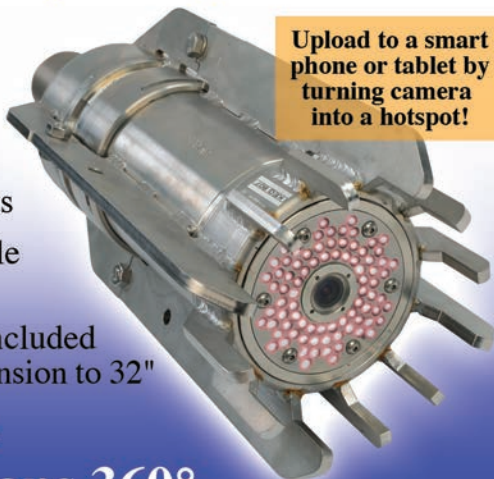


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SUCCESSION AND SUCCESS

Family-owned company lays down specific guidelines
for growth and customer service

By Marian Bond // Photography by James Robinson

Looking at the history of Shelton Plumbing is a bit like following the up-and-down path of a roller coaster. At one time, the company had up to 20 employees, but owner John Shelton didn't enjoy the dynamics of a larger company and scaled down to just himself.

In 2005, John's son, Josh, joined the company and a new growth mentality took hold. "We wanted to grow," says Josh Shelton, who is now CEO and president of the company based in New Kensington, Pennsylvania. "Times had changed, and advertising was very different."

The company used to advertise in the newspaper or depend on word-of-mouth, but Josh noticed it was getting harder to stay busy. "I wanted to grow this business and just keep up with the times," he says.

That meant embracing new methods of reaching out to customers as well as being open to adding new services like relining. "We looked for ways to stay in contact with customers and to provide more options and better service, and it started to grow," Shelton says.



Shelton Plumbing

LOCATION: New Kensington,
Pennsylvania

OWNER: Josh Shelton

YEAR FORMED: 1983

EMPLOYEES: Seven

SERVICES PROVIDED: Plumbing,
relining

SERVICE AREA: 25 miles around
New Kensington

WEBSITE:
www.johnsheltonplumbing.com

RAMPING BACK UP

At first, the company remained only Shelton and his father. The workload eventually increased beyond what the two could handle on their own, so in 2008, Shelton's sister, Sarah Kimmel, came aboard to handle payroll and accounting as well as answer calls and coordinate schedules.

Shelton's brother-in-law, Denny Kelley, a licensed plumber, also came on board early in the growth phase. The company now has seven employees. Five of them are either licensed plumbers or apprentices.

The customer base is primarily residential with a small amount of commercial. Service and repair make up most of the workload in a 25-mile area near Pittsburgh. Shelton Plumbing currently operates on leased property with several buildings and storage areas but is considering purchasing its own site as the business grows.

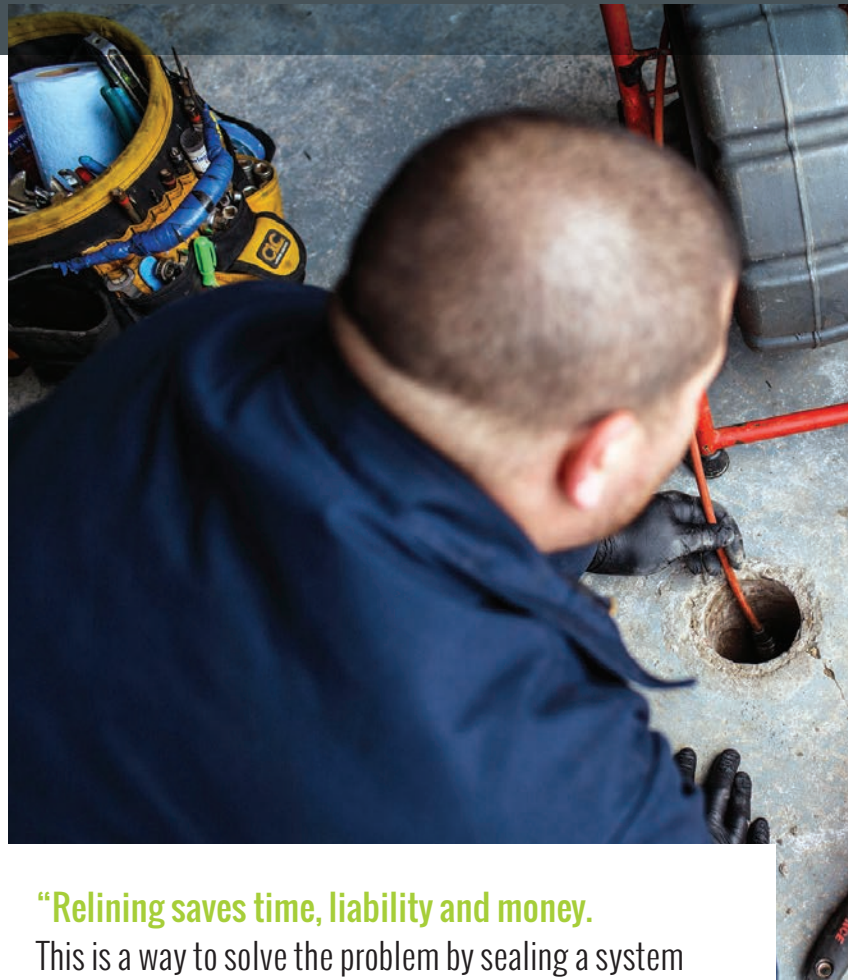
The service fleet includes an Isuzu with a Hackney body, a Chevrolet box truck, and a Ford pickup truck. A Kubota backhoe is used for minor excavations, and outside help is brought in for any major excavations.



📍 Shelton Plumbing owner Josh Shelton with his dad and company founder, John Shelton, outside the company shop in New Kensington, Pennsylvania.



« Denny Kelley inspects the drainline below a toilet during a presale home inspection.



“Relining saves time, liability and money.

This is a way to solve the problem by sealing a system and stopping root infiltration as well.

It can do some amazing things.”

Josh Shelton

The company also has cameras and drain cleaning equipment from RIDGID.

BRANCHING OUT

In early 2016, Shelton began researching relining as an additional service the company could offer. With Pennsylvania imposing mandates on municipalities to reduce inflow & infiltration and limit the amount of water ending up in treatment plants, he saw an opportunity.

While I&I is a municipal problem, private laterals are a major contributing factor.

“Our cities are handling the systems, but when it comes to an individual wanting to sell their home, excavation to replace or repair is very challenging as well as expensive,” Shelton says. “Relining saves time, liability and money. This is a way to solve the problem by sealing a system and stopping root infiltration as well. It can do some amazing things.”

Shelton admits that when he started thinking about the technology and the huge investment it would require, it was intimidating. The Pittsburgh area is one of the busiest regions for lining because of the age of the infrastructure, homes and other buildings.

“I found it fascinating and wanted to get into it,” Shelton says.

He did his research and settled on a system from Perma-Liner Industries. The company was in the relining business by June 2016. Shelton Plumbing also purchased an 18-foot trailer from Perma-Liner Industries called the Turn-Key Trailer.

“This trailer has everything needed to go onto a job site,” Shelton says.

“We do not have to put in any extra tools and are able to take it on the job site and complete the job with no hassle.”

SPREADING THE WORD

From the beginning, Shelton realized that relining would pay off if the company made its services available to other plumbing operations in the region. “Not everyone is going to want to spend the money to get into relining,” Shelton says. “Because of my father’s reputation, we have a network of other plumbing companies that will want to use us when they need this technology.”

Having the relining service has been a benefit to the company’s success. Financially, it has contributed to healthy sales figures, going from \$500,000 in 2015 to over \$800,000 in 2016.

“We are doing one or two relining jobs a week and have worked for other plumbing firms in the region, either as a subcontractor or as a contractor,” Shelton says. “We always work with the assurance that we do not want to take customers away from a plumbing competitor. In our area, we network with many other plumbing firms and help each other out whenever there are problems and we can be helpful.”

FOCUS ON EMPLOYEES

Treating employees well has always been a hallmark of Shelton Plumbing. Because of that, the company doesn’t offer 24/7 services. The company is open



⚡ Denny Kelley uses a RIDGID SeeSnake camera during a home inspection in the city of Lower Burrell. Before local homes are sold, all interior drains and city connections must be tested and inspected in an effort to eliminate stormwater from entering the municipal system.

» Denny Kelley uses a RIDGID SeekTech locator to determine where a lateral connects to the mainline.

Coming to the aid of others

If there is one thing Josh Shelton has carried on since taking over Shelton Plumbing from his father, it's being charitable and always lending a hand.

"Over the years, my dad has helped out in many charitable ways," says Shelton, owner of the company based in New Kensington, Pennsylvania. "We support local charities but have been active by sending members of our team on disaster relief mission trips in the United States and around the world."

When a tornado hit Henryville, Indiana, in 2012, Shelton Plumbing joined with other members of a local plumbing firm and spent weeks clearing and helping the community recover. In 2011,

when a tornado hit Rainsville, Alabama, the company helped install showers in conjunction with other plumbing firms for volunteers who did not have proper facilities.

"Living a life of service is something we can take pride in," Shelton says. "We gain the trust of people by just doing the best we can. We help out in many ways whenever we can."

Shelton Plumbing also went to Bay St. Louis, Mississippi, following Hurricane Katrina to help rebuild homes. In 2010, after a massive earthquake in Haiti, the company sent some of its crew there to assist in school repairs and to help supply more than 200 students with water filtration systems, food, school supplies, and medical supplies.

"I have paid a lot of attention to my father over the years and have been led by his example," Shelton says. He also gave credit to his Christian faith, saying he isn't who he is without that. "Feast or famine, we give him praise for it all."



➤ The Shelton Plumbing team includes (from left) Jake Graft, Denny Kelley, Josh Shelton, John Shelton, Sarah Kimmel, Aaron Dray and Caleb Graft.

five days a week, and in extreme situations, they will go out during off-hours to help a client or they refer the call to one of the other firms they work with in the area.

“We just don’t jump to every emergency because we are a small company and we want to honor ourselves and employees with a weekend for family activities,” Shelton says.

“We are doing one or two relining jobs a week and have worked for other plumbing firms in the region, either as a subcontractor or as a contractor. **We always work with the assurance that we do not want to take customers away from a plumbing competitor.**”

Josh Shelton

Finding plumbing technicians is always a challenge. Shelton says he wants dedicated employees who will stick around for more than a few years, and not constantly being on call for emergency service has helped with that.

“Plumbing is not easy, and we deal with all the elements. It is a messy job,” Shelton says. “People don’t often want to be dirty. This job can wear you out, which is another reason that our decision to have the weekend free for our employees and ourselves has been a benefit for all.”

He admits that there is a risk they might lose a customer by not offering 24/7 service. He stresses that the goal has never been to have a large company

but to focus on quality service and improving the lives and welfare of the staff, their families and the customers.

“Our customers will wait for us,” Shelton says. “We know it is a competitive world out there and there are big companies in our area.”

THE FUTURE

Shelton took ownership of the company in 2014, as his father plans to retire in the near future. He says he didn’t anticipate becoming a plumber, but having worked in some “dead-end” jobs, he realized there was a lot of job security in the plumbing industry.

He has also come to realize that running the company is a lot different than being an employee.

“I wear a lot of hats,” he says. “I work with my guys to prove we are a team and nobody is above the other. We work like a machine and hold each other together. We are not looking to grow a massive company, and we’ve gotten busy focusing on quality customer service.” **■**

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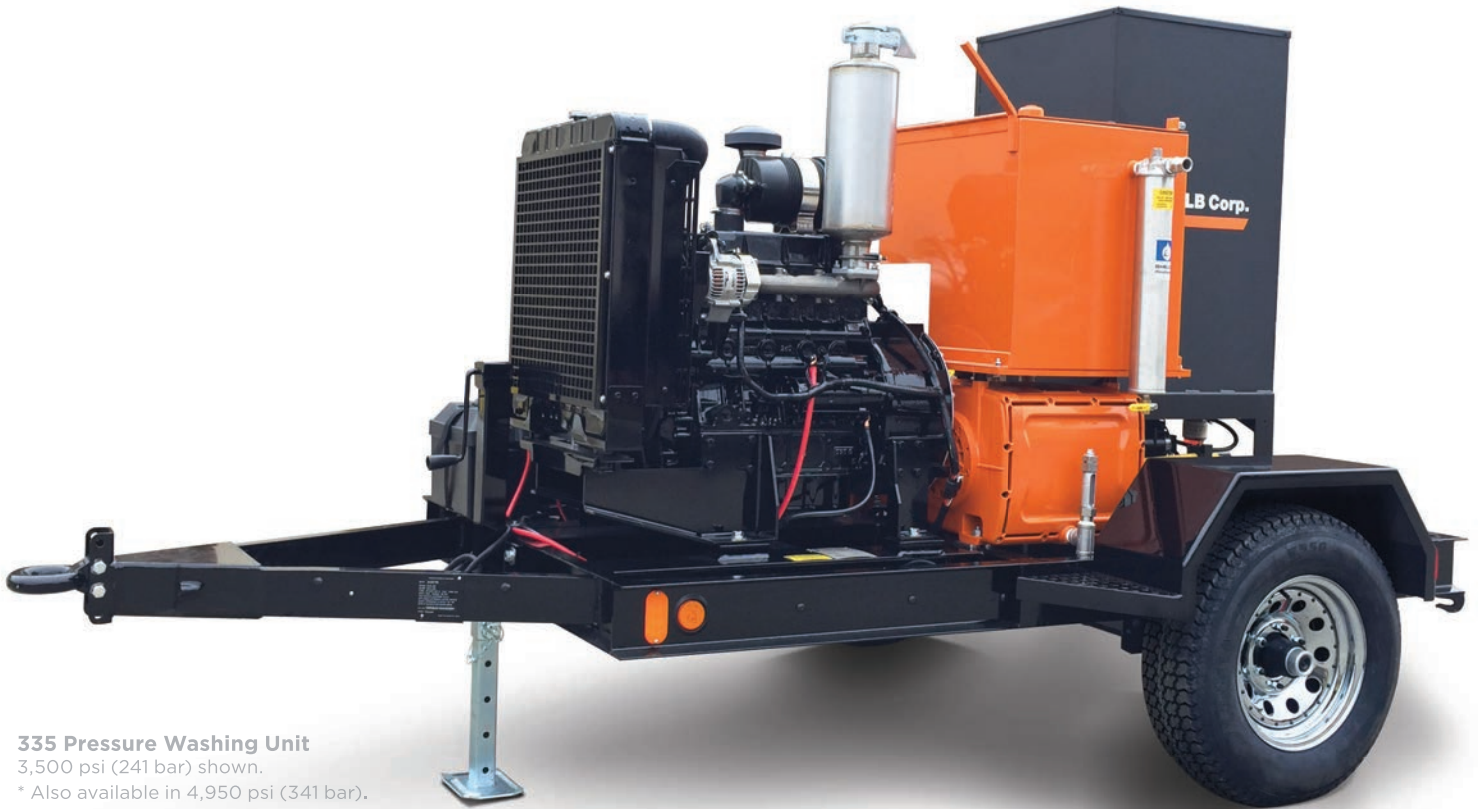
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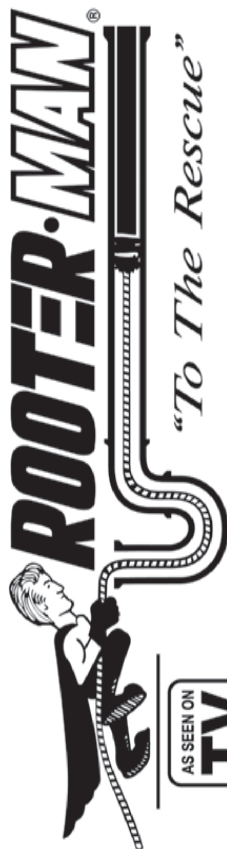


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Erik Gunn

When Another Business Goes Bankrupt

If you're a creditor, keep your cool, pay attention, and don't expect a miracle

By Erik Gunn

Your business is humming along when one day you get the news that a key supplier — or perhaps one of your biggest customers — has filed for bankruptcy. You're just a bystander in all of this courtroom drama. How could it affect you?

If you're lucky, your supplier has delivered your most recent order and doesn't owe you anything. You only need to find a new vendor to take its place.

Or, if it's your customer, you can be thankful if they've paid your last bill in full and carry a zero balance on your books. You simply need to figure out whether they plan to keep going and will still want your services — and whether you'll consider them a reasonable risk. If not, you merely need to go out and find new customers.

Life is seldom so smooth, of course. So what do you do if a supplier or customer goes into bankruptcy court and owes you money?

Attorney Christopher Combest is a partner in the Chicago office of the national, full-service law firm Quarles & Brady. Combest practices in the firm's commercial restructuring, bankruptcy and creditors' rights group and works both with creditors and debtors in bankruptcy as well as other insolvency cases.

Everyone's circumstances are different. No matter what you read here, consult your own trusted legal and financial adviser before taking any action that would affect your own business.

But if there's a short bottom line to Combest's advice, it might be this: Don't panic, pay attention, follow the rules — and don't expect miracles.

For either a person or a company behind the financial eight ball, bankruptcy court really is the court of last resort. It helps put things in order for everyone, but if you're a creditor, don't count on getting back all you may be owed.

TWO CHAPTERS

Business bankruptcy comes in two flavors — Chapter 7 and Chapter 11 — that are named for the section of the federal bankruptcy code that defines them.

“Chapter 7 is what we call the liquidation chapter,” Combest says. “A company that files Chapter 7 is essentially throwing in the towel.”

When a company files under Chapter 7, the court appoints a trustee whose job is to collect all the company's assets, turn them into cash (by selling company property, inventory or equipment), and then see that creditors are repaid in the order in which they're entitled.

First in line are secured creditors — lenders who have collateral against the company's debt, such as lien on the debtor's property. The collateral is sold, and those creditors are paid from the proceeds.

Next in line is the trustee, who gets a fee for administering the case, and lawyers representing the trustee. They're followed by employees whose wages have gone unpaid and certain government taxing authorities.

BACK OF THE LINE

Last in line are unsecured creditors. Most likely, that's what you are, whether you are providing a service to the business in bankruptcy or you are that company's customer.

Unsecured creditors have the smallest chance of getting back what the debtor company owes them. “In Chapter 7, particularly, there's often little or no money to pay general, unsecured creditors,” Combest says.

When the debtor is flat broke with no assets to speak of, that's called a “no-asset case,” Combest explains. Barring some unexpected turn of events, you won't see a penny of what you're owed. “Don't throw good money after bad,” he suggests. “Just write it off as a bad debt and move on with your life.”

By the way, this is just as true if the debtor isn't a business but an individual or a household. In fact, he notes, “by far the vast majority of bankruptcy cases that are filed in this country are individual human beings filing Chapter 7 cases” — most of them are no-asset cases in which there's nothing for unsecured creditors at all.

But some businesses, even those filing to liquidate under Chapter 7, might have enough assets to pay unsecured creditors something after everyone ahead in line has gotten paid.

FORMS AND DEADLINES

When companies file for bankruptcy, they complete a list of every person or business to whom they owe money. If you're one of those creditors, you should get notices in the case. And if there are funds available to pay their claims, unsecured creditors will be asked to file a “proof-of-claim” form with documentation — invoices and other relevant paperwork — of what you are owed and why.

“In Chapter 11, it's more and more common to have a third-party claims agent to take claims, organize them and keep track of them,” Combest observes.

The court, or the bankruptcy code itself, sets a deadline to submit claims, and those deadlines are usually drop-dead dates. It's critically important that you don't let any mail or notices from the court stack up on your desk unread. “If you miss a deadline, you may be out of luck in getting your claim paid,” he warns.

CHAPTER 11

Chapter 11 is known as “the reorganization chapter.” Companies opt for that route when they plan to stay in business, perhaps by selling their assets as a going concern or by reworking their balance sheet and dumping some debt. Unless there’s evidence of fraud or other egregious mismanagement, the existing management typically manages the bankruptcy process instead of an outside trustee.

In that situation, you’ll have to decide whether you want to keep doing business with the debtor. It might be tempting to simply drop a customer in Chapter 11 bankruptcy — and if there isn’t a long-term binding contract, you can do that. But consider this: If you’re providing goods or services to a company while it’s in Chapter 11, the bills for that work will actually take higher priority than the ones that were outstanding before the debtor went to court.

To be sure, Combest notes, “There’s always some risk in extending credit to a Chapter 11 debtor.” So if you do decide to keep doing business with your customer in Chapter 11, you may want to tighten up procedures — demanding payment upfront, for example, setting a shorter payment deadline, or at least collecting your out-of-pocket expenses (for supplies, say) upfront.

WATCH YOUR STEP

One thing you can’t do once a business is in Chapter 11 is sue for an old, unpaid bill.

Suppose you provide your customer with a service, send the bill, never get paid, and then the customer winds up in Chapter 11 bankruptcy. “The instant the petition is filed with the court, automatically a stay goes into place that is a bar against all creditors,” Combest says. “It prevents virtually all actions that may be taken against a debtor on account of a prebankruptcy obligation.”

That means you can’t sue. You can’t send threatening letters. You can’t sic a collection agency on the customer. Even if you have already sued before the bankruptcy petition was filed, your suit is frozen — you can’t pursue it any further, unless you get specific permission from the court to do so. In fact, if you tried to take any court action against the debtor, you could wind up in court instead.

There’s a reason for that strict rule, Combest says. The whole point of a Chapter 11 bankruptcy “is to give the debtor breathing space to reorganize and restructure their business.” Having to fight off old or new litigation defeats that purpose.

That doesn’t mean you just have to suffer in silence. You’re within your rights to contact the customer and ask how you can work things out mutually by joint consent. But take those words — *mutual* and *consent* — very literally.

PREVENTIVE MEDICINE

Follow the procedures, don’t violate the bar on collection actions, and never ignore notices from the bankruptcy court or from the debtor, Combest advises.

But how can you avoid the whole mess to begin with? The best remedy is the most basic: Stay on top of your accounts receivable, pay attention when any customer gets too far behind, and keep your ear to the ground.

“Monitor the account before it goes into bankruptcy,” Combest says. “If you know it’s in financial difficulty, enforce your remedies as quickly as possible.”

That way, you’ll never have to see them in court. **C**

Erik Gunn is a magazine writer and editor in Racine, Wisconsin.

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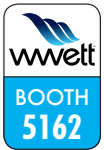
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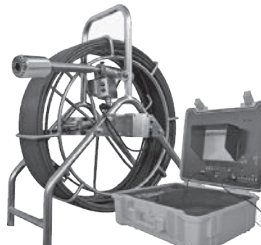
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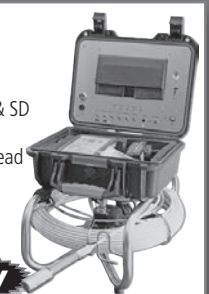
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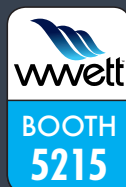
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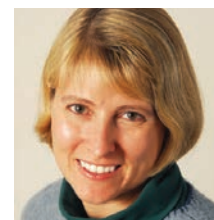
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Judy Kneiszel

5 Marketing Trends You Need to Know

In the ever-changing world of marketing, several current trends could have a positive impact on your sewer and drain business

By Judy Kneiszel

Once upon a time, a drain cleaner could place an ad in the Yellow Pages, slap a logo and phone number on the side of the company trucks and call it a marketing plan. Today, new marketing opportunities abound. Here are some trending marketing practices that might be worth adopting to give your business a boost:

1. Mobile first. The number of web searches done on mobile devices is at least 50 percent and growing, according to Google. Optimize websites and other digital content to be viewed on mobile devices. Make sure content can be viewed and performs equally well across all devices — desktop computers, laptops, tablets and smartphones — by hiring a web developer who can optimize your website and emails for mobile devices first, and then consider other platforms.

Optimizing content for mobile devices means understanding the conditions under which people use their smartphones and devices. Consider, for example, how long it takes under average conditions to load a page over a mobile network. Insist that when your information is viewed on a mobile device, the viewer can call your company with a single click.

In general, personal computers are used for research, but mobile devices are used for action. If someone asks Apple's Siri where they can rent a portable restroom, odds are they are serious about wanting to rent and will take action, so make it easy for them. And if you really want to get into mobile marketing, the next step may be location-based marketing, which uses technology to determine where your customers are so you can connect and interact with them on their mobile devices in real time.

2. Live video. Facebook has made live video streaming simple for anyone to do. How can you use Go Live to market your company? Let's say you're helping clean up after a local disaster and stream a Go Live video on Facebook from the scene that shows your crew chipping in to help the community.

What do you accomplish? You've reminded your Facebook followers about the services you provide and given them a look at your work. Plus, you've impressed your Facebook followers with the knowledge that your company is doing its part to serve the community. It's also an ego boost for your employees to know you're bragging about their hard work.

Be sure to zoom in on the company logo and phone number on the trucks and restroom units. Why take the time to Go Live? Because you have nothing to lose — all of this trendy marketing is absolutely free.

3. Personalized marketing. It's easy for consumers to get lost in the sea of marketing messages they encounter every minute of every day. That's why marketers are increasing their use of data collection, analysis and automation technology to provide individualized content to potential customers. That may not be possible for a small company lacking in IT staff, but don't underestimate the personalized touches you are able to provide.

If customers have trusted your company enough to share contact information, they will appreciate individual attention, which can inspire or deepen loyalty. Ironically, in this age of sophisticated, data-driven digital marketing, personalized or one-to-one marketing like a direct phone call, an email addressing an individual decision-maker by name, or a face-to-face meeting can be a refreshing, memorable marketing tool.

4. Purpose-driven marketing. Have you noticed there are more ads today that tell a story? These ads don't just describe the product or service being promoted; they tell why a company does what it does or how it makes the world a better place. Attempting to establish an identity as a business with a conscience is sometimes called purpose-driven marketing.

Young people especially want to do business with companies that give back. While consumers can spot a phony message a mile off, you may benefit from a well-crafted message touting company efforts to be environmentally responsible or actively supportive of the community.

5. Increased voice searching. Voice assistants like Amazon Alexa, Apple Siri, Microsoft Cortana and Google Assistant get asked a lot of questions these days. According to Google, 20 percent of searches done on mobile devices are voice searches, and the number of voice searches on all devices is growing. As people see and hear their peers talking to devices with more frequency, they feel less silly doing it themselves, so the number of voice searches will continue to increase.

Make sure your website content includes key words and phrases that answer questions potential customers would ask to find a portable restroom company. How are voice searches different? Consider this: If you wanted to know the name of the tallest U.S. president and you were at your desktop computer, you'd probably type, "tallest U.S. president." If you were asking Siri, however, you'd likely say, "Who was the tallest U.S. president?" The difference may seem negligible, but it can actually make a difference in search results.

UPDATE THE MENU

Not every marketing technique works for everyone. What's most effective varies from day to day, company to company and customer to customer. Marketing is constantly evolving, and if you want your company to remain relevant and grow, it's in your best interest to keep up on the trends. Don't abandon the tried-and-true, but occasionally review your marketing plan and implement some fresh ideas. After all, if no one ever upgraded their marketing efforts, consumers would still be getting all their information from cave paintings. **c**

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Safety Under Pressure

Waterjetting brings danger to operators' day-to-day routines, but simple precautions can prevent injury

By Jared Raney

You wouldn't expect latex gloves to protect you from a gunshot. They won't protect you from waterjetting accidents either.

An OSHA article describing the dangers of high-pressure jetting notes, "High pressures can cause injuries similar to gunshot wounds, but have the added health hazard of involving contaminated water."

In pipeline-related industries, dangers are plentiful. Trenches, excavation and confined spaces are often touted as the main concerns in risk management, but operators face another underestimated risk on a daily basis — cleaning with water under pressure.

"Injection injuries can happen much lower than the pressures that are in use in drain and sewer applications. And that carries the risk of infection and tissue damage as well. ... Water injection injuries can appear minor but can cause serious health complications, even at pressures in the range of a consumer pressure washer or drain cleaner," says Peter Wright, association manager with the WaterJet Technology Association and Industrial & Municipal Cleaning Association.

Despite being generally overlooked in terms of safety across the industry — due in part to a relatively low rate of injury when compared to working in trenches and the like — jetting is a concern simply because of how common it is.

Lines are jetted for daily cleaning operations, inspections, rehabilitation: With just about any work involving pipes, water jets are in play.

"Trying to get people to understand that you can get injured by a water jet strike is probably the most difficult bit to get across to people," says Nick Woodhead, president of US Jetting. "We've got to start promoting safety."

"I think people assume that hoses are not going to burst, and therefore, they are sort of immune. Or they've never seen a hose burst, or they've never seen a jet injury, so it doesn't really register. People get complacent."

And it's not just equipment malfunction that operators need to worry about.

Case in point: Chad Unverzagt, the Indiana operator who was killed in 2012 during a routine sewer blockage. *Cleaner* covered the incident in another Safety First article.

Unverzagt wasn't killed by an exploding pipe or other malfunction — his hose got loose while the system was pressurized as he was attempting to

retrieve it from the pipe. A momentary lapse in a job he'd done a thousand times before and for more than 30 years in the industry.

With no protective gear, he didn't stand a chance against the high-pressure water, which lacerated his neck, killing him before help could arrive.

"That's more of an isolated incident, but it's worth reminding people," Woodhead says. "That's why you've got to know what you're working in."

A few months after that incident, *Cleaner* published another Safety First article, highlighting a new line of protective clothing from TST Sweden AB. Though the medium-pressure gear hadn't reached enough awareness at the time to help Unverzagt, today operators and their employers have fewer and fewer excuses for ignoring proper safety.

"The safety gear is essential when you're running a machine. So many people don't wear anything," Woodhead says. "We've got to try and get it across to people, it is worth investing in the kit to protect yourself. Even if you're the operator and maybe the boss doesn't want to spend the money; it's worth investing in it, just as a precaution."

"I think people assume that hoses are not going to burst, and therefore, they are sort of immune. Or they've never seen a hose burst, or they've never seen a jet injury, so it doesn't really register. **People get complacent.**"

Nick Woodhead

US Jetting has made it their practice to supply a pair of protective gloves to customers with purchase of a jetting system, and it has encouraged other manufacturers to do the same.

Other products like semiautomated jetting systems give even more options for mitigating risk to operators.

"OSHA says if there is safety gear available, the owners of the company are bound to supply it," Woodhead says. "Rather than have government regulation, we'd rather be self-regulated and have people understand (the dangers)."

Beyond planning for the worst, simple common sense and following standard operating procedure goes a long way to ensuring safety. That includes checking the equipment before each job, performing the necessary maintenance, and assessing each job site before beginning any work.

"It doesn't take more than a couple of minutes to do the cursory checks," Woodhead says. "Once you've gotten to your location, you've got to do your due diligence. ... Just scope out the job for 15 or 20 minutes while your tank is filling up."

WaterJet Technology Association and Industrial & Municipal Cleaning Association offers several manuals covering many aspects of pressure cleaning, including best practice for waterjetting and industrial vacuum. US Jetting has its own video and PowerPoint presentation covering the basics of jetter operation

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and safety, and the National Association of Sewer Service Companies — NASSCO for short — has videos on jetting as well as a Jetter Code of Practice, which are available for a fee.

To get you started, Wright offers a few quick tips to keep in mind:

“Mark the end of the hose a distance from the nozzle to help indicate the location of the jets within the pipe. Ensure the system is depressurized before conducting maintenance or repairs. Ensure the nozzle is well inside the pipe before bringing system up to pressure,” Wright says.

It’s easy to oversimplify pipe cleaning, but when the pressure is on, there’s a lot operators can do to prevent accidents — it’s just a matter of knowing how and promoting safety whenever possible.

“It’s definitely important to have respect for the power and the force of the high-pressure water streams,” Wright says. **c**



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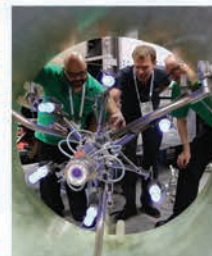
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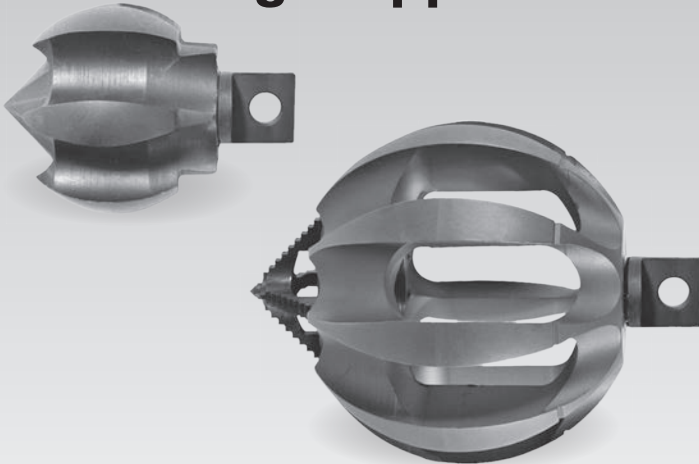
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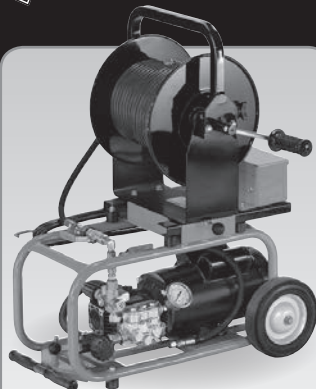
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FREE FREIGHT ON ALL CAMERA KITS

Manhole Inspection and Rehabilitation

By Craig Mandli



APPLICATORS

1 / I.S.T. SERVICES MRT SYSTEM

The **MRT System** from **I.S.T. Services** includes an automated, high-pressure water/grit blasting unit for substrate preparation of manhole surfaces. The combined effect of high-pressure waterjetting and grit blasting with a working pressure of 7,500 psi results in quick and efficient substrate preparation. Appropriate substrate preparation is vital to enable proper application and bonding of mortar. The automated and controllable centrifugal spray unit can coat the interior manhole walls with both mortar and organic compounds. The extreme rotation speed provides compaction of mortar and an even application. The automated nature of the system eliminates the need for accessing the manhole directly and reduces completion speed drastically. 858-997-0004; www.shopistamerica.com.

2 / PERMA-LINER INDUSTRIES PERMA-MAIN TOP GUN

The **Perma-Main Top Gun** from **Perma-Liner Industries** is a manhole-to-manhole, continuous inversion lining system. It is specifically designed to rehabilitate 8- to 24-inch-diameter pipelines in only a few hours with no excavation or disruption in substrate. The liner is air-inverted through existing manholes and steam cured in as little as 90 minutes using compact 750,000 Btu dry steam generators. This minimizes repair time, road closures and reconstruction, and allows for safe reactivation of the repaired pipeline in just hours. Because the system can be continuously fed, there is no limit to the length of material it can invert. Depending on the infrastructure, the installation lengths for liners typically average 300 to more than 600 feet. Prep time is minimal because all liner materials are premeasured and delivered to the repair location pre-saturated. 866-336-2568; www.perma-liner.com.

CHEMICAL GROUT

3 / AVANTI INTERNATIONAL AV-254 GELSEAL

AV-254 Gelseal injection grout from **Avanti International** is a hydrophilic urethane gel with permeation properties when injected in water. It quickly permeates various soils and cures to create an effective, long-lasting water barrier while providing soil stabilization. It is designed to stop water infiltration in manholes, sanitary and storm sewer mainlines, pipe joints, service laterals, and other underground structures by providing support and strengthening surrounding soils. Typical injection techniques are probe or curtain grouting and by remote packer. It is easy to handle, nontoxic and nonflammable. It is typically pumped at an 8-1 water-to-resin ratio, but in injection areas with high water flow, it can be pumped without water. 800-877-2570; www.avantigrout.com.

COATING

4 / MADEWELL PRODUCTS TWO-COMPONENT SYSTEM

A two-component system consisting of a high-build restoration mortar and a 100 percent solids epoxy, corrosion-barrier coating from **Madewell Products** is a cost- and time-effective way to repair and protect concrete and brick sewer structures. First, the mortar is shot onto a damp substrate, using the water on the surface to achieve a strong bond. Then, an epoxy topcoat is applied while the mortar is still soft, and the two materials cure together. The final product results in a strong and highly corrosion-resistant monolithic lining that provides a continuous surface. The mortar and topcoat are tightly bonded to the substrate and each other. This system saves time and labor costs because



it eliminates the need to dry the structure prior to mortar application. The need for a second mobilization to apply the epoxy after the mortar has cured is also eliminated because the two materials cure simultaneously. **800-741-8199; www.madewell.net.**

EPOXIES

5 / PICOTE SOLUTIONS DUAL COLOR EPOXY BRUSH COATING SYSTEM

The **Dual Color Epoxy Brush Coating System** from **Picote Solutions** allows technicians to rehabilitate pipes from 1.25 to 12 inches for drains, sewers, water pipes, electrical conduits, heat and air-conditioning ducts by brush casting a coating. The coating resin forms a pipe inside the original pipe that is a tested, safe and environmentally friendly product. The new pipe is damp-proof, corrosion resistant, wear-resistant and noncorrosive. It is ASTM and NSF Certified (it meets the requirements of NSF/ANSI 61-5). It is a 100-percent solids epoxy and the method allows for clear visual verification during the application process. Apply to small areas or all drains in multistory buildings. The system is practical and easily fits in tight places. **219-440-1404; www.picotesolutions.com.**

6 / SOURCE ONE ENVIRONMENTAL GREYCOAT EPOXY

GreyCoat Epoxy from **Source One Environmental** is a 100 percent solids monolithic epoxy that offers chemical-resistance and lasting durability with adhesion to concrete substrates and metal surfaces. The epoxy can build up to 1/4 inch without sag or shrinkage, and it has a quick cure time, depending on the temperature. It is designed to structurally repair a variety of substrates, such as manholes, wet wells and vaults, and provides adhesion to damp, humid surfaces. The material's viscosity also allows installation on vertical and overhead areas. As an environmentally friendly product, it contains no VOCs, CFCs, or HFCs and protects against hydrogen sulfide and other chemicals typically found in a sewer system. It is packaged in a two-part bagging system that eliminates guesswork and product waste. **877-450-3701; www.s1eonline.com.**

LEAK LOCATION

7 / FORBEST PRODUCTS FB-R2013E

The **FB-R2013E** multifrequency underground pipe locator from **Forbest Products** allows users to locate the pipeline, measure the depth, and detect the leaking coating point. The locator comes with seven multifrequency options: 512 Hz, 1 K, 2 K, 8 K, 33 K, 65 K and 83 kHz. A variety of measurement modes for pipeline positioning can verify each other to ensure the accuracy of pipeline positioning. The built-in GPS helps to generate the pipeline drawing automatically. It can detect the pipe coating damage points and size or the outer layer breakdowns of electric cable with the "A" frame. Working depth reaches 6 meters. It displays on a 3 1/2-inch LCD with backlight. The built-in rechargeable battery can last more than 10 hours. **877-369-1199; www.forbestusa.com.**

8 / RIDGID SEEKTECH SR-20 LOCATOR

The **RIDGID SeekTech SR-20 Locator** is a lightweight, yet rugged receiver that provides needed data fast for accurate locating and protection of critical assets. It weighs 3 1/2 pounds, has a battery life of 16 hours, and can be programmed to detect any active frequency from 10 Hz to 35 kHz. Target line and guidance arrows quickly identify distortions. Proximity signal and signal strength also help work through difficult locates. **800-769-7743; www.ridgid.com.**

9 / SUPERIOR SIGNAL SMOKE GENERATORS

Smoke generators from **Superior Signal** can help find the sources of surface inflow that are causing wet weather sanitary sewer overflows. They provide a fast, easy, and inexpensive way to find leaks and faults in collections systems; laterals; as well as building plumbing, drains, and vents. Classic Smoke Candles provide visible smoke to detect more faults at a longer distance. Smoke generators are available in sizes to meet any need, from 30 to 500,000 cubic feet. Smoke Fluid Systems use an insulated heating chamber with stainless steel injector to maximize dry smoke output and produce quality liquid-based smoke. They meet WEF, NASSCO and EPA standards. **800-945-8378; www.superiorsignal.com.**



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MANHOLE INSPECTION

10 / CTSPEC SEWER OVERLAY EDITION MODULE

The **CTSpec** sewer overlay edition module lets the user edit pipe reference numbers, street names, the entry manhole, or the exit manhole in an automated way directly in the inspection record. This module allows the user to change the text of existing information; add missing information to the inspection record; change the position, color, and size of the information; and add or remove an observation. **888-965-8987; www.ctspec.com.**

11 / CUES SPIDER SCANNER

The **SPiDER scanner** from **CUES** can calculate its position in the manhole shaft by using its sensor data to measure its incremental motion instead of the payout cable. It weighs less than 30 pounds and can be hand carried to easements or other previously difficult-to-access sites. This wireless portability is possible because the processing computer and battery supply are built into the scanner. It collects millions of 3-D measurements during each manhole inspection, so the manhole can be measured to better than 5 mm accuracy. The point cloud can be used to evaluate the structural changes in a manhole before and after rehab. It also provides live-video stream and recorded MPG video, making it an ideal wireless tool for inflow and infiltration studies. **800-327-7791; www.cuesinc.com.**

12 / ELECTRIC EEL ECAM PRO 2

The **Ecamm Pro 2** mainline pipeline inspection camera system from **Electric Eel** has a stainless steel-housed, 1.68-inch self-leveling color camera with sapphire lens; 20-LED light ring with an impact-resistant polycarbonate light ring cover; and high-resolution CCD element. The auto-iris adjusts light automatically. A flexible camera spring navigates 3-inch P-traps. The unit comes standard with 200 feet of braided fiberglass premium 1/2-inch-diameter pushrod (with a capacity of 400 feet available on the reel), industry-standard 512 Hz sonde, 10.4-inch daylight-readable monitor with click-touch controls, and one-touch recording directly to a USB flash drive. It has an on-screen footage counter, a two-hour battery with built-in charger, adjustable light controls, 16 pages of text writing with memory saves, voiceover recording, an 8x zoom function, audio/video out jacks, 8-inch wheels for easy maneuverability, a secure-locking reel brake, and rugged powder-coated steel tube and bar construction. **800-833-1212; www.electriceel.com.**

13 / ENVIROSIGHT CLEVERSCAN

The **CleverScan** manhole scanner from **Envirosight** performs a comprehensive, fully automated assessment of manhole condition in two to three minutes. It captures visual and dimensional data, and it presents the user with a flat scan with detailed image data covering every inch of the manhole wall; a dense point cloud for 3-D visualization of the manhole structure and easy CAD integration; and a virtual view inside the manhole, where an operator can pan, tilt and zoom to areas of interest. It sits over an open manhole. With the press of a button, the system's probe descends into the manhole, capturing image data using five HD cameras and building a dimensional profile using an array of four lasers. An onboard rangefinder controls descent and determines when the scan is complete. Scan data is immediately transferred to a laptop running specialized software, where it can be viewed, annotated and shared. **866-936-8476; www.envirosight.com.**

14 / MYTANA MFG. PGR400

The **PGR400** from **MyTana Mfg.** can be used to inspect 4- to 12-inch lines with 400 feet of rugged pushrod and comes with a 512 Hz locator. The system's 1 1/2-inch, color, self-leveling camera head includes a built-in 512 Hz sonde transmitter, high-intensity LEDs, and an extended-focus lens for wide-angle viewing. A built-in, 12-inch, daylight-readable monitor delivers high-clarity footage, and all-digital recording lets the user save that footage to either the 64 GB internal drive or removable USB flash drive. Operators can also stream video wirelessly to multiple devices. A 3-inch protective skid for the camera head helps navigate bends. Rechargeable batteries deliver up to 3 hours of service. The included 512 Hz locator provides continual depth readout, directional indicators and intuitive operation with audio feedback. **866-948-7576; www.mytana.com.**

15 / R.S. TECHNICAL SERVICES (RST) HELIX

The **Helix** from **RST** is an advanced manhole inspection system designed to accurately identify sources of inflow & infiltration as well as structural deficiencies in sewer and stormwater manholes. The fully automated system can be economically deployed by a single operator from a van, pickup, ATV or CCTV vehicle, and it will scan a typical 10-foot manhole in under a minute. It has six high-resolution cameras that capture panoramic imagery of every surface of a manhole as well as six active 3-D sensors that record millions of spatial data points for precise measurements. It automatically transmits the

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scan data to software, where it can be reviewed in the office or the field. The inspection system includes the probe, cable reel, launching boom and wireless control unit. The system data is compatible with NASSCO's MACP standard. 800-767-1974; www.rstechserv.com.

16 / RAPIDVIEW IBAK NORTH AMERICA PANORAMO SI

The **PANORAMO SI** manhole inspection system from **RapidView IBAK North America** offers 100 percent coverage, inspection speeds of up to 14 inches per second, geometric measurements from any point inside the manhole, laser depth measurement, 225 feet of cable, and capabilities from 10-inch-diameter and up. The software allows the user to view the manhole from any angle and at any position, creating a virtual-reality-style view of the manhole. This file can be viewed from any computer, anytime. The system also automatically generates a 3-D model of the inside of the manhole that can be rotated, viewed, measured or output to a CAD file for further analysis. The system can be an addition to a **PANORAMO** mainline inspection system or is available in a stand-alone version. It allows a crew to inspect more than 50 manholes per workday. 800-656-4225; www.rapidview.com.

17 / RAUSCHUSA M-SERIES

The **M-Series** pipe inspection system from **RauschUSA** is highly modular, as each inspection module is interchangeable and upgradeable. The manhole inspection system is an add-on for Elka 600 systems used in conjunction with the standard KS 135 mainline camera. It is connected to a telescopic bar module mounted to the arm of the Elka 600 motorized cable reel. Using the same system control unit, the manhole inspection system is controlled remotely to lower and raise the camera into the manhole. The system offers TV inspection of manholes up to 26 feet deep. The camera has a 10x optical and 12x digital zoom, automatic iris and autofocus functions. This system enables detailed manhole inspections with documentation according to MACP standards, or a custom manhole template may be created. 717-709-1005; www.rauschusa.com.

MANHOLE LINERS

18 / LMK TECHNOLOGIES CIPMH

The **CIPMH** (cured-in-place manhole) solution from **LMK Technologies** is a one-piece, resin-saturated liner designed to reduce inflow & infiltration

and renew structural defects in a variety of manhole configurations and sizes, including barrel sections as well as eccentric and concentric cones constructed of brick and mortar, precast, or cinderblock. This one-size-fits-most, reinforced and stretchable liner is engineered to resist traffic loading and freeze-thaw cycles while creating a corrosion-resistant lining. Available for chimney or full-depth manhole rehabilitation projects, the ASTM F3033-compliant, vacuum-impregnated liner is pressed against the existing manhole by a pressurized bladder until the thermoset resins have cured ambiently, typically within two hours. 815-433-1275; www.lmktechnologies.com.

19 / THE STRONG COMPANY STRONG-SEAL HIGH PERFORMANCE MIX

Strong-Seal High Performance Mix from **The Strong Company** is a pure-fused calcium aluminate mortar that stops infiltration, restores structural integrity, and protects against microbiologically induced corrosion in sanitary sewer systems with harsh sulfide conditions (pH greater than 1.0). As the pH level of the structure evolves downward, this product regulates microbial activity, providing corrosion production. It is reinforced with alkaline-resistant fiberglass. When spray applied to a minimum 1/2-inch thickness, it is intended to form a structural monolithic liner covering all interior substrate surfaces. When correctly applied, this material exceeds the compressive and flexural strength of the original structure. 800-982-8009; www.strongseal.com.

MANHOLE PARTS AND COMPONENTS

20 / RELINER/DURAN MODULAR MANHOLE INVERT CHANNEL SYSTEM

RELINER/Duran Modular Manhole Invert Channel Systems use molded fiberglass flumes with smooth sewer pipe interfaces to rehabilitate inverts without flow interruption. The field-installed modular components bolt together inside the manhole and serve as the form for a new concrete bench. They eliminate the inconsistencies associated with field-formed concrete channels. The full-depth lined channels are high-flow and easy to clean and maintain. Standard 8- and 12-inch-depth channel sections fit through a 24-inch manhole frame and will accommodate 6- through 12-inch pipes. Larger sizes are available. Parts are selected based on the unique configuration of each manhole. 800-508-6001; www.reliner.com.

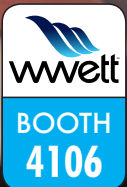
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21 / TRELLEBORG PIPE SEALS FLEXRIB

The **FlexRib** manhole chimney seal from **Trelleborg Pipe Seals** includes Waveband technology that reliably compresses the rubber FlexRib seal against the frame casting and the manhole cone to achieve water tightness without requiring bonding. The FlexRibs readily absorb joint movement without compromising the seal. The seal keeps joints in the grade adjustment area (chimney to frame) from deteriorating with impact loads and thermal expansion or contraction, which can result in infiltration. The seal accommodates for inevitable movement in joints and withstands seasonal temperature extremes, which can take their toll on the bonding of coating systems because of differential expansion or contraction from the manhole materials. **800-626-2180; www.trelleborg.com/pipe-seals.**

RISERS

22 / CRETEX SPECIALTY PRODUCTS PRO-RING

The **PRO-RING** concrete-alternative manhole and catch basin grade adjustment system from **CreTex Specialty Products** is available in round, square and rectangular shapes. They are manufactured from expanded polypropylene, which is renowned for its strength-to-weight ratio, durability, chemical resistance and long service life under harsh conditions. One person can install the watertight system in minutes to within a 1/4 inch of finished grade. Where concrete rings break and may cause injury, the system eliminates the hazard, helping minimize the risk of injury. A 6-inch unit weighs 14 pounds and stands up to physical abuse. The system can dramatically help speed manhole installation and repair time. Manhole repair sites can be opened, repaired, and closed in one day, reducing overall costs. Angle rings are available to match slopes, eliminating the need for mortar and shimming. **800-345-3764; www.cretexseals.com.**

23 / LADTECH MANHOLE RISER RING

Manhole riser rings from **LADTECH** can be installed in minutes. The rings nest together and include a 2 percent slope ring and a 1/4-inch spacer ring for a precision fit. They're made of high-density, lightweight recycled polyethylene; meet AASHTO's HS-25 axle-loading spec; and are impervious to H₂S corrosion that destroys concrete. **877-235-7464; www.ladtech.com.**

SAFETY EQUIPMENT

24 / MR. MANHOLE SIX SHOOTER

The **Six Shooter** manhole cutter from **Mr. Manhole** cuts and pulls the manhole frame with no labor involved, keeping crews safe. The cutter has an adjustable cutting diameter that requires no tools or additional parts. Fully engineered repair specifications are offered as a free download. The repair is quick and affordable and provides a perfectly level repair that can be done in less than an hour. **419-302-2461; www.mrmanhole.com.**

25 / UTICOM SYSTEMS CONFINED SPACE COVER SIGNS

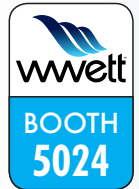
Confined space cover signs from **Uticom Systems** present a safe and easy way to cover potentially hazardous confined spaces. They can help reduce the risk of unauthorized entry and/or falling into an uncovered manhole. Options include an 18-by-64-inch sign manufactured from 1/8-inch durable polycarbonate that completely covers a manhole. The second option is an 18-by-36-inch label to be applied to clean and painted 19- by 36-inch plywood. This label is backed with U7000DS3 adhesive, which creates a permanent bond when applied correctly to the plywood. To install the cover sign, simply place it over a confined space, along with two standard safety cones on either end of the sign. Both systems comply with OSHA 1910, ANSI Z535 and NESC C2-2017 requirements. Custom imprinting is available. **610-857-2655; www.uticom.net.**

SEALANT

26 / SEALING SYSTEMS INFI-SHIELD

Infi-Shield external seal from **Sealing Systems** prevents erosion and infiltration in manholes or catch basins. The one-piece molded seal is made from EPDM rubber and has a reinforced, pre-formed, L-shaped corner. It is bonded with nonhardening butyl mastic and will pass a vacuum test. It installs easily in minutes without any special tools, sealing the extra water out of the system and gaining effective capacity. **800-478-2054; www.ssisealingsystems.com. c**

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Manhole Inspection and Rehabilitation

By Craig Mandli

CITY USES INSPECTION PLATFORM TO PRIORITIZE WATER PIPE ISSUES

PROBLEM / The city of Santa Monica, California, needed to inspect and assess pressurized potable water pipes to determine pipe and asset condition on live pressurized pipelines ranging from 4 to 20 inches and then identify and prioritize a list of water mains to be replaced as part of future CIPP projects.

SOLUTION / Using the **Investigator** platform from **Aquam Pipe Diagnostics**, a total of 40 pressurized pipe sections were identified by the city, which incorporated various materials, age, diameters and operational pressures. Wet barrel fire hydrants were selected as access points, and inspections encompassed a minimum of 50 feet upstream and downstream of the insertion point. Heavily tuberculated laterals remained a consistent theme throughout the survey and, in fact, proved to be in significantly worse condition than the mainlines.

RESULT / The city is in the process of reviewing the data from the inspection and intends to redesign its capital improvement plan, prioritize intervention and remediation techniques, and align capital expenditure based on the results and recommendations from the inspection. **858-242-1640; www.aquamcorp.com.**



EPOXY COATING USED ON BADLY DETERIORATED MANHOLES

PROBLEM / A project in the city of Coquille, Oregon, required the rehabilitation of 15 badly deteriorated, 48-inch manholes located in a flood plain that is largely swampland. Most locations were inaccessible for the delivery and utilization of spray equipment.

SOLUTION / **Neopoxy International** is the manufacturer of high-strength, corrosion-resistant, sprayable and hand-applied **NPR-5300** series epoxy resins, specifically designed for manhole coatings. Per Neopoxy International's recommendation, Michels used 3-gallon One-Step KITS of trowelable epoxy resin **NPR-5305**. The kits are easy to use since both parts of the epoxy system are preloaded in the same container. They don't require spray equipment, instead just an electric drill with a paint blade and a spatula. Using the specified 250-mil thickness, Michels hand-applied the epoxy to around 80 percent of the work area. The remaining area was sprayed with **NPR-5304**, another Neopoxy International epoxy product, to a thickness of 250 mils.

RESULT / The epoxy resin was successfully applied by the crew of three on the deteriorated manholes. **510-782-1290; www.neopoxy.us.**



CHEMICAL GROUT SYSTEM PUTS A STOP TO ACTIVE LEAKS

PROBLEM / A municipality in Texas was in need of a cost-effective way to stop problematic, high-volume active leaks in their collections system manholes. In-house crews had the capability to do the work with a chemical grout injection system but needed a system that would provide consistent results.

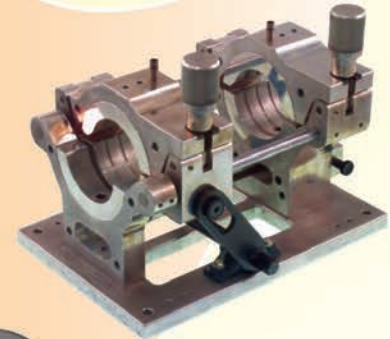
SOLUTION / The crew decided to try **Seal-Tite**, a two-component, fast-acting chemical grout system from **Parson Environmental Products**. The team was so impressed, they bought the product in bulk, along with two pneumatic application guns for a solution every time they find a leak.

RESULT / The municipality has a 100 percent success rate for stopping active leaks. They continue to stock the product in bulk for quick fixes to a problem that used to cause them a lot of headaches. **800-356-9023; www.parsonenvironmental.com.** **C**

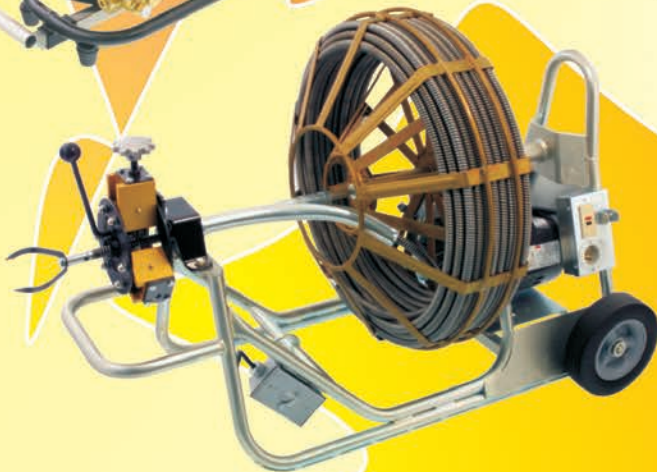


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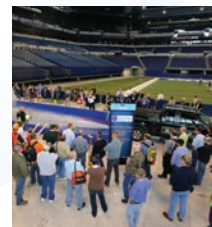


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SPOTLIGHT

Get more out of your inspection data and reports

By Craig Mandli

Camera inspections can provide a wealth of information to a drain cleaner. So much, in fact, that it can sometimes be difficult to organize it all. The ITpipes Web software program does that for you.

The program is browser-based for simplified deployment and includes features for inspection data management, review, planning and scheduling. It provides quick inspection review access in the field and powerful reporting as needed.

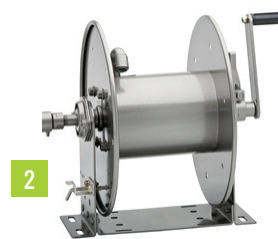
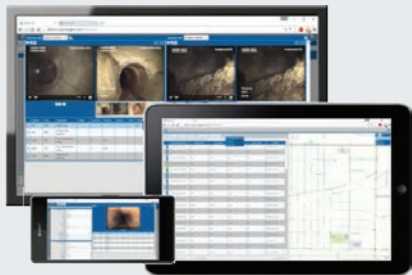
“The biggest benefit of ITpipes Web is it allows for easy organization,” says sales representative Cori Criss. “It very simply gets everyone in a company on the same page.”

ITpipes Web has automated integration to GIS mapping, so reports instantly show up as color-coded assets. With unlimited drill-down filtering and querying on any data collected, new inspections sync automatically to provide instant reports, updating in real time as new inspections sync. With options for on-premise local hosting and fully managed SaaS, it provides access to inspections anytime, anywhere, on any device.

“The software is compatible with laptops and tablets, and the app can be downloaded and used on any smartphone,” Criss says. “All collected information is synced on the web, so it is accessible from anywhere that has an internet connection.”

ITpipes Web includes SmartTabs that provide comprehensive detailed reports in spreadsheet-like formats with unlimited, drill-down filtering and querying. Search, sort, and grouping tools quickly provide intelligent data displays for decision-making. With easy-to-use unlimited filtering, querying, and reporting, users can make informed decisions quickly in the field. And when combined with the company’s GIS Mapping add-on, searching, sorting, and grouping of tools can be done quickly to provide intelligent results that are mapped in real time. SmartTabs are automatically updated on Esri maps, which display constant location visuals for single inspections or your filters and queries. With integration to AMS/CMMS, the inspections are available where and when you need them.

“This is going to be a great tool for inspection contractors and municipal agencies that want to keep everyone on the same page,” Criss says. “For larger companies with multiple arms, that is very important. That’s why we feel this is such a great fit in this market.” 877-487-4737; www.itpipes.com.



1 VACTOR NEXT-GENERATION HXX VACUUM EXCAVATOR

Vactor’s new HXX vacuum excavator maximizes legal payload and improves operational efficiency. The placement of the debris body and water tank on the chassis ensures equal distribution of the payload on the axles, regardless of how much water is in the tanks. A new PrecisionFlow water pump system features a single-piston design that is capable of higher flow and pressures than a triplex water pump system for production and reliability. The vacuum system is rated at 6,200 cfm and 28 inches Hg, and the water pump system is rated at 30 gpm and 3,000 psig. Water tank capacity is 1,200 gallons, and the debris tank has a 16-cubic-yard capacity. 800-627-3171; www.vactor.com.

2 HANNAY REELS 1000 SERIES COMPACT MANUAL REWIND REELS

The 1000 Series from Hannay Reels is a compact manual rewind reel built for a 1/4-, 3/8- or 1/2-inch I.D. hose. This lightweight reel has an e-coated frame and is ideal for air, pressure washing, washdown and spray operations. With an adjustable cam-lock brake and exterior mounting holes, the series offers easier installation while handling pressures up to 3,000 psi and temperatures from 20 to 400 degrees F. 877-467-3357; www.hannay.com.

3 GEOPHYSICAL SURVEY SYSTEMS INC. (GSSI) PALM XT ANTENNA FOR GROUND-PENETRATING RADAR CONCRETE INSPECTION SYSTEM

GSSI’s new accessory for the StructureScan Mini XT is the Palm XT antenna. It is a miniaturized, hand-held ground-penetrating radar antenna that is designed to enhance the capabilities of the inspection system by providing access in tightly spaced areas and enabling overhead scanning. It features full keypad control via the top that allows for remote control of the user interface and has three data collection modes: standard, cross polarization and side car. The Mini XT can help identify structural elements, including pan deck and concrete cover, and can also provide real-time determination of concrete slab thickness. 800-524-3011; www.geophysical.com.

4 VACALL - GRADALL INDUSTRIES STEP-IN COMPARTMENT FOR ALLEXCAVATE HYDROEXCAVATORS

The new step-in compartment from Vacall - Gradall Industries for its AllExcavate hydroexcavators provides warmth and protection from inclement weather. The standard heater compartment is roomy and has floor drainage, racks to hang dry clothing, and another dry rack to store the high-pressure hand gun and extensions. There are larger compartments with extra room, among other options. Along with LED lighting, the cold weather package includes extra insulation, heated cabinets for the hose reel and water pumps, and boilers that can heat water for more effective hydroexcavation in frozen ground. 800-382-8302; www.vacall.com. c

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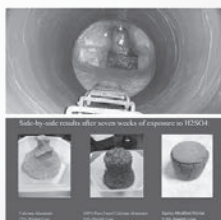
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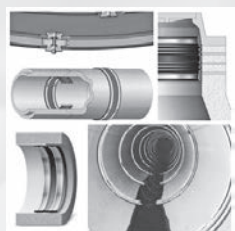
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The McAlear Group helps in Houston hurricane aftermath

Volunteers from The McAlear Group, parent company of Drincables Direct, traveled to Houston to assist in cleanup efforts following Hurricane Harvey. The trip was organized through Experience Mission, an organization specializing in planning domestic and international mission experiences and aiding in disaster relief.



From left, Monica Chavez, Inside Sales Service Spring Corp.; Nate Reid, The McAlear Group; Andrew Martinez, Drincables Direct; Emet Ramos, Emet's Plumbing; and Rae Pobst, marketing, The McAlear Group.

Vortex Infrastructure changes name, expands

Vortex Infrastructure announced that it is changing its name to Vortex Cos. The decision was driven by the rapid growth of the company's expanding portfolio of brands, products and services for the renewal of civil infrastructure. Including the recent acquisition of Ricor Services in Arvada, Colorado, the company also has locations in Texas, New England, Pennsylvania and Arkansas.

InfoSense wins 2017 Fast 50 Award

InfoSense announced it was one of the *Charlotte Business Journal's* 2017 Fast 50 Award winners. This marks the third time this award has been given to the company.

Hydra-Flex wins award for Ripsaw

Hydra-Flex was named the winner of the Best New Product Design category in the 2017 Minnesota Manufacturing Awards for its Ripsaw rotating turbo nozzle. Hydra-Flex was also a finalist in the Best in Class and Sustainability categories, and CEO Jaime Harris took home the Executive of the Year award.

Electric Eel launches new website

Electric Eel announced a new website that better supports customers across the many markets it serves. It consists of two major categories: rental, which addresses all the needs of the tool rental market, and professional, which includes products for plumbers, drain cleaners, schools, hospitals, municipalities, property management, government, and maintenance professionals.

StoneAge names new vice president of sales and marketing

StoneAge announced the appointment of Barbara Beaubien to vice president of sales and marketing. She previously worked for Flowserve's corporate headquarters, developing strategy and marketing for their pump, valve and mechanical seal divisions. **c**



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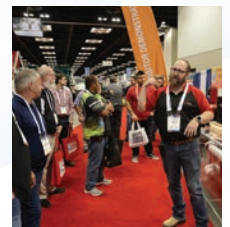
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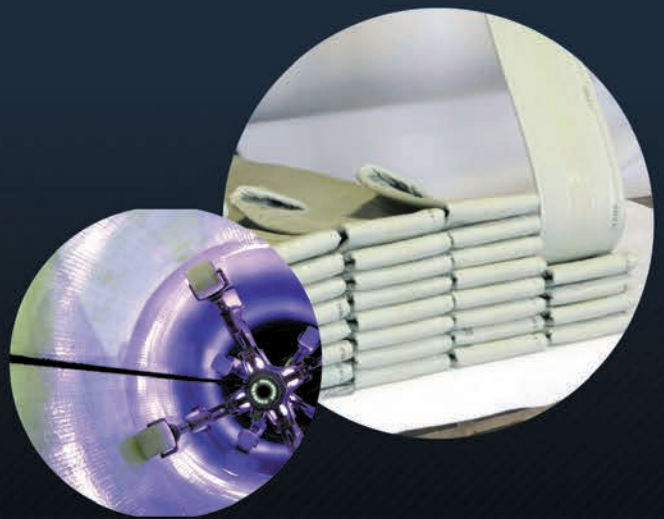
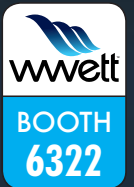
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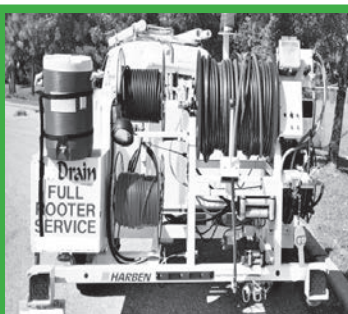
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Honda model WP40X, 8 hp, 4" with hoses. Honda 4 hp, 2" pump with hoses. The Cable Center: 800-257-7209. (CBM)

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Bosch Brute hammer drill with cart irons. The Cable Center: 800-257-7209. (CBM)

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1997 GMC 3500 Savanna UEMSI TV inspection truck. 5.7 gas engine, 88,961 miles, UEMSI PCU, Dell PC with Windows operating system. \$10,000 OBO

Call Mark for more information
708-475-7116, IL CBM



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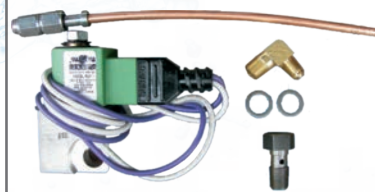
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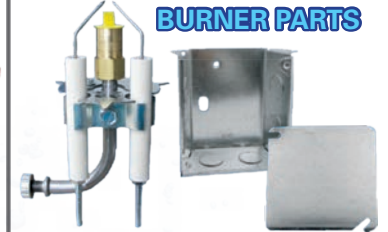
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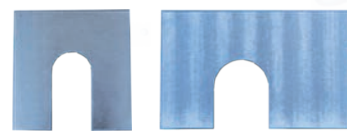
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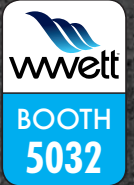
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