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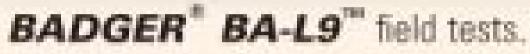


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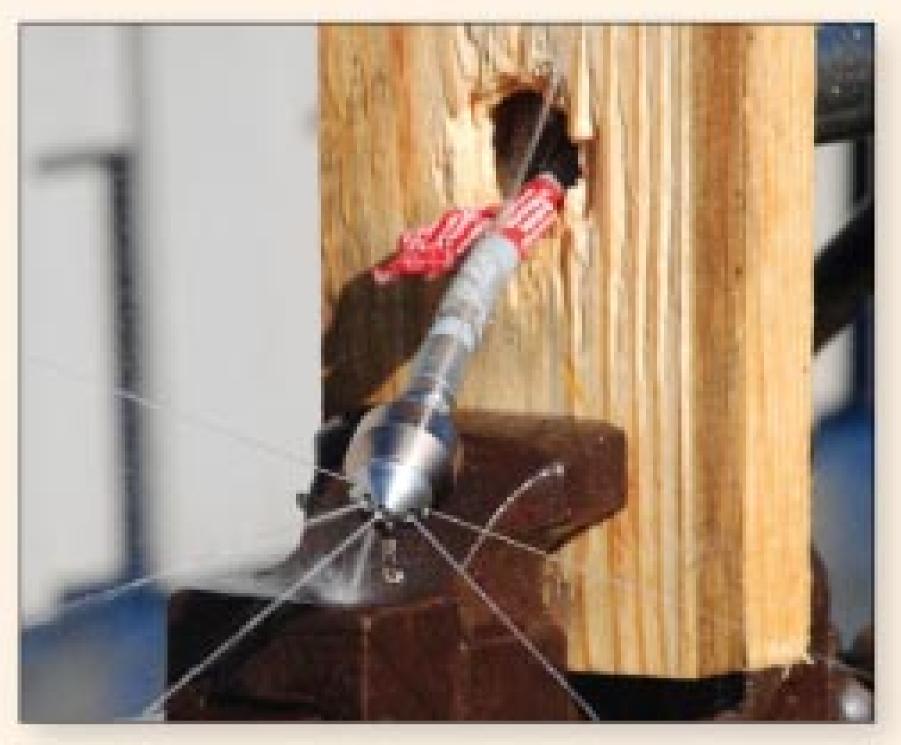
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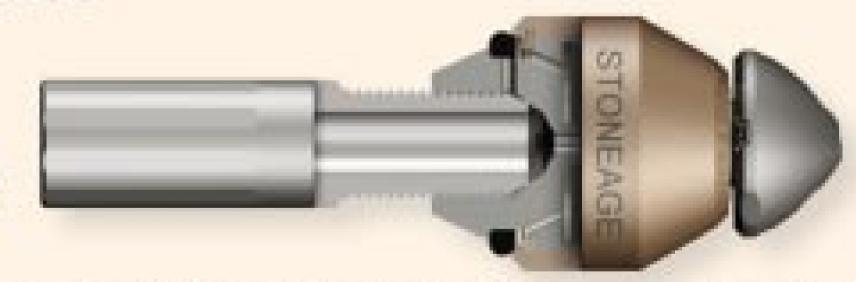
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US Patents No. 7,635,096 D 617,871 D 622,810 D626,624

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Flow Range		
BA-R05 Offset	5-15 gpm	19-56 lpm
Flow Rating	0.8 Cv	
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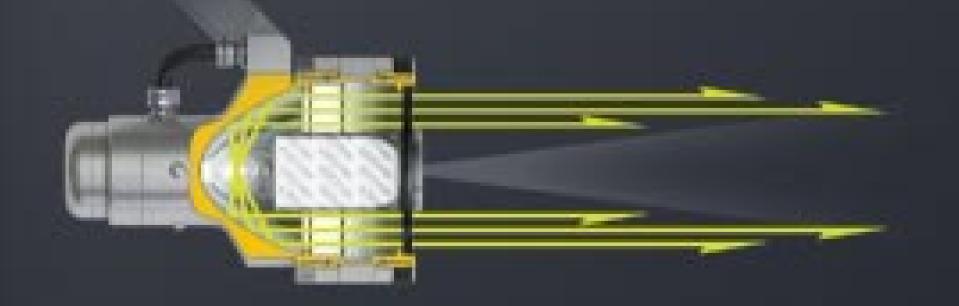


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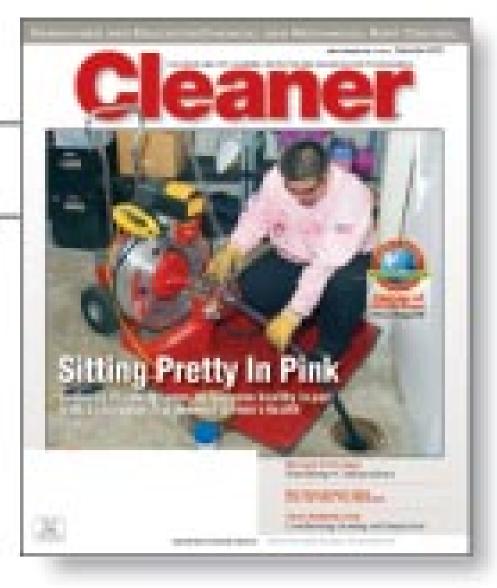
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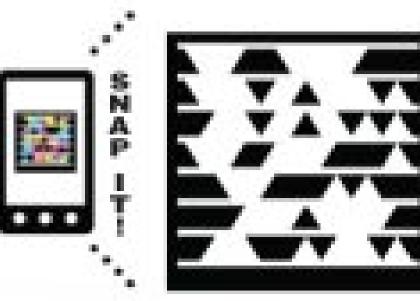


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Plan of Attack

Trade show attendance is an important investment. Your time at the show is valuable. Here are ten tips for getting the most from your adventure.

Ted J. Rulseh



hen you go to a trade show, you pay for registration, travel, hotel and meals. But the most important investment you make is your time.

If you want to spend it wisely, you have to prepare. If you plan to attend the 2011 Pumper & Cleaner Environmental Expo International in Louisville, it's not too soon to start getting ready. One of the best ways to plan is to start with the end in mind – with what you want to bring back from the show to help your business.

Be comfortable. There's a tendency to underrate this. But the you're at the show. plain fact is, if you're over-dressed and get too warm, if your feet hurt, if you keep pushing yourself too hard, you're going to be miserable, and as a result you'll be at less than your best. Above all, wear the most comfortable shoes you can find. Consider buying a great pair of walking shoes – and do it a month ahead of time so you can break them in.

Share the wealth (and the work). If you can, take along a colleague. Two heads and two sets of eyes are better than one. Another team member is sure to notice

and stay focused on the real reasons

Write things down. Things you observe, ideas you get, people you want to follow up with, products you want to investigate later write it all on a list or make notes in your smart phone. If you don't, you're all but certain to forget things that might have been of great value.

Make appointments. It's frustrating to visit an exhibitor whose new product interests you, only to find the booth mobbed and the staff terminally tied up. If there's a product you're definitely interested in seeing up close, consider calling the learned, examine everything you've collected, and follow up as needed. If you don't do this, a lot of great ideas and opportunities will vanish into thin air – because you'll be too wrapped up in the day-to-day to remember them, let alone attend to them.

Have some fun. Include on your schedule time to take in a sports event, have dinner at a nice restaurant, go to a concert, or visit a museum in the host city. As my mother used to say, "Remember what all work and no play does to Jack." (It makes him a dull boy.) A little R&R, a little entertainment,

If you can, take along a colleague. Two heads and two sets of eyes are better than one. Another team member is sure to notice things that you didn't. And with two people patrolling the floor and taking in seminars, you'll accomplish at least twice as much as if you attended alone.

That might be equipment. It might be knowledge. It might be a newly minted network of friends and mentors. Most likely it's all these and more. Consider planning now for all the treasures you hope to gather. Here are ten tips drawn from my own experience and from experienced trade show attendees.

Don't bite off too much. At a large trade show, there's more to see and do than you can possibly take in. As in any other endeavor, it's better to do a few things well than many things poorly. Decide in advance which products you're going to research, which seminars you're going to attend, and what events you're going to take in. Take good care of that business - and then do other things in any spare time you have.

things that you didn't. And with two people patrolling the floor and taking in seminars, you'll accomplish at least twice as much as if you attended alone.

Set goals. Make them specific and measurable. Examples: 1 will come back from the show with the business cards of five peers with whom I can share information through the year. I will compare and contrast four portable video inspection systems and be prepared to make a buying decision within one week after the show.

Keep your eyes on the prize. Don't get distracted by the sideshows and giveaways. Stick to business. That doesn't mean you can't take a minute to watch a magician or try your hand at a putting green. But keep that to a minimum

manufacturer in advance and arranging a booth visit on a specific day and time.

Observe the "three-foot rule." One trade show regular I know likes to say, "If you come within three feet of me at a show, I'm saying hello and shaking your hand." That's basically a way of saying: Don't be shy. Get out of your comfort zone and talk to people. The person ahead of you in the lunch buffet line could be someone with the solution to a problem that's been plaguing you for months.

Plan for the post-mortem. One can argue that the most important trade show days are the ones right after you get home. Before you leave for the show, set up a meeting or series of meetings with your team where you'll go over everything you

will help you enjoy your trade show experience - and look forward to the next one.

Here's wishing you a successful and enjoyable 2011 Pumper & Cleaner Expo.

Look inside this issue of Cleaner magazine for your free wall calendar. It comes packaged with the December issue as a special thank you for your loyalty during our nearly 30 years of monthly publication. You can hang this calendar in a convenient place and use it to note important events during your work year.





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Familiarity Can Breed Complacency

Excavators are such common work machines that employees can easily forget the danger of using them without proper care

By Ted J. Rulseh

ow dangerous are hydraulic excavators? Not very – if they are used properly. But when employees forget basic safety procedures, even for a moment, the consequences can be serious.



The National Institute for Occupational Safety and Health (NIOSH) cites an example straight from the sewer construction and maintenance industry. A 28-year-old

laborer and a co-worker, and an excavator operator were using a machine with a quick-disconnect bucket to load concrete manhole sections onto a truck.

The laborer was on the ground to connect the manhole sections to the excavator, while the co-worker was on the truck, disconnecting the sections after they were loaded. The operator had positioned the excavator bucket near a manhole section, while the laborer attached a three-legged bridle to the object for lifting. The bucket disconnected from the excavator stick and struck the laborer, who was pronounced dead at the scene.

NIOSH advises business owners and employees to help prevent injuries and deaths through training, proper equipment installation and maintenance, safe work practices, and personal protective equipment.

Based on a review of information from the Bureau of Labor Statistics Census of Fatal Occupational Injuries, NIOSH suggests that the two most common causes of injuries around excavators are being struck by the moving machine, swinging booms, or other machine components, and being struck by buckets that detach unexpectedly. Other leading causes are rollovers, electrocutions, and slides into trenches after cave-ins.

NIOSH suggests a series of measures employers should take to protect workers:

Site setup. Contact local utilities or one-call services to locate overhead and underground utility lines before starting work. Avoid working near overhead power lines. If people must work near them, develop a plan to avoid contact and to follow OSHA regulations for minimum clearance. Do not allow excavators to be operated on grades steeper than those specified by the manufacturer. Make sure workers position machines at a safe distance from trenches or other excavations.

Equipment operators. Train operators in the proper use of the equipment.

Continually evaluate safety programs to address changing work site conditions. Clearly identify and label all machine controls and make sure that the manufacturers' safety features are working.

Install and maintain equipment attachments and their operating systems according to manufacturers' specifications. Securely latch attachments (such as quick-disconnect buckets) before work begins. Follow the manufacturers' instructions for using positive locks on quick-

disconnect equipment.

Train operators to conduct visual and operational checks on all machine systems and operating controls before working the machine. Make frequent visual inspections of quick-disconnect systems, especially after changing attachments.

Use the ROPS and seat belts supplied by the manufacturer. Do not remove the ROPS. Do not exceed load capacities when lifting materials. Instruct operators to lower the boom to a safe position with the bucket on the ground and turn off the machine before stepping off for any reason.

Other site workers. Train workers to recognize and avoid unsafe conditions and to follow required safe work practices. Make all workers aware of the machines' swing areas and the operators' blind spots before the operator works the machine. Keep workers on foot outside these areas by marking them with rope, tape, or other barriers.

Before each work shift begins, review and confirm communications signals between machine operators and workers on foot. Instruct machine operators to keep the bucket as close to the ground as possible when workers are attaching loads for hoisting.

Keep workers outside the swing areas and clear of attachments when using the machines for hoisting materials. Do not allow workers to stand under suspended loads or suspended machine components such as the boom, arm, or bucket. Do not permit workers on foot to approach the excavator until they signal the operator to shut down the machine and receive acknowledgment.

Use spotters or signal persons around operating equipment when necessary,

Never permit workers to ride in or work from excavator buckets. Provide appropriate personal protective equipment and make sure that workers use and maintain it.











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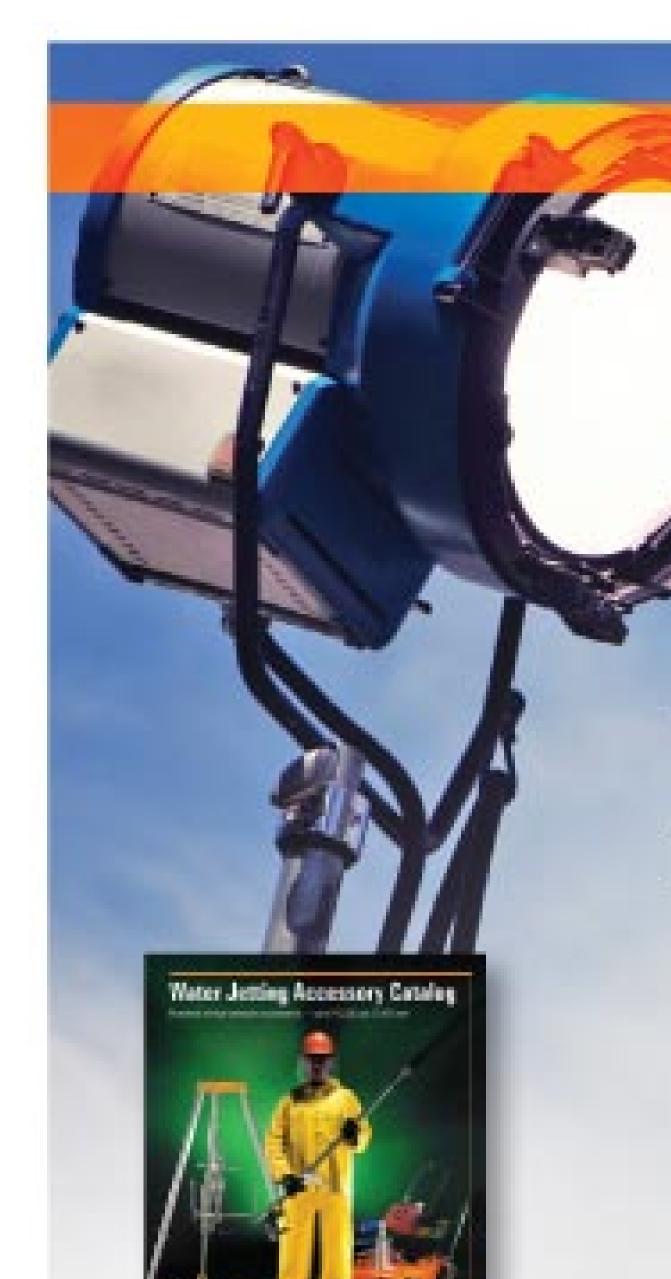
Steve Johnson, Division Manager CCS, Longview, WA "They worked with us until the operation was up and running smoothly. With Jetstream's help, we finished what would have been a two-week project in six days."

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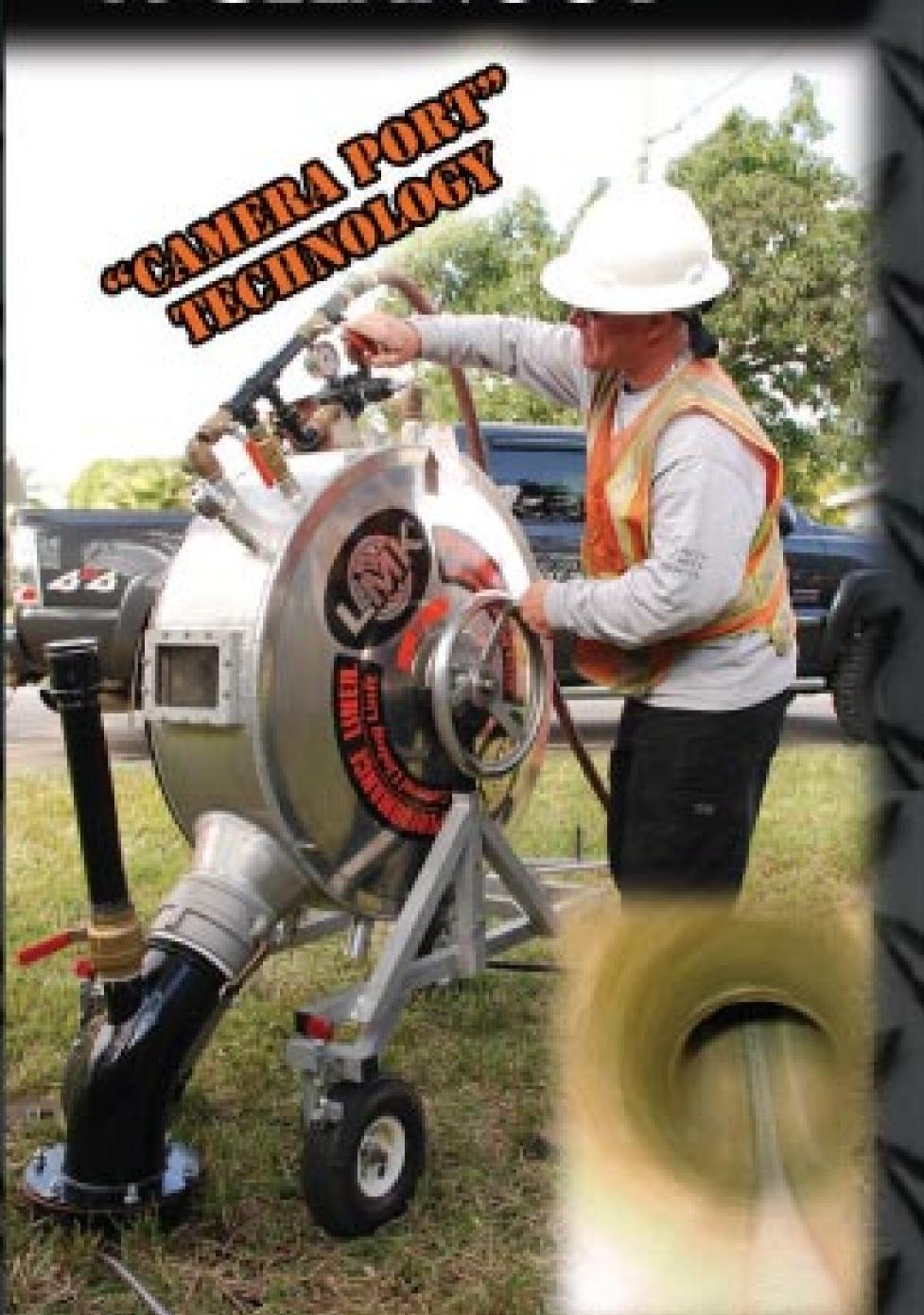
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Fighting the Good Fight

A Colorado contractor takes up the charge in an ongoing battle with tree roots using cutting and treatment techniques

By Marian Bond

Operating out of its Denver County facility, Guildner Pipeline Maintenance cleans about one million feet of sewer line a year, and televises at least 700,000 feet.

In the process, owner Jerry Guildner's crews have to deal with root intrusion in about 100,000 feet of that line. No matter what the treatment, roots will grow back. For Guildner, root control has been an important service since day one. Most customers are municipal, industrial and commercial.

Crews attack roots mainly with two chain knockers from KEG Technologies (Super 150 and Super 200), two Warthog nozzles from StoneAge Tools, and assorted root cutters from UEMSI. In addition, the company's rigs are equipped for RootX chemical root treatment.

PROFILE

GUILDNER PIPELINE MAINTENANCE INC. COMMERCE CITY, COLO.

OWNER: Jerry Guildner

FOUNDED: 1976

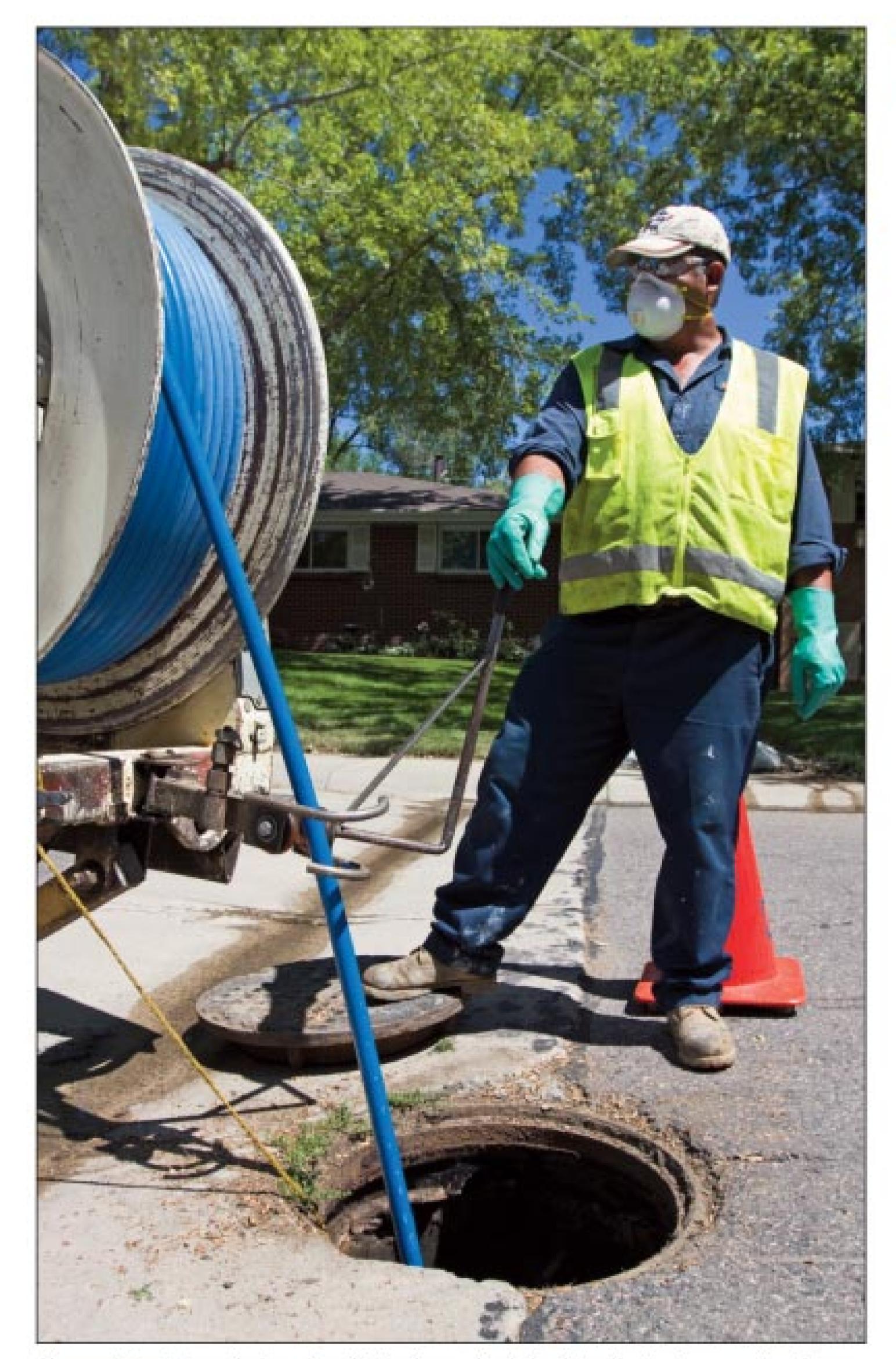
SPECIALTIES: Root control, sewer and drain cleaning,

manhole and pipe rehabilitation

SERVICE AREA: Colorado and adjoining states

EMPLOYEES: 21

WEB SITE: www.guildner.com



Upper photo: Everardo Canela pulls the hose slowly back to the truck, spreading the herbicide that will kill roots inside the pipeline. Lower photo: Inspection operator Leonard Josytewa watches video as foreman Mark Lei (not shown) lowers a chain cutter into a line.



READY FROM THE GET-GO

When Jerry Guildner's father, the late Fred Guildner, established Guildner Pipeline Maintenance, he had already owned other companies in the industry, and he declared that he was the first to offer CCTV inspection west of the Mississippi.

The company now operates on a four-acre site in Commerce City, Colo., and has a 17,000-square-foot building. Portions of the property and structure are leased out. Jerry Guildner continues to offer a variety of services by keeping abreast of new technology and helping customers evaluate better ways to solve problems.

Recently, a regular TV inspection for a long-time customer found a 3-foot break in a clay line alongside a two-lane roadway. The client wanted Guildner to dig down 17 feet to do the repair, but Guildner knew there was a better solution.

With research, he found PrimeLine Products, a supplier of materials for pipe repair. The process involved exactly locating the break, then running a cable from manhole to manhole carrying a packer loaded with repair material, which was installed and secured. The cure time is three to five hours. Because the packer has a flow-through, the line was not obstructed during the repair.

Guildner still offers the technology and has done about 75 repairs for that first customer, plus similar repairs for the city and county of Denver.

While expanding its services, the company has increased its reach with projects in Montana, South Dakota, New Mexico and Texas. Ninety-five percent of the work is still in Colorado. With the right equipment and trained personnel, Guildner Pipeline Maintenance is positioned to offer high-quality service to a wide customer base.

With the right equipment on board, the next challenge is making sure customers receive the best and most cost-effective procedure for their needs. Guildner crews make sure that once the roots are cut, the debris is removed from the system so that it doesn't go down the line, collect on more roots or grease deposits, and cause a clog or backup.

The battle line

In the Denver area and throughout the state, sewer pipes tend to be clay or concrete, although some are PVC. After several years of drought, roots are

"There are mineral deposits that can be as hard as concrete that have built up to an inch or an inch and a half around the joint. We cut those deposits for our customers."

Jerry Guildner

growing deeper to find moisture, and they find their way into pipes flowing with nutrient-rich water. In clay and concrete pipe, the invaders enter through joints or tap connections.

"We also see cases where lines were laid through a high-mineral area," says Guildner. "There are mineral deposits that can be as hard as concrete that have built up to an inch or an inch and a half around the joint. We cut those deposits for our customers. The difference here is that the mineral buildup has taken place over 20 or 30 years and won't soon come back. Roots will grow back within two years, or longer with treatment."

Removing mineral deposits is especially important when a pipe is to be lined. Mineral deposits and roots rarely occur in the same joint. In any case, roots are the more prevalent problem. Crews also have to deal with hard grease deposits. "We have had to use the root saw in some cases and even the chain knocker to get rid of grease and minerals," Guildner says.



Members of the crew at Guildner Pipeline Maintenance include: front from left, Cody Wagner, Len Josytewa, Mark Lei and Federico Escareno; back row, Tony Noal, Bill Guildner Jr., Josh Ralph, Jake Guildner, Lou Martinez, Ken Peach, and D.J. Guildner and Jerry Guildner.

Guildner Pipeline has three Vac-Con combination trucks. Two units (2007 and 2001) have 1-inch hoses, 2,000 psi/65 gpm water systems, and 10-cubic-yard debris tanks. The other (1999) carries a 3/4-inch hose and has a 3,000 psi/30 gpm pump.

The company also owns a 1998 Hot Shot Jet Rodder from Vac-Con with 3/4-inch jet hose, 2,500 psi/30 gpm water system, and 1,600-gallon water

"We suggest cutting the roots and then giving them six to eight weeks to sap out and then scab over.

Then we go in and give the treatment."

Jerry Guildner

tank. Also in the fleet are two inspection vans from Aries Industries Inc. and one from RS Technical Services.

Lines of defense

Guildner likes to give customers options for dealing with roots. He prefers cutting and then treating, although two-thirds of customers prefer cutting only.

"People don't always believe in the process of treatment, and I understand that," he says. "We suggest cutting the roots and then giving them six to eight weeks to sap out and then scab over. Then we go in and give the treatment. We let the roots get the hurt out and then go in and apply the foam. You get a better kill that way. The roots will grow back, but it will be three or four years rather than two if we just cut.



Jake and Jerry Guildner, father and son, of Guildner Pipeline Maintenance.

"We explain the benefits of treatment, and that we need to get into the routine and stay on a schedule. It takes time and the willingness to let it work."

Treatment is a little more technical in the application, and Guildner has technicians specially trained and equipped. They jet up through the line, attach the applicator to the jet hose at the upper manhole, load the applicator with the product, and pull back as the foam is applied. The operator has to know the rate of retrieval and how much to load into the applicator for the length of pipe being treated.

Guildner reports that one customer has used the company's cut-and-treat regimen for 15 years and has not seen a root-related backup in all that time.

Putting it all together

Mechanical methods work, too. Guildner is satisfied with the way modern root saws are designed and says there is little risk of damage to the pipe during the cutting process. The chain knockers are another matter.

"You need a good operator on it who knows how the equipment works," says Guildner. "They have to know how much pressure to run through it, as it moves around in the pipe pretty quickly. The tool can shatter clay pipe if improperly handled. It's sort of a learn-by-feel thing. You learn by practice. You can't run it up to full pressure and have it spinning at 1,800 rpm. If you rev it up, it will bounce around and do damage."

On a job, technicians watch the chain knocker with a camera to monitor its performance. "We put the jet nozzle in, jet up the line to the upper manhole, remove the nozzle and attach the chain knocker and pull it back without water," says Guildner. "As we pull it back, we follow it with the camera."

The root saw does a good job with 6- to 18-inch pipe. In clay and concrete pipe, crews use a spiral bit. In lined pipe or PVC, they attack with a flat or concave blade. "The tolerance in the hydraulic motors is so tight," says Guildner. "If rust starts working up in the unit, it can freeze. That is the worst-

"We explain the benefits of treatment, and that we need to get into the routine and stay on a schedule. It takes time and the willingness to let it work."

Jerry Guildner

case scenario. If it starts slowing and wearing down, you will not have the power in the saw, and you can't cut the roots."

Having proper nozzles is essential. In Colorado, contractors often have to pay for the water they use, and the right nozzles help control water usage and save money.

Take no prisoners

There are options for removing roots after they are cut. "We position a combination unit at the downstream manhole to suck the roots up as they come by," says Guildner. "Sometimes we put in a mesh screen at the downstream side of the manhole. It has a 3/4-inch opening and water will flow through, but the roots will be caught. We can also put in a trap with a 90degree bend at the downstream manhole to catch roots."

On one project, Guildner Pipeline was asked to find a manhole that had been buried for many years in a district where the company had done little work. After locating the manhole, the crew went down 6 1/2 feet and found three feet of roots, which they removed using a reciprocating saw.

While dealing with the challenges of root removal, there is one thing Guildner always guarantees his customers: No matter what action is taken, chemical or mechanical, the roots will eventually and aggressively grow back. The question is, how to fight back and maintain the upper hand. That's the job of Guildner Pipeline Maintenance – and it's a job the company continues to do well in the arid desert regions of Colorado.

MORE INFO:

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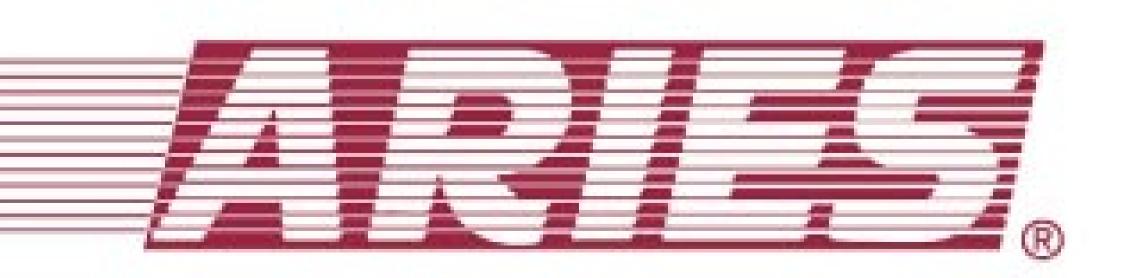












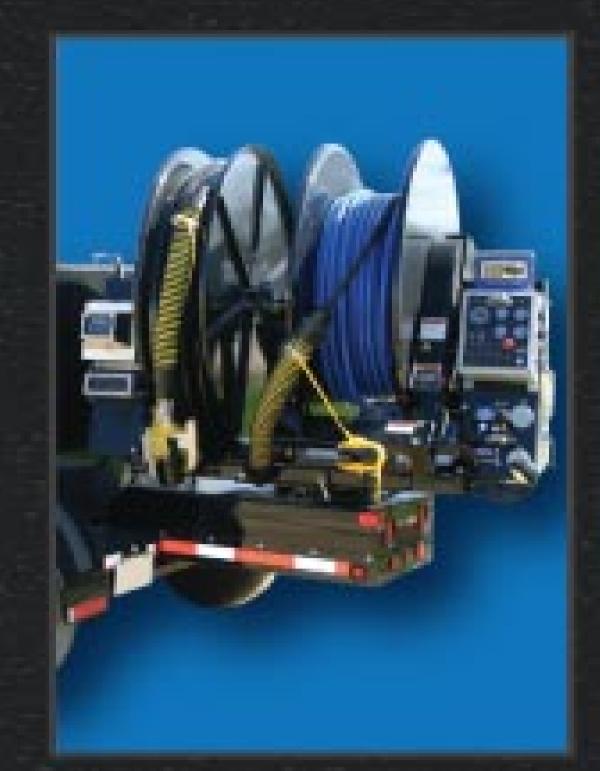


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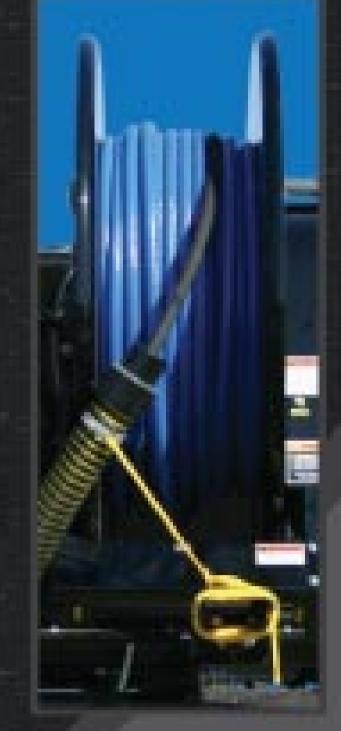


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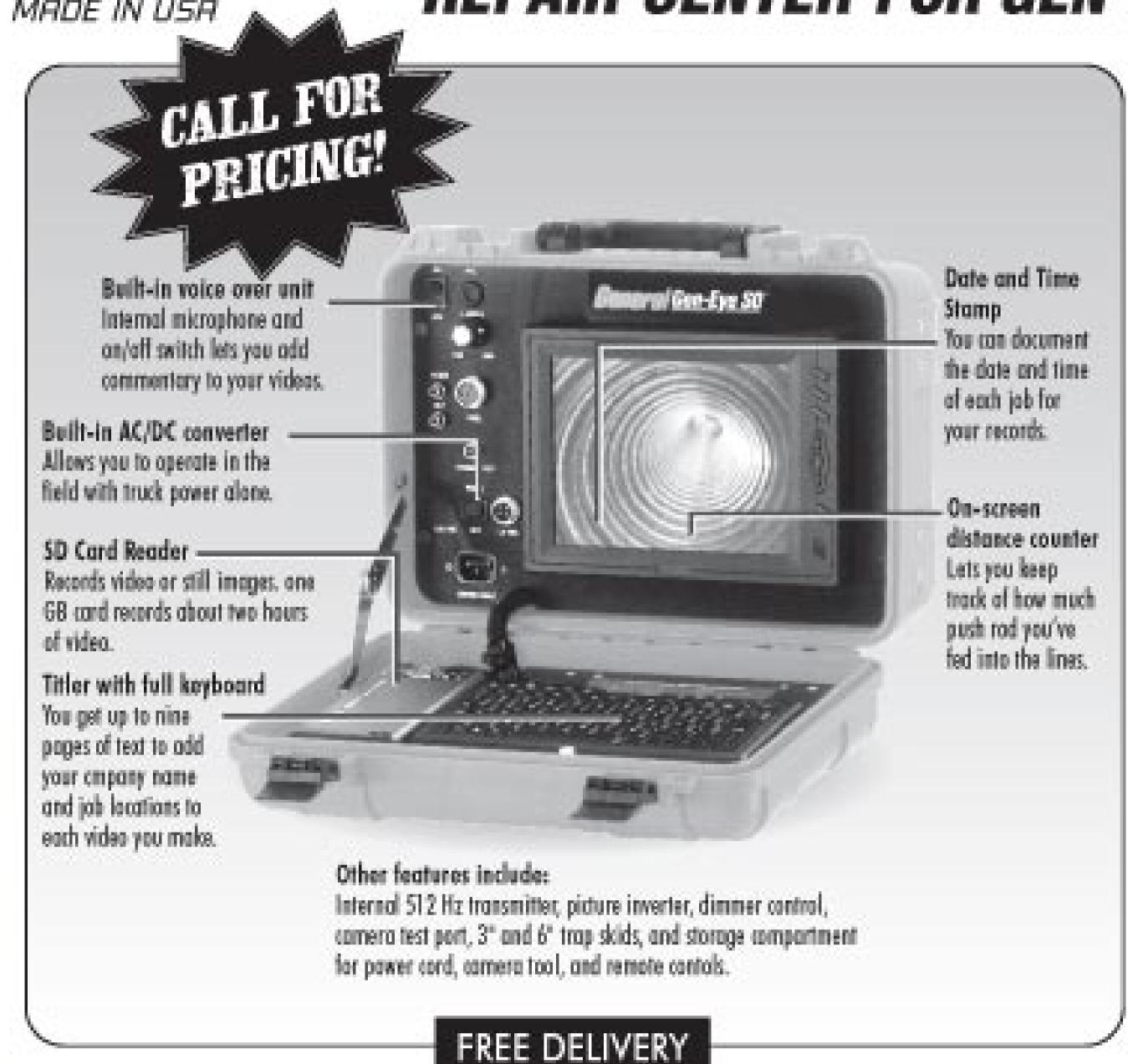


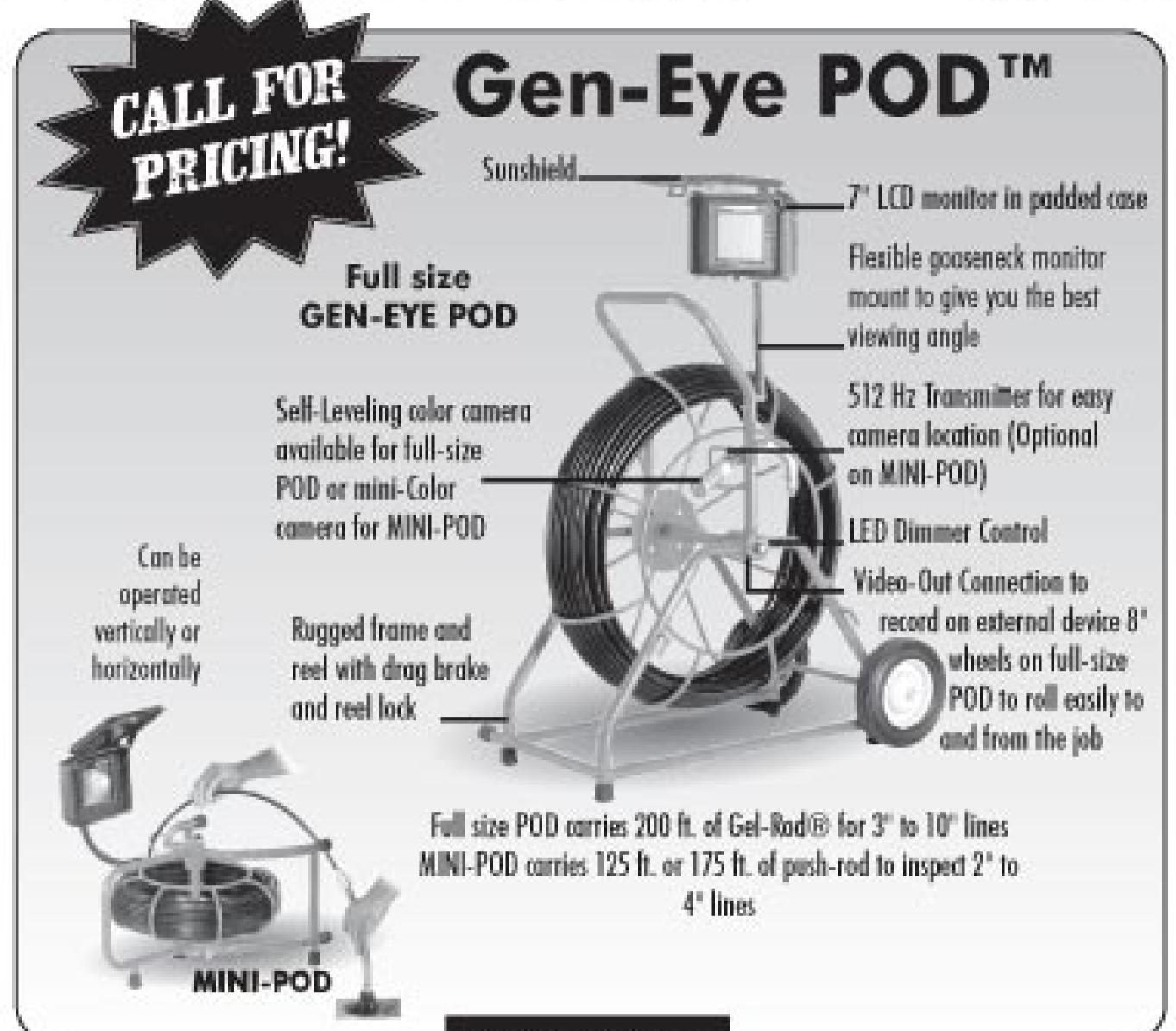


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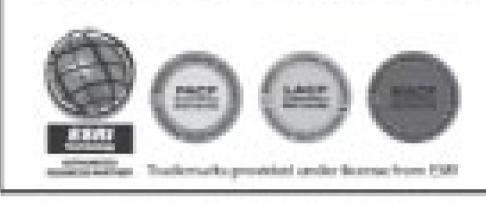
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Sitting Pretty in Pink

A breast cancer awareness initiative helps Umbrella Plumbing advance its visibility and promote its top-quality plumbing and drain-cleaning services

By Ken Wysocky



UMBRELLA PLUMBING & DRAIN CLEANING LLC, STRASBURG, COLO.

Marcus and Kristin Rodriguez OWNERS:

2007 FOUNDED: EMPLOYEES:

Metropolitan Denver area

When people in the Denver area see a technician from Umbrella Plumbing & Drain Cleaning LLC dressed in the company's signature uniform, they rarely fail to ask: What's up with the pink shirts?

The answer - breast cancer awareness - may seem odd coming from a cleaning contractor. But it makes perfect sense to 28-year-old company





Effective marketing, rigorous hiring standards, and technologically advanced equipment have helped the company increase its revenue fivefold since startup in late 2007. It also positions the company, based in Strasburg, Colo., to expand slowly into the much larger Denver market nearby.

Rodriguez thought about pink-shirted plumbers for some time. "It's hard to forget a plumber in a pink shirt," he says. But the idea came to fruition after he saw cancer survivors in a local fundraising walk sponsored by the Network of Strength (NOS), a nationwide support group for women with breast cancer.

"I realized that the customer demographic we cater to is mostly female, plus it was a perfect tie-in to community service," he says. From a practical

"If people have a choice between a company that gives back to the community and one that doesn't, they'll choose the one that gives back."

Marcus Rodriguez

standpoint, being community-minded leads to word-of-mouth referrals. Rodriguez observes, "If people have a choice between a company that gives back to the community and one that doesn't, they'll choose the one that gives back."

Money for mammograms

Under the company's Plumbers in Pink campaign, customers receive \$50 toward a mammogram screening. They either get a \$50 discount on the spot for work performed, or a \$50 credit on their next service call.

In addition, Umbrella (company slogan "We've gotcha covered") donates a percentage of the revenue from VIP service agreements to the NOS and the Ronald McDonald House. The company Web site includes links to those charities.

Service technician Albert Gabriel unloads a Spartan drain-cleaning machine.

"On the back of our shirts, it says, 'Ask me why I wear pink,'" Rodriguez says. "When people ask, we tell them what it's all about and leave information behind. Our goal is to encourage customers to get checked. We don't make any money on this. I'm just a big believer in giving back to the community."

The emphasis on community service comes from his grandfather, Milo Rodriguez, a police officer and firefighter whose volunteer work ranged from coaching local sports teams to rehabilitating gang members. "My grandfather was a huge inspiration," Rodriguez says. "When I look back 50 years from now, I want to know I gave back to the community, instead of being someone who takes and takes and takes."

Rodriguez has trademarked the Plumbers in Pink concept. Any plumber is free to join the ranks by wearing a pink shirt and joining the NOS. As of April, some four-dozen women had scheduled or received mammograms. One was diagnosed with Stage 2 breast cancer and received treatment that otherwise might have been long delayed.

"It's a very emotional experience when you get a call from someone who's been diagnosed with breast cancer," says Rodriguez. "After you get that call, there's no way you wouldn't wear a pink shirt." He wears pink whenever he attends local events, from high school basketball games to parades.

Taking the plunge

Rodriguez started his career by joining the U.S. Air Force right out of high

SUPPORT AND INCENTIVES

For Marcus Rodriguez, hiring is a painstaking, time-consuming process. So once an employee is on board at Umbrella Plumbing & Drain Cleaning LLC, he goes to great length to keep them there.

Small bonuses ("spiffs") are primary tools for employee retention and satisfaction. But instead of cash, employees earn new tools, from channel locks and torch kits to drills and reciprocating saws. Providing new tools is a win-win formula: technicians love them, and they increase productivity, too.

"I see it as an investment in the technician and the company," Rodriguez says. "A tool that helps them become more efficient in the field means they might be able to get in that one extra call a day." Incentive criteria vary. For example, technicians might be rewarded for compiling the highest average ticket for a day, a week or a month.

Rodriguez also pays technicians for coming up with ideas that increase productivity or save the company money. One technician figured out how to reduce the time it took to finish a project. "I looked at the time and materials he saved the company and bumped up his commission from 20 percent of the project's cost to 25 percent," Rodriguez says.

Other technicians have found ways to set up the service vans more efficiently, reduce paperwork and improve job estimating. "I want my guys to think like it's their own company, and the best way to incentivize them is with money," Rodriguez says.

To make employees feel valued and boost efficiency, Rodriguez meets with them almost daily. That typically means a half-hour meeting in the morning to talk about what happened the day before - how problems were solved or what procedures could be improved. "I love it," Rodriguez says. "It ensures that we're not dealing with the same problems over and over and over."

Rodriguez takes the open-door policy to a whole new level: his office has only three walls. "The one open wall reflects our company's openness. I want employees to feel like they're part of a family - to come to me with problems. I've dealt with a lot of situations as a sergeant in the Air Force, so I think I can help them deal with things."



The team at Umbrella Plumbing includes, from left, service technician Phillip Smith, owners Marcus and Kristin Rodriguez, and service technician Albert Gabriel.

school and learning how to be a plumber. After leaving the military, he became operations manager for a drain-cleaning company. "That really opened my eyes to what's out there," he says. "In the Air Force, it was a fix-it-and-go mentality. After I left, I learned all about the customer service side of business. I realized fixing things wasn't the only thing.

"That job was a great experience for me. The owner gave me 20 years of experience in one year. He always took time to explain why we did things, instead of just telling me to do things."

Rodriguez eventually decided to start his own company. "I was confident I could make it," he says. "Was I fearful? Yes. But you can use fear to your advantage or use it as a handicap. Fear of failing really motivated me."

Two books were essential to his success: Who Moved My Cheese? by Spencer Johnson, and Freedom from Fear. The Story of One Man's Discovery of Simple Truths That Lead to Wealth, Joy and Peace of Mind, by Mark Mattson. Both are required reading for new employees.

The best equipment

Rodriguez realized that buying new equipment with the latest technology would be critical to the success of his company, which focuses on residential drain cleaning and plumbing. "I'm a big believer in investing in assets," he says. "When I look at a tool bag, I don't see what it costs — I see what it makes. To stay ahead, you need to have what no one else has. You've got to keep up with technology.

"Better tools help you provide better service to customers. Think of it this way: Would a restaurant owner rather be down for three hours or just an hour and a half? Do you want to unclog a drain in five passes or three?" Umbrella's equipment includes:

- A trailer-mounted Hot Jet USA (Power Line Industries) waterjetter (3,500 psi/12 gpm).
- Three heavy-duty cable machines, three Spartan 100 drain machines for smaller lines, and three Spartan 81 drain machines for bathtubs, toilets and sinks, all from Spartan Tool LLC.
- SeeSnake and SeeSnake microDrain cameras from RIDGID.
- Three custom-built mini-jetters (2,000 psi/3 gpm).

Service technicians travel in two GMC 2500 trucks with 14-foot Morgan box bodies, made by Morgan Corp., and a Ford 550 cab-over service truck.

Rodriguez started out with just a small drain-cleaning machine, small tools and a jackhammer. He spent his last paycheck from his former job on a vinyl wrap for a service van. As he earned money, he gradually bought more tools, starting with used equipment.

"We're in the customer satisfaction industry. We're not plumbers, we're customer satisfiers."

Marcus Rodriguez

"I pulled a line of credit to buy equipment, but never used it," he says. "I think the biggest mistake you can make is to start a business with a lot of debt. I literally built the company job by job, investing in new equipment whenever possible."

Rigorous standards

Good equipment has little value without good employees to operate it, and Rodriguez sets the bar high when he hires. He often interviews 35 to 40 people for a job, considering their demeanor and personality as much as their technical skills.

"I call it hire hard, train easy," he says. "If you take the time to distinguish the right people from the rest of the group, training doesn't need to be as extensive because you've got someone who will listen and learn. I look for traits in an individual – either they have it or they don't. You know if their parents raised them right. I know a lot of people who are excellent at what they do, but they still track mud onto a white carpet with their size 12s. That's not the kind of guy we're looking for."

Technicians must be certified plumbers or drain cleaners and pass a background check and a drug test. After they're hired, they must pass monthly drug tests. "It's something I offer my customers as a security blanket," Rodriguez says. "They can rest assured that there are no criminals or drug users entering their homes."

Core values

Employees must also ascribe to the company's core values, which Rodriguez borrowed from his military days: excellence in everything they do,



Albert Gabriel uses a RIDGID electronic line locator.

Customers don't get charged if a technician fails to unclog a drain. In fact, if that ever happens, Umbrella will call another drain cleaner to finish the job. (So far, it has never been necessary).

Expansion ahead

Like many small-company owners, Rodriguez wrestles with the issue of

growth: How much is too much too fast? How can it be kept manageable? Even though Strasburg lies 40 miles east of downtown Denver, many residents commute there to work. That means word-of-mouth referrals generate more business in the city.

Umbrella operates one truck in and around Strasburg and two from a new shop in Aurora, a Denver suburb. Rodriguez doesn't rule out opening more shops. "We're always challenging ourselves to grow, but I don't want to be a 10-truck shop," he says. "I don't want more than four trucks per shop. By staying small, we can manage response times and keep service personal for our customers."

And keep making people think pink.

MORE INFO:

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integrity first, and service before self. Those values help differentiate his company.

"If something is wrong, we take a look to see what core value was broken," he says. "It doesn't happen very often, but when it does, it's easy to diagnose. If an employee comes in late because he decided to sleep in, it

"Better tools help you provide better service to customers. Think of it this way: Would a restaurant owner rather be down for three hours or just an hour and a half? Do you want to unclog a drain in five passes or three?"

Marcus Rodriguez

violates the service-before-self value. If a repair is done incorrectly, it violates the excellence-in-all-you-do value. It helps them to understand things more easily."

Rodriguez takes great pains to impress on employees the value of customer satisfaction. "We're in the customer satisfaction industry," he says. "We're not plumbers, we're customer satisfiers. It's important to educate customers and show them that we're knowledgeable about what we do. We don't send out guys with equipment that they don't know how to operate."



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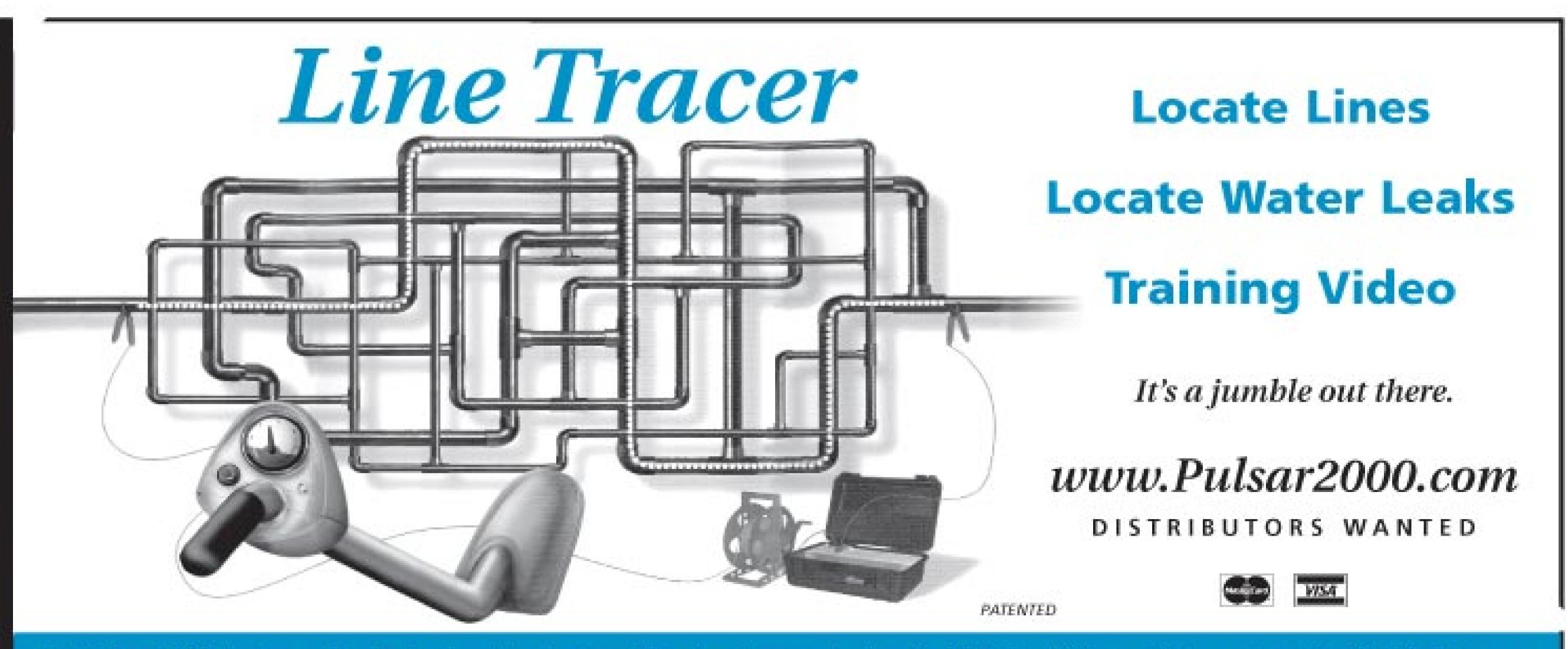
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Tech Perspective

Working in Concert

A clean-and-inspect approach to pipeline assessment requires close coordination between the cleaning crew and inspection operators

By Jim Aanderud

s cities and agencies implement sanitary sewer assessment programs, they must decide on their approach to CCTV inspections.

Essentially, there are two schools of thought when it comes to inspecting sewers. The first is to inspect the pipeline without prior cleaning, on the belief that information about the maintenance status of the line is an important part of the assessment. If the pipe is cleaned before the inspection, then information on grease, roots and sediment buildup is lost.

The other approach is to clean the sewer before the inspection, based on the idea that obstructions are then removed that would otherwise block the view of defects. With grease and spider webs out of the way, technicians can make a better assessment on the structural integrity of the pipeline.

There is no right or wrong either approach can yield a highly satisfactory outcome. However, the "clean first, then inspect" approach

Matter of timing

During clean-and-video programs, contracts often specify a maximum time that can elapse between cleaning and inspection. Since system owners want to see as much of the pipe wall as possible and are concerned that obstructions to the view may return quickly, it is

Maps should be laid out, and the cleaning crew must clearly specify areas already cleaned. If there is more than one inspection crew, the reaches to be inspected must be clearly defined. There can be no room for error. Missing a reach or inspecting it twice is not an option.

Tech Perspective looks at

technology-related issues and

provides information and advice

that cleaning professionals can

apply to equipment selection and

to their daily work in the field.

Industry members are welcome

to offer ideas for this column.

Please direct them to editor Ted J.

Rulseh, editor@cleaner.com.

Each crew must have its own

When lines are cleaned and inspected simultaneously, the inspection van typically sets up at the upstream manhole while the combination unit sets up at the downstream manhole. The camera waits for the nozzle to reach the upstream manhole, then follows the nozzle as it is pulled back.

poses a few key challenges that need to be overcome: Coordination between the cleaning and inspection crews is critical.

common to see a specification that the pipe must be inspected within 24 hours of cleaning.

This, of course, requires significant coordination between the cleaning and CCTV crews. It takes precise planning to ensure proper execution. In most situations, combination units can clean at a faster rate than a CCTV crew can inspect. This creates a challenge because a combination unit is then restricted on the footage it can clean in a day.

Without proper planning, the cleaning crew will sit idly and unproductive for long periods while waiting for the inspection crew to catch up. One possible solution is to have two CCTV inspection units working alongside one combination unit. This keeps the combination unit working at full capacity.

Proper timing between cleaning and inspection requires close coordination. Crews must meet each day to plan their approaches in detail.

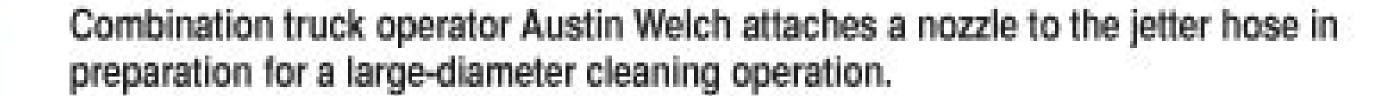
set of maps with the areas where they will be working clearly marked. Each day, colored-in portions should be updated so that each map is exactly the same. Any questions, ideas or problems should be discussed during the daily meetings.

Planning should extend out to include the second day and beyond. Each crew member must have a good understanding of where the project is headed. Discussions should include the challenges that can be expected down the road.

Communication throughout the day is vital: It ensures that everyone operates according to the plan, and it provides a means for assistance when crews encounter problems. For example, if inspections reveal that certain sections of pipe need additional cleaning, the cleaning crew can be summoned to do the work immediately. Since the CCTV crew is already set up at the upstream manhole, the combination



From left, CCTV operator Jake Ziegler, supervisor Bill Houser and combination truck operator Austin Welch discuss their approach to cleaning and inspecting a section of pipeline. (Photos courtesy of Jim Aanderud)





unit can clean from the downstream manhole and receive immediate feedback on its cleaning effectiveness.

At work simultaneously

Sometimes, crews encounter lines that are difficult to clean, even with multiple passes. In these cases, it may be beneficial to have a camera follow the cleaning nozzle to ensure that it is cleaning effectively. The inspection operator can then direct the cleaning crew on the proper speed, the exact areas where the nozzle should linger, and the areas that need repeated passes.

When mechanical devices such as chain flails and cutters are used, it is imperative for a camera to be

there, as well. The damage these tools can inflict on a pipeline can be significant, and it's important to have an eye in the line to ensure that they are operating as planned.

Sanitary sewer rehabilitation with CIPP lining also requires that nozzles and cameras work together. This is because precise cleaning is required to clear pipelines of any protrusions or debris. A camera must follow the cleaning nozzle to ensure that cleaning takes place to very strict tolerances.

Cameras and nozzles may also be in a line at the same time for educational purposes: Exposing cleaning operators to a visual scene of a functioning nozzle can increase their knowledge and effectiveness.

When cameras and cleaning nozzles operate simultaneously in a line, communication becomes critical, as a cleaning nozzle can inflict costly damage on a camera. In my former career as an operator, I saw this point forcefully demonstrated during the cleaning of a challenging section of pipe.

At that time, the primary form of communication was via Nextel radios. As the inspection operator, it was my job to advise the cleaning operator on the direction of the nozzle. As it approached the camera, I was to tell him by radio when to reverse direction. On one occasion, the radios went silent.

The cleaning operator thought the silence meant he should continue to thrust forward. I watched in horror as the nozzle blasted at full speed into my camera lens. Assuming that he had encountered an obstruction, the cleaning operator continued to pull back and thrust forward, repeatedly striking the head of the camera. After the second collision, the video signal was lost. Arms waving frantically, 1 got the cleaning operator's attention, but not before significant damaged was done to my camera.

The moral of the story is that radios and cellular phones have deficiencies: It is common to be working in canyons or in mountains where signal coverage is spotty or nonexistent. Walkie-talkies provide the most dependable communication at close range, and they are also inexpensive.

Setting the protocol

Whenever a camera must be in a pipeline during cleaning, it is a good idea to review the communication protocol beforehand. The cleaning and CCTV crews must understand the meaning of the statements they will use. It is also a good idea to have a contingency plan in case the electronic communication system fails.

That issue aside, the camera and cleaning operators need to coordinate and choreograph their activities. When lines are cleaned and inspected simultaneously, the inspection van typically sets up at the upstream manhole while the combination unit sets up at the downstream manhole. The camera

waits for the nozzle to reach the upstream manhole, then follows the nozzle as it is pulled back on its cleaning pass.

The camera should stay at least 10 feet from the nozzle at all times. This gives the CCTV operator enough time to react to any unexpected movements of the nozzle. It also prevents water from splashing on the lens and obstructing the camera's vision.

The cleaning operator must maintain a steady rate of speed so that the camera can move relative to the speed of the nozzle. Before making any changes in direction, the cleaning operator must notify and receive acknowledgement from the CCTV operator. The same applies to any changes in pressure.

The CCTV operator should never lose sight of the monitor while the nozzle is working. Things can change quickly, and by the time the operator has time to react, a serious situation could develop.

A CCTV operator must always plan for the unforeseen. For example, if it looks like the camera will be hit by the nozzle, the operator should try to articulate the camera head away from the impact. If the nozzle reaches the manhole where the CCTV van is set up, the operator should be prepared to back up into the upstream line. The watchword is: Always be ready for the unpredictable.

Once the nozzle and camera have been removed from the line, operators should meet face to face to discuss any issues that could help them in the future.

Combination units and CCTV inspection cameras can be highly effective when working side by side. With a little planning and coordination, difficult sections of pipe can be cleaned and inspected efficiently, and the accurate data collected can help support sound decisions on repair and rehabilitation.

Jim Aanderud is owner of Innerline Engineering, a video pipeline inspection company based in Corona, Calif.

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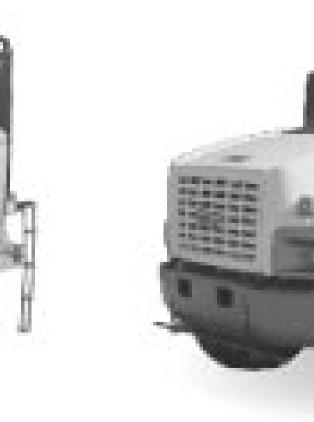
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SHOP WITH CONFIDENCE - ORDER ON LINE

Ways to Grow

Franchise systems and education resources offer knowledge and business systems that can help service contractors reach new levels of success

By Ted J. Rulseh

eing in business for yourself can be tough. It's even tougher if you try to go it alone. Savvy owners look to outside help for ways to improve and grow their businesses.

In the pipe cleaning and repair and industrial cleaning sectors, a variety of associations and networking groups provide support to service businesses. In addition, franchisers of a variety of services and products provide contractors with proven systems that can improve all facets of a business.

Here is a list of resources available to companies seeking ways to advance to the next level of performance and profit.

FRANCHISE SYSTEMS

1-800-PLUMBER

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PLUMBER system provides franchisees with simple business tools and ongoing support. The business model takes the sales, marketing and administrative legwork out of the business so that franchise owners can spend more time hiring and training the best technicians.

The system provides a memorable phone number and corresponding Web site designed to create top-of-mind awareness with customers. A central sales and dispatch center supports all franchisees, taking incoming calls and dispatching the job to the closest franchise, relieving owners of answering the phones, booking and scheduling jobs, and the related administrative processes.

Marketing systems provide tools, systems and support to grow and market their businesses. Franchises receive business tools and support including a one-week startup training program, a comprehensive operations manual, business planning and budgeting tools, key metrics reporting and benchmarking, sales and marketing planning and support, and human resources tools for hiring, training and retaining technicians. 800/ 758-6237; www.1800plumber.com.

A Corp/ Rooter-Man



For eight

consecutive years, Entrepreneur magazine has named Rooter-Man the number one plumbing and drain-cleaning franchise in the nation.

As the core of its support system, Rooter-Man provides franchisees with a series of 11 comprehensive how-to manuals. They include an employee handbook containing policies and procedures, all necessary business forms, a management guidebook, instructions on creating sound human resources policies, a service technician training manual, a marketing guidebook, a training manual for phone operators, dispatcher training, a guide to developing service standards, an operations manual covering all facets of the business, and an advertising guidebook. 866/577-1221; www. rooterman.com.

ACE DuraFlo Systems



place pipe lining system for repair of drainpipes and sewer laterals and an epoxy process for repair of potable water pipes in buildings without openings the walls.

The company carries local, state and national certifications as well as NSF 61 approval for drinking water. The products are UPC listed and IPC compliant. The company offers its products through franchises nationwide and offers franchisees a fully portable service package. Future franchisees benefit from the successes and best practices of the current franchisees. 888/775-0220; www.aceduraflo.com.

Benjamin Franklin Plumbing

Benjamin Franklin Plumbing

was the first plumbing service company to make a

guarantee that, "If there's any delay, it's you we pay." The company's unique selling proposition is presented in an easy and memorable rhythm that customers remember on hearing only a few times.

Franchisees benefit from partnerships with a large network of business groups that provide business support, including the BuyMax businessto-business Internet buying site for the residential service industry, and SuccessWare21 business management software, available to users around the clock.

The company offers a strategic business system that delivers daily, monthly and annual training modules for owners and employees. Offerings include Success Academy training for technicians and other professionals, Clockwork University for training in every aspect of the plumbing industry, and the Gearing Up 101 fourday introduction to franchise operations.

Operating Excellence manuals guide owners through the entire operation of running a business, and annual events provide opportunities to network and brainstorm with other franchisees through hands-on classes and business sessions. 877/236-2899; www.benjaminfranklinplumbing .com.

Dr. Shrink

Shrink offers shrink-wrapping products and



services for the protection of industrial products during transport and storage. The company offers shrink-wrap in widths from 12 to 40 feet along with accessories that include heat tools, adhesives, zipper access doors and venting.

The company goes to market through a network of affiliates and offers a startup package that helps representatives become established. Offerings include a series of in-home or on-site training programs, a training CD, 24-hour customer service, and business leads while new owners are being trained. 800/968-5147; www. dr-shrink.com.

Formadrain

Formadrain offers a no-dig lining system that can be used for a variety of applications



including underground pipes, sanitary and storm sewers, electrical conduits, rainwater leaders, vents and process piping.

The company provides its products and services through a network of licensees and offers them a seven-part program for support. It includes a proven and easy-to-use technology, comprehensive on-site training, live consultation by telephone as needed, marketing support, a guarantee on all system components, and a financing plan with low investment capital and equipment rental to help licensees get started. 888/337-6764; www.formadrain.com.

Mr. Rooter Corporation



1974, the Mr.

Rooter plumbing and drain-cleaning organization has more than 300 franchise locations in the United States, Canada and Europe.

Branded services include BioChoice ES Green Drain Cleaner and HydroScrub Pipe and Drain Cleaning. The company offers discounts and rebates on all items franchisees need to operate, including insurance, vehicles, supplies and parts.

Every part of the business has a system built to maximize results. A franchise combines the benefits of a local business with the strength of a national brand name. Owners get comprehensive training and ongoing support from a Franchise Coach. Franchisees also receive local and national marketing support and the opportunity to network and share information and ideas with other owners. Regional and national training meetings held frequently. 866/696-1504; www. mrrooter.com.

Roto-Rooter

In business since 1935, Roto-Rooter provides plumbing repair



and sewer and drain cleaning services to homeowners, businesses and cities. The company has a network of more than 600 locations and affiliates in the United States and throughout the world.

Roto-Rooter independent contractors enjoy the best of both worlds: running their own business while getting support from a large national company with a well known brand name and reputation.

Territories are owned by Roto-Rooter, and the management of the territory is contracted out. There are about 60 locations within North America, located in smaller to mid-major markets.

The contractor keeps the sales and pays a royalty fee together with an equipment lease amount to Roto-Rooter. The contractor's annual income ranges from eight to 10 percent of customer sales, and the average market creaties about \$1 million in revenue. Roto-Rooter provides the marketing, equipment, telephone lines, computer system/processes, brand identity items, and a consultation staff that includes operational, administrative and financial support. Independent contractor locations are available. 800/780-3292; www.roto-rooter.com.

1-800-Got-Roots

1-800-Got-Roots provides a wide range of



pipe maintenance services that include root removal and treatment, drain cleaning, diagnostics, preventive maintenance, and trenchless rehabilitation.

The company serves customers through local service providers who receive exclusive territories. All calls to the national toll-free number from a provider's service area ring directly to that company's phone number. For providers with multiple locations, calls can be routed to the closest office based on customer location. Contractors receive a detailed report with date, time, duration, caller's phone number, city and state for each call routed to a given location.

Members also benefit from a central consumer Web site, also used to direct customers to the local contractor. 847/746-4646; www. gotroots.com.

EDUCATION RESOURCES

Leaders Resource Network

The Leaders Resource Network helps people responsible for leading their busi-



nesses and organizations do so more effectively and efficiently. LRN focuses on development in marketplace, workplace and community and environmental leadership.

Offerings include educational and training opportunities through seminars, workshops, and on-site training, products and services at discounted rates, consultants and experts for individual support, and knowledge libraries.

Resources also include training and workshops in marketing, sales, customer service, team-building, business planning, financial management, marketing plan development, marketing communications, Web site development, new-business development, customer surveys, collection services, and lead generation services. Peer-to-peer advisor groups are available in selected areas. 574/276-0217; www.leadersresourcenetwork .com.

National Association of Wastewater Transporters



NAWT carries on the mission to unify the voice of the sanitary liquid waste management industry, while increasing its professionalism and public image through education of industry members and the public. The organization also develops national representation of individual, state, and regional chapters, allowing the industry to exchange ideas and concerns.

The association provides a wide range of training programs that include septic system inspector training and certification, onsite system operation and maintenance training, vacuum truck technician training, and an annual waste treatment symposium. A Train the Trainer program helps the organization take its programs to a wider audience. 800/236-6298; www.nawt.org.

Nexstar Network



Nexstar Network is a business-development and best practices organization

delivering comprehensive business training, systems and support to independent home-service plumbing, heating, air conditioning and electrical professionals. It helps businesses get rapid results guided by peer connections, experienced coaches, and proven systems.

Best practices from across North America are available for members to apply in their own business. Coaches and member trainers come from the industry and have owned and operated businesses. They guide, advise and hold members accountable. 888/240-STAR www.nexstarnetwork.com.

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which bills itself as The Public Health and Safety Company, is a not-for-profit, non-governmental organization providing standards development, product certification, education, and riskmanagement for public health and safety.

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NSF is recognized for its scientific and technical expertise in health and environmental sciences. Its staff includes engineers, chemists, toxicologists, and environmental health professionals with experience in public and private organizations. The NSF Mark is recognized for its value in international trade around the world and is respected by local, state and federal regulators. 800/673-6275; www.nsf.org.

WaterJet Technology Association -Industrial & Municipal Cleaning Association

The WJTA -IMCA serves high-pressure waterjet and industrial vacuum equipment



users, manufacturers, distributors, research-ers, regulators and consultants. It is international in scope with corporate and individual members throughout the world.

The primary goals of WJTA-IMCA are to enhance communication within the industry; facilitate cooperation among government, industry, university and research institutions; foster foreign and domestic trade in jet cutting and cleaning products and industrial vacuum equipment and services; and study and advance industry tools and technology.

In 2009, WJTA formed the Industrial & Municipal Cleaning Association (IMCA) as a special-interest group. The purpose of IMCA is to

provide a focused forum for WJTA members involved in industrial cleaning to communicate, share ideas and knowledge, and foster closer collaborations. Programs include live and online workshops, meetings, webinars, and other educational programs; periodic review of safety and operational practices; representation before legislative and regulatory bodies; and access to industry experts for consultation, networking and troubleshooting. 314/241-1445; www. wjta.org.

Top Dollar Press

Top Dollar Press is the publisher of Top Dollar Plumber, a book of advice for plumbing and draincleaning service contractors. Authors Sid and Ti Sutherland, both experienced plumbing professionals, share advice designed to help contractors grow their businesses and maximize profit.

The company Web site includes a variety of articles and other resources with marketing, sales and operations advice. 877/883-9150; www. topdollarplumber.com.





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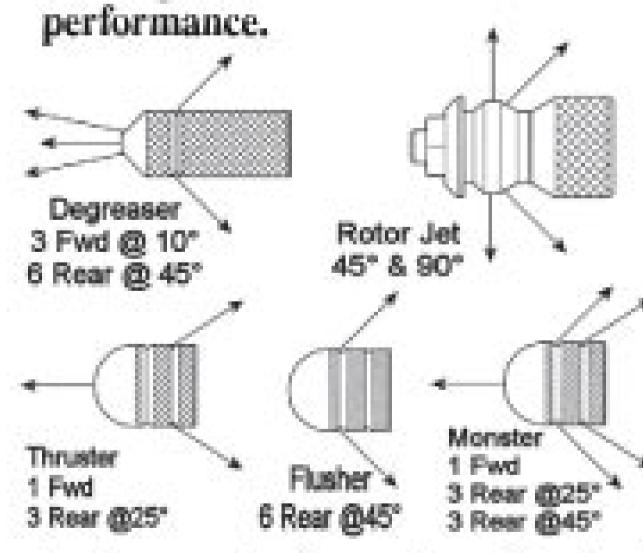
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Get It While It's Cold

A Georgia contractor uses a favorite work tool to give his grandkids a chance to romp in snow

By Ted J. Rulseh

armers like to "make hay while the sun shines."

One plumber and drain cleaner in Georgia likes to make snow while it's cold – not often the case in his part of the country. Dave Runyan, owner of Runyan Plumbing, lives in Brunswick, near the ocean.

The temperature seldom falls below 32 degrees there, and when it does, it's not for long – a couple of days at best. Still, Runyan wanted his grandkids to experience playing in snow without having to drive them to a colder climate.

So last February, when the temperature in Brunswick fell to about 27 degrees, Runyan went to work with a homemade snowmaking device relying

on his Harben trailer-mounted waterjetter and information and equipment from SNOWatHOME, a supplier of snowmaking products based in Terryville, Conn.

Runyan made what he calls "the South Georgia Redneck Snowmaker"



Runyan with his grandkids. From left, Cortney, Dave and Lizzy. (Photos courtesy of Dave Runyan)

using an SG7 X-stream Snowmaker from SNOWatHOME with nozzles upgraded to 7.5 gpm.

"Because I am on a water well, the temperature of the water is around 68 degrees," Runyan reports. "Of course, we all know that 68-degree water will not work." Therefore, Runyan converted an old outdoor heat pump by removing the compressor and fan motor and modifying it so that he could circulate water through the coils. He added a fan to pull cold ambient air across the coils to drop the water temperature into the mid-30s.

The water then goes into the jetter's 300-gallon water tank and is pumped out at 800 psi through a nucleation nozzle, which ejects it as a fine mist. At the same time, air at 60 to 70 psi is injected into the stream of mist and cools rapidly as it expands. This causes the mist droplets to fall out as ice crystals.

On the night of Feb. 26, Runyan recorded a temperature of 27 degrees F at 85 percent humidity. He ran the snowmaker in his yard for 8.5 hours at 6 gpm and covered a large area. The snow was 19 inches deep at the center where the snow machine stood. His grandkids enjoyed using the snow to make snowmen and have a snowball fight.



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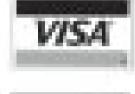
Pumper & Cleaner Expo Heads to Indianapolis in 2012

The 2012 Pumper & Cleaner Environmental Expo International will be held in Indianapolis, Feb. 27 to March 1. The Indianapolis facility has more than 4,000 connected hotel rooms, shopping and dining, all within walking distance. More information will be available at the 2011 Expo in Louisville, March 2-5. The 2010 Expo drew nearly 4,000 companies and 13,000 attendees from 48 countries.

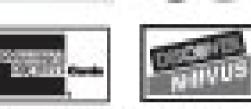
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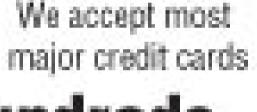
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Perma-Lateral Receives PMG Listing

The Perma-Lateral System, manufactured by Perma-Liner Industries, received PMG (plumbing, mechanical and fuel gas) listing No. 1068 from ICC Evaluation Service LLC. Products listed under the ICC-ES PMG program undergo evaluation based on requirements in such codes as the International Plumbing Code, the International Mechanical Code, the International Residential Code, the International Fuel Gas Code, the Uniform Plumbing Code and the Uniform Mechanical Code.

Mr. Rooter Launches Mobile Marketing

Mr. Rooter Plumbing has launched a text-message marketing campaign, sending coupons and promotions to its customers' cell phones. The rollout completes Mr. Rooter Plumbing's makeover, which includes red-sunburst vans that showcase the company's winking icon as well as an updated Web site.

Vanair Benefits Wounded Warrior Project

Proceeds from the August Vanair Poker Run 2010 benefited the Wounded Warrior Project, supporting the U.S. Armed Forces and their families. The Third Annual Vanair Poker Run is set for Aug. 20, 2011.

Radiodetection Places First in Locate Rodeo

Radiodetection placed first and third in the Power division, second and third in the Telecom division and was third in the Gas division of the 9th Annual International Utility Locate Rodeo, held in Atlanta in August and sponsored by the company. The competition tests the skills of damage prevention technicians. Scores from three events determine the winner. Judged on accuracy, each participant is allowed 12 minutes per event.

COLE Publishing Launches Gas, Oil & Mining Contractor

Gas, Oil & Mining Contractor is a new COLE Publishing trade magazine launching in January 2011. The monthly publication is directed at environmental and support service professionals working in land-based gas, oil and mining exploration, resource recovery and refinery operations throughout North America.

Readers are service company owners, managers and technicians who transport, set up and maintain equipment critical to the mission of fuel and mineral extraction companies. These services include water and wastewater conveyance and treatment, byproduct dewatering, industrial cleaning, portable sanitation equipment and maintenance, worker camp development and maintenance, electrical power generation and site preparation.

COLE president Jeff Bruss said the energy and mineral extraction and refinery sectors are being served by a diverse group of contractors who will benefit from the editorial content and focused advertising in GOMC.

"At a time when energy exploration and recovery of valuable mineral resources are especially critical to economic growth and sustainability, we're excited to reach out to contractors working in these industries," Bruss said. "This new publication will help the hardworking men and women who provide important support services operate more efficiently and grow their businesses."

The magazine will include profiles of successful contractors, monthly themed product roundups, comprehensive new product coverage, emerging technology coverage, industry news, and general business development and human resources topics. For more information or to request a free subscription or a media kit for the magazine, go to www.gomcmag.com.

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Looking Deep

An inspection camera system from Aries Industries helps authorities locate 33 miners trapped underground in Chile

By Ed Wodalski

amily and friends of 33 miners trapped 2,300 feet underground in northern Chile got an early Christmas present last summer when a camera made by Aries Industries showed that all were safe.

"We were very pleased to be able to help the families of these miners and offer some hope in knowing they are OK," says Jim Lenahan, Aries president and CEO. "It makes us feel really good to know we are helping save the lives of others in a very difficult underground environment through our technological developments. That's a wonderful feeling for us as a company."

Aries Slimline Camera

The WC1750 slimline dual view water well color inspection camera is smaller than those the company makes for inspecting sewers and laterals. Measuring 1.75 inches in diameter and 22 inches long, it is designed for vertical inspection of small boreholes and for well monitoring.

Features include high-intensity LED lighting with a 10,000-hour operating life, low/medium/high lighting controls, adjustable focus, and clockwise and counterclockwise rotation. Rated to a depth of 5,000 feet, the camera has a stainless steel housing pressurized with dry nitrogen to help displace moisture and minimize corrosion.

Aries had quoted the Chilean government prices on camera systems for wet well inspection before

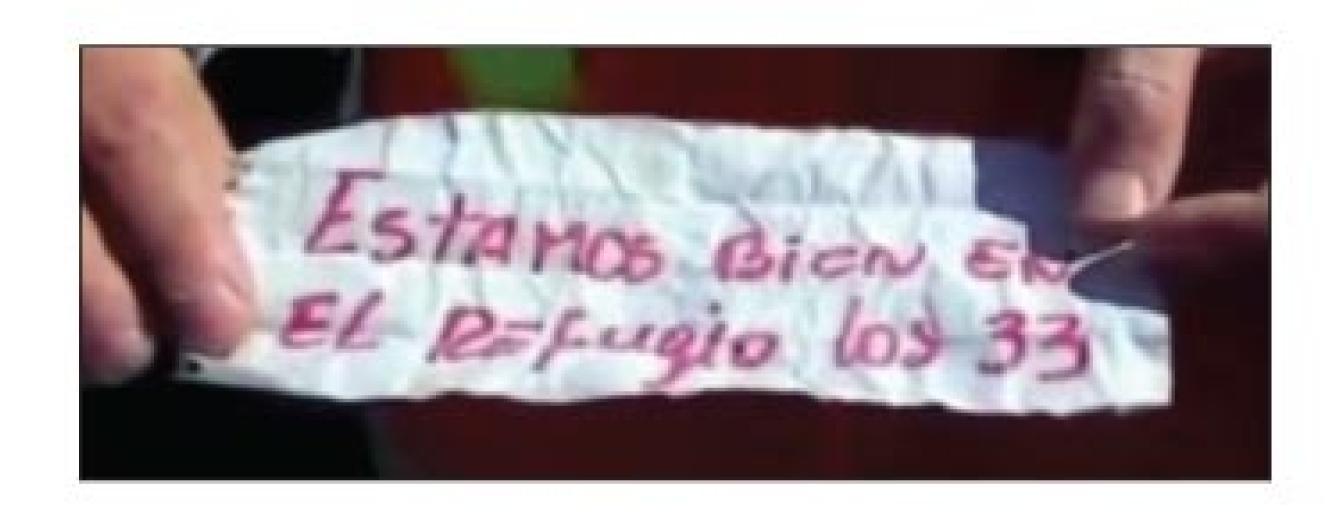
the mine cave-in, so officials there knew the company's technical abilities. Aries also manufactures a mine disaster relief camera system, but it was too large for the 3 1/2-inch borehole drilled in Chile to reach the miners.





"Fortunately we had what they needed on hand. Within a week, the equipment was on site and they were able to view those first images of the miners."

Jim Lozano



Top Photo: Video images from an Aries Industries camera in August showed that Chilean miners trapped underground were alive. Bottom Photo: A note from the miners attached to an Aries inspection camera reads "All 33 of us are well inside the shelter."

"Fortunately we had what they needed on hand," says Jim Lozano, product manager, water well for Aries. "Within a week, the equipment was on site and they were able to view those first images of the miners."

The Chilean government has since ordered a second camera and spare equipment to serve as a backup, says Lozano, who remains in contact with workers at the rescue site. "More than anything they were grateful that they were able to do the job and that we had the right equipment to do it with," he says.

The miners became trapped Aug. 5. Rescuers reached them with a 2,067foot escape shaft in mid-September. By mid-October the shaft was widened and strengthened enough to enable a

rescue capsule to be lowered inside, ending 69 days of confinement underground.



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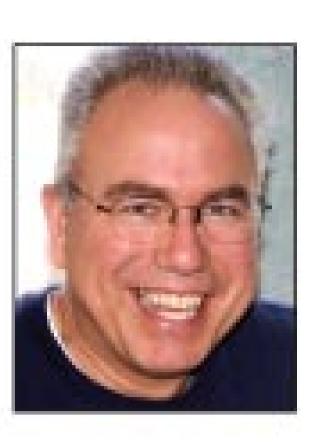
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Franchise or Independent?

Successful contractors see merits in the business systems and support from a national network and in the freedom to operate while answering to no one

By Ken Wysocky

Comments may be directed to Ken Wysocky in care of Cleaner.



hen it comes to operating a drain-cleaning business as a franchise or staying independent, there are good arguments on both sides.

Franchisees cite business-building benefits such as marketing support, budget guidance, pricing guidelines and a broad network of fellow franchisees to lean on for advice and assistance. Independents, on the other hand, prize the freedom to operate the way they want to without answering to a corporate office.

In the end, there is no right or wrong. Most contractors interviewed for this story deliberated long and hard about which way to go and had compelling reasons for the decisions they made.

Both sides

Frankey Grayton, owner of Grayton Plumbing in Washington, D.C., knows both sides of the issue. He explored a franchise about eight years

ago and ultimately decided



Frankey Grayton

Co-Owner Grayton Plumbing, Washington, D.C. Employees: 15 Years in business: 18

to remain independent.

"In hindsight, I've talked to other people who attribute their success to franchises," he says. "And I certainly understand why people jump on board. I've had friends who jumped on the franchise bandwagon who were smaller than me and twice as big as me, and they all had their reasons.

"Some of them needed someone to kind of kick them in the butt to do things, like turn in reports. Others weren't good at marketing, so they figured it would be great if someone could help them. Another one wanted to retire by age 40 and thought being a franchise gave him an exit strategy to walk away when he wanted to walk away."

Corporate support

For Don Kebler, vice president of a Mr. Rooter Plumbing franchise in St. Johns, Mich., buying a franchise in 2008 was an easy choice. The franchise systems helped his family turn a 37-year-old

mom-and-pop plumbing and heating shop into a larger, more diversified business.

"The support we get from the Mr. Rooter cor-

porate office is great,"



Don Kebler

Vice President Mr. Rooter Plumbing, St. Johns, Mich. Employees: 5 Years in business: 2

Kebler says. "I have a coach who looks over what we do. She gives me direction on things we need to do better. For instance, they'll take a look at our financial numbers, help us with annual budgeting and marketing, and provide things like employee handbooks and proper procedures for doing things. Our company never had those things in place."

Steve Harmon, owner of Harmon Plumbing Services Inc., which does business as a Rooter-Man franchise in Raleigh, N.C., was courted for years by several franchises before he agreed to join Rooter-Man in 2008.

Retained identity

"I'd reached a lull - a stagnant point - and felt like I was headed down the road to the 30year, three-truck syndrome," Harmon says. "1

wanted more than that. I



Steve Harmon

Owner Harmon Plumbing Services Inc. (dba Rooter-Man), Raleigh, N.C. Employees: 5 Years in business: 21

felt like, 'I've come this far and been at it this long why can't I get over the top?' I kept getting the pieces of the puzzle to operate like a franchise, but l couldn't put them together."

Rooter-Man helped him accomplish that, and without giving up one of his most important business assets: the equity in his company's name. "Rooter-Man gives you the system and tools you need to succeed, but less hands-on control," he notes.

That was important to me because I ran my business for 19 years before I bought a franchise. I didn't want to lose that 19 years I spent building a good reputation with long-standing customers."

Harmon also learned how to figure out what percentage of sales revenue he should devote to various aspects of the business, such as marketing, in order to achieve a certain profit margin. "You can tweak it a little because you're going to fluctuate up and down," he says. "But you try to keep it close. And it's different if you're established or in a growth mode. Marketing expenses might be higher, for example, for a new company as opposed to an established company."

Name recognition

For others, such as Roy Birnie, owner of a Mr. Rooter franchise in Hamilton, Ont., national name recognition was a big attraction. His company

used to receive phone calls



Roy Birnie

Owner Mr. Rooter Plumbing, Hamilton, Ont. Employees: 12 Years in business: 16

from customers who mentioned Mr. Rooter as a competitor. "We realized that if the franchise was pulling that many calls a week, we needed to rethink our position," Birnie says. "It made us realize all the business we were losing in our market."

Kebler adds, "Name recognition was a big factor. The Mr. Rooter brand really stands out. They helped me put together a marketing plan and benchmark it against other organizations in the same gross-sales range as my business, so I'm not out there freewheeling it."

Stephen Bennett

Owner Roto-Rooter Plumbers, Kamloops, B.C. Employees: 48 Years in business: 18

Stephen Bennett, who owns a Roto-Rooter franchise in Kamloops, B.C., agrees. "A good, rep-"I didn't have to give up my company name. | utable brand name carries a lot of weight," he says.

"With it, you're going to develop a business faster if you're starting out new than if you're an independent plumber working out of your basement. You're wearing that uniformity on the vehicle, products and equipment. There's strength in uniformity."

On the other end of the spectrum, Grayton figured he could effectively brand his company just as well on his own. He has done that to great effect with a fleet of six service trucks that display his picture on the back and carry highly distinctive vinyl-wrap graphics.

"I believed the franchisers could deliver what they said they would deliver, but I also believed I could deliver it myself," he says. "I'm now one of the most recognized plumbers in the city. They were setting out to establish a national brand, but that didn't benefit me."

Financial issues

David Ratliff, owner and general manager of Midway Plumbing in Abilene, Texas, believes franchising would make more sense if his business wasn't doing well. "We're very profitable and getting great margins, so I can't see any advantage unless it could increase sales," he says. "But I'm in a market of 115,000 people pulling out \$3 million

a year in (gross) sales."



David Ratliff

Owner and General Manager Midway Plumbing, Abilene, Texas Employees: 14 Years in business: 27

Ratliff also prefers not having to pay franchise fees. While he doesn't know what various franchises charge, he figures it would be a significant amount of money.

Derrick Jackson, owner of Precision Plus Plumbing in Philadelphia, Pa., agrees. He considered buying a franchise about five years after he started his business because franchises have a lower failure rate than independents and can generate more business because of national name and brand recognition. But in the end, finances trumped all.

"The up-front cost was too high – that's what held me back," Jackson says. "Especially in this economy, I didn't want that kind of debt. The name of the game is keeping expenses as low as possible, and I would have owed them that money no matter what the economy is doing or what revenue I'm pulling in. The bottom line is I'd be paying someone to put their name on the side of my truck. I wanted my own name on the side of my truck."

Network of colleagues

Kebler says franchises offer another benefit: A network of colleagues he can rely on for help, whether with over-the-phone advice or on-the-job assistance. Once the city of St. Johns asked if Kebler could perform mainline camera inspections. | able. I'm harder on myself than anyone.

"We didn't have the expertise, but another nearby franchiser did, so he came down and worked with us as a team," he says. "He more or less worked for us as a subcontractor, and we didn't have to spend \$50,000 on equipment. His assistance helped get us in the door to do future work for this municipality."

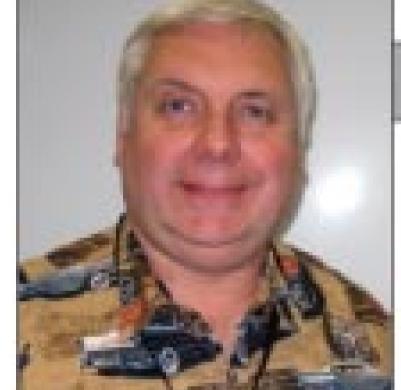
Birnie adds, "After buying our franchise, we became part of a larger group, and rather than one or two heads trying to make a decision, we had six or seven or eight guys that we could sit down with locally to discuss our challenges, and work together. We'd never experienced anything like that before, and it's worked out exceptionally well."

Bennett often calls other franchisers to discuss topics such as marketing (radio versus Internet advertising, for instance) or to see what new technologies work well in their areas. "I first heard about waterjetters from several other franchisers," he says. "I didn't have one, so I started spot-checking with other franchisers around the country. Eventually we purchased one and it paid for itself in three months. Was that a good conversation? Absolutely!"

Decision-making freedom

But for contractors like Steven Davis from Rogers Septic Tank and Plumbing Inc. in Bessemer, Ala., there's nothing like the freedom to

operate as he sees fit.



Steven Davis

General Manager Rogers Septic Tank and Plumbing Inc., Bessemer, Ala. Employees: 14 Years in business: 14

"I like to make my own decisions without a lot of rules and regulations," he says. "I've always been pretty independent-minded. In a franchise, you have to go by their guidelines. It's almost like working for somebody. If there's an elderly lady and I want to do a job for half of what it's worth, I can. I do a lot of charity work that I couldn't do if I was in a franchise."

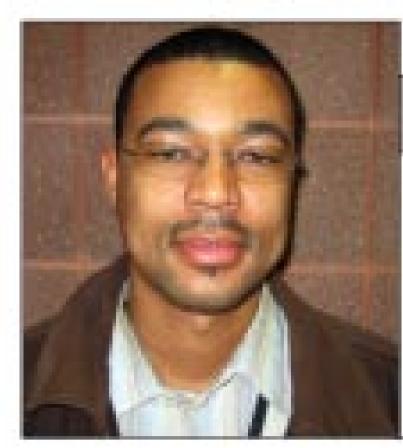
Davis also says independent owners have more flexibility to be entrepreneurial and nimble enough to move fast on business opportunities. For instance, if a customer calls with a problem that requires a new piece of equipment, he can quickly decide whether to make the investment. "I can make that purchase happen in a matter of days, maybe even hours, but you can't do that in a big corporation," he says.

Ratliff agrees, noting that he's free to market his company in whatever way he feels is best. In a franchise, much of that planning is laid out for the owner. He doesn't think that's necessarily bad, especially for contractors who lack marketing skills. "It's just that I've been self-employed ever since I was 27 years old," he says. "I want the freedom to make my own decisions - and my own mistakes. I don't need anyone to hold me account-

"And even with a franchise, there's no guarantee you'll be successful. One of my best friends owns a McDonald's franchise, and even a McDonald's can fail. What they give you is the tools to succeed."

Jackson also points out that some franchises limit the services a company can offer - for example, barring a plumbing company from expanding

into HVAC work - and



Derrick Jackson Owner Precision Plus Plumbing,

Philadelphia, Pa. Employees: 2 Years in business: 12

impose geographic restrictions. "If I'd get a call from a Zip code that I don't service, I might need to get some kind of corporate approval," he says. "As an independent, I can go wherever I want."

On the other hand, Bennett says Roto-Rooter gives him the flexibility to build his business. "They're not always knocking on your door to see your books or review your business," he says. "You can build your business as an extension of you, bolstered by the uniformity of their brand strength."

Timing is everything

Grayton says timing is a big factor – that buying into a franchise may make more sense at one point in a career than another. "The franchise I was considering emphasized that a nationally branded company provides an easier exit strategy down the road," he says. "But at the time, I was 33 years old with no intentions of exiting. So for a guy who's 50 or 60 years old, maybe that's a compelling reason to consider franchising."

Ratliff, who is 48, concurs that franchises offer a better exit strategy. "But at my age, I don't see myself selling or retiring for quite some time," he says. "I see about 20 more years of this, unless someone is waving a great, big, fat checkbook at me. "I think franchises are a great thing for most people. Truth be known, a lot more people will be more successful with a franchise instead of going it alone. But I wouldn't. I know I wouldn't be a very good employee."

Judging from the number of successful contractors in both independent and franchise drain-cleaning businesses, either option can lead to a prosperous and satisfying career.

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Congress Sweetens the Deal

If you've been waiting to buy new equipment, you might want to re-crunch the numbers before the end of the year to take advantage of the latest tax law changes

By Judy Kneiszel

ncle Sam wants you ... to buy things for your business. Big things. And to motivate you to spend money on equipment, newly revised Section 179 of the federal tax code allows you to write off 100 percent of major capital expenditures immediately, putting quick cash in your company's pocket.

Section 179 has been around for a few years, but thanks to the Small Business Jobs Act, signed into law in September, it has been extended and expanded. Before passage of the act (officially the Small Business Jobs and Credit Act of 2010), the future of Section 179 was unclear. Its benefits and deductions were set to expire this year and, almost nine months into it, there was no indication it would be renewed.

But now, Section 179 allows you to buy qualifying equipment and expense 100 percent of the purchase in the same year. This means you can deduct the cost immediately rather than depreciate it over time. The new law raises the amount you can deduct from \$250,000 to \$500,000.

It also changes the "phase-out threshold." In the earlier provisions, the \$250,000 expensing was phased out if you bought more than \$800,000 in qualifying property for that year. Congress changed the law so the phase-out begins at \$2 million. All of the changes cover the 2010 and 2011 tax years.

Immediate infusion

With these larger tax deductions for equipment, software and vehicles, Section 179 can mean dollars going into your bank account, giving your bottom line a substantial boost this year. As long as the purchases are less than your profits, you can take up to the full amount of the Section 179 deduction this year, if you make your purchases by Dec. 31. The deduction applies even if you finance or lease the equipment, making only a small down payment.

Leasing or financing equipment with the Section 179 deduction in mind can be a savvy strategy because it can significantly improve cash flow and profits. The amount you save in taxes could actually exceed the amount you pay on the equipment in 2010.

What qualifies?

The purpose of Section 179 was to encourage businesses to buy equipment sooner and so stimulate the economy by increasing orders to the nation's factories and getting people back to work. The range of qualifying items is broad, and includes:

- Machinery and equipment.
- Business vehicles with a gross vehicle weight greater than 6,000 pounds.
- Computers and software.
- Office furniture and equipment.
- Property attached to a building that is not a structural component (such as large manufacturing tools and equipment).
- Equipment purchased for both business and personal use. (Here the size of the deduction is based on the percentage of time the equipment is used for business.)

How Section 179 works

Here are three examples of how the new Section 179 could affect your business:

Example 1: Suppose your company expects a \$200,000 profit for 2010 as reported on Schedule C of your federal tax return, and that you buy or lease qualified equipment worth \$150,000 before the end of the year. You would be able to deduct that entire \$150,000 from your 2010 taxable income, reducing your profit for tax purposes to \$50,000. That means a significant 2010 tax savings.

With these larger tax deductions for equipment, software and vehicles, Section 179 can mean dollars going into your bank account, giving your bottom line a substantial boost this year. The deduction applies even if you finance or lease the equipment, making only a small down payment.

Example 2: Suppose your 2010 Schedule C profit is \$50,000 and you buy or lease business equipment costing \$55,000. You would be able to deduct \$50,000 of the purchase price from 2010 taxable income under Section 179, reducing your net profit for tax purposes to zero. For the remaining \$5,000 of the equipment cost, you could either take depreciation over the useful life of the equipment, or carry it over to 2011 and fully deduct it under Section 179 – as long as you have enough profit in that year to absorb the \$5,000 expense.

Example 3: Suppose you operate at a loss in 2010. In that event, Section 179 will not benefit you for that year. If again you made \$55,000 in equipment purchases, you could depreciate that amount over time, or carry it over and take the Section 179 deduction for 2011, provided your profit in that year covers that amount.

Seek professional advice

Of course, as with any tax matter, consult with an accountant or tax advisor before jumping in and making significant capital expenditure in hopes of benefiting from the improved Section 179. Make sure it's going to benefit you – and then go shopping.

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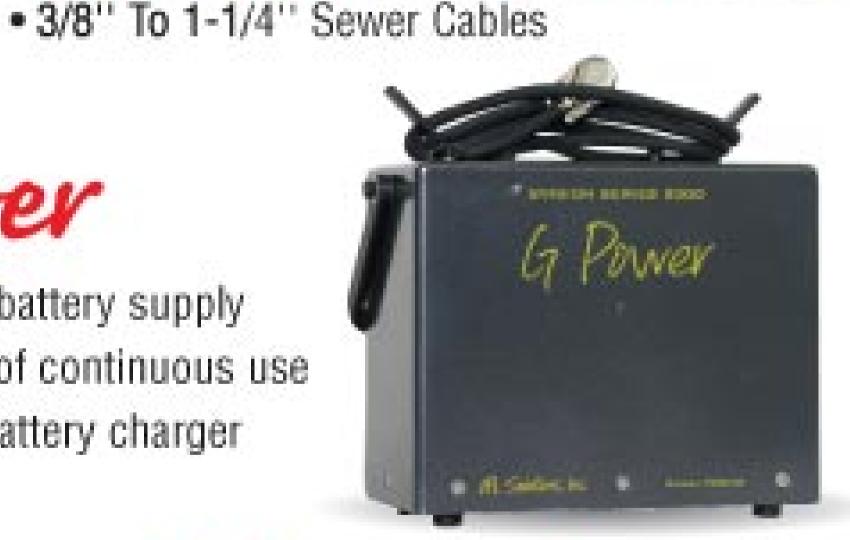
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Avoiding the Power Trip

Power is valuable, but it can do damage if abused. Here are seven principles you can apply to keep your power as a leader in perspective

By Danita Johnson Hughes, Ph.D.

Danita Johnson Hughes, Ph.D. is a health care industry executive, public speaker, and author of the book, Turnaround. She inspires people to dream big and understand the role of personal responsibility in personal and professional success. In her first book, Power from Within, she shared the principles that helped her overcome meager beginnings and achieve success. Visit www.danitajohnsonhughes.com.

eaders are found in almost every stratum of life: in companies, in politics, and in social organizations such as families and groups of friends. Leaders are powerful people because they can sway the attitudes, opinions, and actions of others. Leaders inspire, influence and achieve results.

Everyone has the capacity to lead, because everyone has the ability to influence others. Developing the right leadership strategy for the people you lead is crucial to getting the results you desire. Therefore, it is important to strengthen your skills to better influence, motivate, communicate and coach your people.

Contrary to what many might think, few people are born as leaders.

with integrity, honesty and selflessness is crucial. Being willing to sacrifice your success and your fortune takes guts. Being unwilling to sacrifice your integrity takes character.

Courage, Martin Luther King, Jr. said, "The ultimate measure of a man is not where he stands in moments of comfort and convenience, but where he stands at times of challenge and controversy." Courageous people take calculated risks. They hope for the best possible outcome but are prepared for a loss.

Commitment. Every day of your life you may face challenges. But commitment is the will and strength to keep forging ahead no matter how many times you are knocked to your knees. It's the ability to accept setbacks as temporary inconveniences

others is a key component of positive relationships. Developing relationships with key people will expand your sphere of influence, your access to resources, and your capacity to make things happen.

Contribution to the welfare of others. One of the greatest attributes of a good leader is willingness to serve others. Many times, people enjoy being in positions of power because of what they gain personally. Genuine service comes from the heart. The willingness to put other people's needs and desires before your own is reflected in the attitude and actions of a good leader.

Creative perception. Often referred to as vision, creative perception is essential to leadership. Leaders have a passion for change. They are ship is the ability to bring others along, through the power of persuasion, erudition or position.

Persuasive power is your ability to make an emotional connection with others, and through this connection persuade their actions. Persuasive power reflects your charisma – the ability to draw people to you.

Erudite power is gained through extensive knowledge of a subject or area of expertise. It is usually based on acknowledgement of your intellect or accomplishments.

Positional power is based on your ability to control and have authority over others by virtue of hierarchical order. It is most often observed in employment situations where there are levels of employees

Leadership is about having self-confidence and being passionate about your values and beliefs. A good value system can help you to stay on course when the ship gets tossed in the storm.

Leadership is a skill developed over time, through practice and hard work. Too often, being a leader and owning power can trip you up. Power in such cases can be misused or abused.

Refining skills

Being on a "power trip" is usually viewed negatively, and it can cause others to lose respect and appreciation for you as their leader. Therefore, it is wise to recognize, develop, and refine the personal characteristics that mark truly effective leaders. Here are Seven Cs for gaining and maintaining power and for keeping power in its proper place:

Character. As a leader you will be confronted with competing demands from time to time. The

that get in the way and try to steer you off course. In the long run, unwavering perseverance gets you through.

Cautious attentiveness. A good leader needs to be accurately informed. Be sure you have all the available facts before deciding anything. Carefully consider all options and their possible results before acting. Thinking through the potential consequences of your decisions often prevents problems down the road. Having enough information is only part of the equation. When you have all the information available, use your intuition to fill in what is missing.

Connectability. The ability to develop meaningful relationships with others is the most important quality a leader can possess. You gain through relationships. ability to manage those demands | Understanding and connecting with | get things done. Inherent in leader- | the storm.

preoccupied with future possibilities. As a leader, you must be able to articulate your vision if you want to inspire and motivate others. Employees who are excited about the leader's vision and the direction of the organization become much more productive and willing to participate.

Forms of power

Popular literature on leadership is rife with contrasts between leadership and power. But to be an effective leader you have to exercise power to realize the results you are striving to achieve.

Because everyone has the capacity to lead, each person is powerful in his or her own way. Simply defined, leadership is the ability to influence others to act and to motivate them to

from line staff through senior management, and in politics where a person ascends to a position of authority by election or appointment.

In most cases, you may ascend to leadership through a combination of these factors. No matter how you reach a leadership role, it will involve influencing others.

Knowing who you are is the most critical element in becoming an effective leader. It requires looking through the lens of critical analysis. You must be in control of yourself before you can expect others to follow your lead.

Leadership is about having selfconfidence and being passionate about your values and beliefs. A good value system can help you to stay on course when the ship gets tossed in

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Your Interests At Heart

Fee-based planners provide objective advice free of influence from commissions on securities or other investments they recommend

By Erik Gunn

Erik Gunn is a magazine writer and editor in Racine, Wis., where he operates Great Lakes Editorial Services, consulting for businesses, nonprofits and individuals.

Readers may direct inquiries to him by contacting this publication at 800/257-7222 or e-mailing editor@cleaner.com.



magine you're building a house, or maybe a new office, warehouse and garage complex for your business. Would you even think of doing that without a plan? And you wouldn't create that plan without hiring a professional, would you?

Of course not. Yet consider your collective wealth: your home, business, investments and cash on hand - in short, all your assets, financial and otherwise. What is that but the house for you and your loved ones, now and for the rest of your life? Now, doesn't it make sense to have a plan for that, too?

Yet too many people ignore that common-sense advice. It's not hard to see why. We tend to be private about our money, whether because of shame or modesty. We also may think no one will really understand our unique situation. And it's easy to convince ourselves that we already know what we need to about finances. But most of us actually don't. That's where financial planners come in.

What's for sale?

Financial planners come in all shapes and sizes, and in all forms, qualifications and means of compensation. The two biggest categories are planners who work on commission for the stocks or other securities they sell, and planners who charge a fee for their work and take no commissions. When it comes to picking a planner to help you make sense of your current and future wealth, there are good arguments for going with a certified, fee-only planner.

What does that mean? Commission-based planners cost nothing up front. But in truth, they are at least partly salespeople. They are typically affiliated with a bank, says. In addition, the association has tion is effective. We really do think other professional advisor for your

brokerage house, or other institution whose goal is ultimately to sell you investments. A fee-only planner sells you nothing except time and expert-

Susan John, national chair-elect for the National Association of Professional Financial Advisors (NAPFA), suggests going a step further: picking someone who is a Certified Financial Planner (CFP). Professionals must have that credential to belong to NAPFA, whose members are all fee-only planners. And all members must take a fiduciary oath in which they vow to put

more stringent continuing education requirements for planners than the industry norm.

The association works with the Certified Financial Planner Board of Standards to help set criteria for certification, but NAPFA and the Board of Standards are separate organizations that operate at arm's length and have no direct connection, John says.

Even though a fee-only planner doesn't get commissions or sell stocks, that doesn't mean you're on your own when it comes to executing the investments the planner says

there should be some sort of discrete regulatory body, whether under the auspices of the SEC or the state or some kind of professional and consumer-oriented board. And it should be separate from any of the bodies that regulate specific functions related to financial planning, like securities."

John says the cost for a fee-only planner can vary widely, depending on the kind of customer (such as an individual versus an institution), the size of his or her assets, the complexity of the plan, and whether the client needs continuing services or

"Fee-only compensation promotes the fiduciary standard a lot more cleanly than other types of compensation. It allows the planner to provide truly independent, individualized advice."

Susan John

their clients' interests ahead of all other considerations. None of them take commissions.

"Fee-only compensation promotes the fiduciary standard a lot more cleanly than other types of compensation," John says, "It allows the planner to provide truly independent, individualized advice."

Setting standards

NAPFA membership itself may be a useful criterion for picking a planner. Beyond requiring certification, the association subjects all of its membership applicants to peer review of their financial planning skills. To join, a planner has to submit a wide-ranging portfolio that shows the breadth of his or her actual planning experience and knowledge.

"We want to make sure that all of our members are capable of producing a comprehensive plan," John

are appropriate for you. Planners typically work with brokerage houses to create customers' investment portfolios. For example, John's business, Financial Focus Inc., in Wolfeboro, N.H., works with TD Ameritrade and Fidelity Investments to manage her customers' transactions.

But it's important to remember one thing, she says: "We do not benefit directly or indirectly from the selection of any particular security."

Changing regulation?

Up to now, the financial planning industry has been largely selfregulated, but that is changing. As a result of the financial reforms passed by Congress in mid-summer, the U.S. Securities and Exchange Commission is studying options for regulating financial planners.

John says that's a good thing: "We don't believe that self-regulaone-time advice.

"It's pretty typical for someone to be able to come in and have an introductory meeting, discuss what brought them in, and discover whether there's a fit between the planner and the things the client cares about," John says. Such meetings are usually free of charge, and if they drift into subjects that are properly part of what the planner charges for, the ethical planner will make that clear in advance.

Once a relationship is ongoing, the planner might charge a certain hourly fee, or a fee based on, for example, the total net worth of the client. "As a rule of thumb, the typical fee for portfolio management is around 1 percent per year," John says.

Picking a planner

You should choose a planner in the same way you would choose any







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business – a lawyer or an accountant, for instance. You might look for a planner who has other clients in businesses similar to yours. You should check each planner's credentials and ask about his or her experience. Ask for references as well, and follow up on them. "And ask about fees – all fees," John says.

Yes, it will take some time, and yes, it will cost you more up front to hire a fee-only planner instead of relying on a stock broker whose services include investment planning.

But if you think of everything you own as a building in which you'll live for the rest of your life, you'll want to know it's on a solid foundation. And that will be worth the price.

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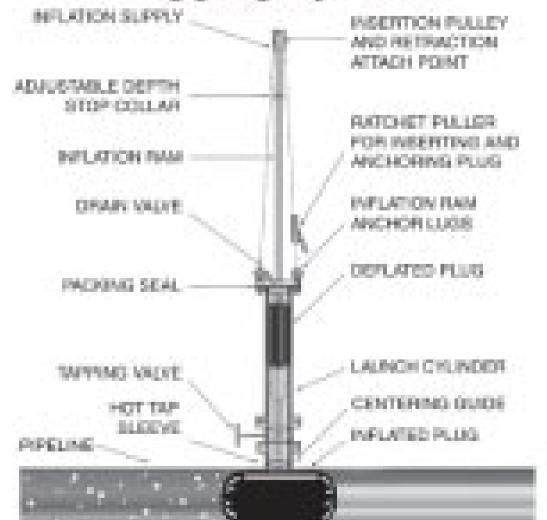
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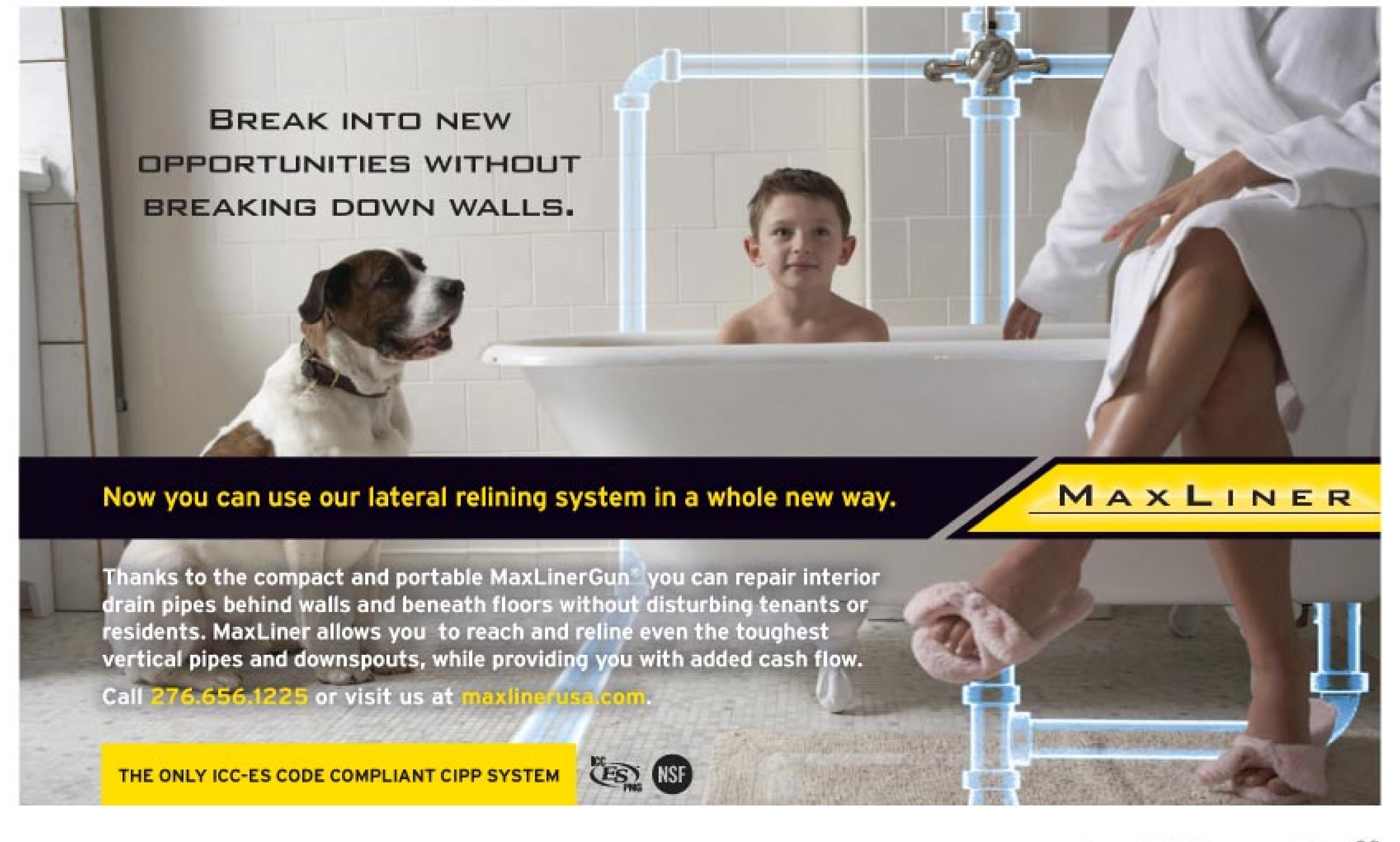
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You Don't Want to Miss This

The 2011 Pumper & Cleaner Environmental Expo International includes more new products, exhibits, more learning, more networking, and a blockbuster show at the Saturday Evening Jam

By Ted J. Rulseh

ighty percent of attendees surveyed at the last Pumper & Cleaner Expo said they would come back in 2011.

That says a lot about the 2010 show, and the 31st Annual Expo March 2-5 in Louisville promises to be even bigger and better. More than 500 exhibitors are expected. There will be a record number of educational seminars. The new-product display space will double. A special Saturday morning Roundtable pancake breakfast will give industry professionals a chance to network and discuss key issues and concerns.

And, to top it all off, the annual Saturday Evening Jam features Dierks Bentley, nominee for 2010 Country Music Association Male Vocalist of the Year and Album of the Year (for *Up on the Ridge*).

"In every respect we continue to make the Expo a bigger and better event for our attendees and exhibitors," says Julie Gensler, Expo coordinator for show sponsor COLE Publishing. "We want professionals in our industry to get more for their investment – in business value and pure enjoyment – every time they attend."

More products and technologies

Tools and equipment remain a key Expo attraction: some 79 percent of 2010 visitors said that new products and technologies were their main reason for attending.

"Each year we try to make the Expo the most rewarding and most fun few days in our attendees' business year. We look forward to seeing old friends again and to meeting many new business owners and municipal managers who want to sharpen their skills and learn better ways to serve their customers."

Bob Kendall

Interest from exhibitors for 2011 is running high. After the 2010 Expo, 85 percent of the 492 exhibitors already said they were planning to be back. Since then, a number of new companies have expressed interest in floor space. The total number of exhibits will most likely exceed 500.

In addition, the popular new-product display, which included 16 companies last year, is moving to larger quarters, and more than 30 exhibits are expected. In these unmanned displays, open throughout the exhibit hours, visitors can examine the products, watch loop videos, and scan their badges to request more information.

More skills and knowledge

The ever-expanding education lineup includes 85 seminars spread across three days. The Education Day program, on Wednesday, March 2, includes tracks of seminars presented by:

- Leaders Resource Network
- Southern Section Collection Systems Committee
- National Association of Sewer Service Companies
- National Environmental Health Association
- National Onsite Wastewater Recycling Association
- WaterJet Technology Association
- Portable Sanitation Association International
- Safety Management Systems
- National Association of Wastewater Transporters

Another track will feature motivational speaker and business coach Scott Hunter, speaking on leadership and "Creating an Outrageously Successful Organization."

The Thursday and Friday morning programs (March 3 and 4) include six seminars in Spanish to serve the growing number of Expo visitors from Mexico, Central America, and South America. All day Thursday, Jim Anderson and Dave Gustafson of the University of Minnesota onsite program will present an installer seminar.

Many seminars qualify for state-approved continuing education credits.

Another way to network

The show hall, dining area, lobby, shuttle buses, and Louisville nightspots remain as venues for networking, along with the COLE Pub outside the show hall. But this year there's a new opportunity. A Roundtable Discussion and Pancake Breakfast runs from 8 to 10 a.m. Saturday. Here, in a forum moderated by COLE Publishing staff, attendees will share ideas on industry "hot topics."

"We're still developing the list of topics," says Gensler. "Attendees who want to suggest a topic may send me an e-mail to julieg@colepublishing.com. We will seriously consider all ideas and will choose the topics of greatest interest to our industry members."

The breakfast price is \$10 and includes fresh fruit salad, buttermilk and blueberry pancakes, link sausage, maple syrup and butter, orange juice and coffee.

Good times for all

As always, the Expo offers lots of enjoyment. The Roe-D-Hoe, sponsored by the National Onsite Wastewater Recycling Association, will be back after a successful first year. More than a spectator event, it lets equipment operators practice their skills in a series of timed events requiring a combination of speed, precision and finesse.

The annual Thursday evening Industry Appreciation Party once again offers 25-cent tap beers.

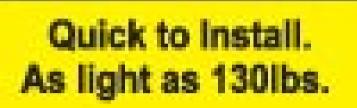
Dierks Bentley, headliner for the Saturday Evening Jam, is the highestprofile act ever to appear at the Expo. Just reaching the height of popularity, he has been a big draw at his own concerts and at country music festivals around the country. Find out more about him at www.dierksbentley.com.

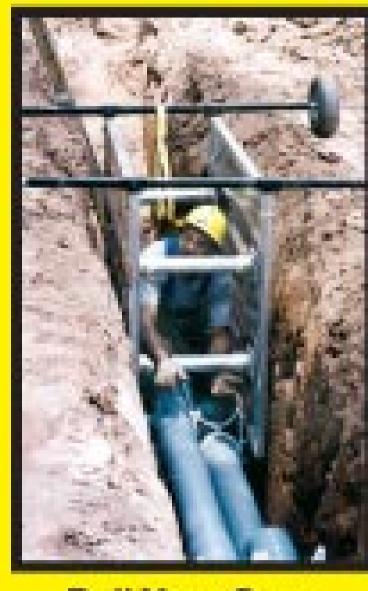
The concert will be held in Freedom Hall, connected directly to the Kentucky Exposition Center, so that attendees can walk to the show while staying indoors. Twenty-five-cent tap beers will be served before the concert.

"Visitors to the 2011 Expo are in for a treat," says Bob Kendall, owner of COLE Publishing. "Each year we try to make the Expo the most rewarding and most fun few days in our attendees' business year. We look forward to seeing old friends again and to meeting many new business owners and municipal managers who want to sharpen their skills and learn better ways to serve their customers."

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If you have a special talent and would be interested in showcasing it at the 2011 Pumper & Cleaner Expo, then we want to hear from you!

We are reaching out to industry professionals and their families who would be interested in participating in a talent contest to be held during the 2011 Pumper & Cleaner Expo. Prizes would be awarded to the top three finalists.

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CONTEST RULES

- 1. You must be present and registered for the 2011 Expo.

 No transportation or hotel accommodations will be provided.
- 2. A video from all applicants performing their talent must be submitted to COLE Publishing in advance. All talents must be appropriate for all age groups.
- An independent panel will pick the top ten finalists from the submitted videos.
- 4. The top ten finalists will then need to perform their talent in front of industry peers on Friday, March 4th, 2011 at the 2011 Pumper & Cleaner Expo.
- 5. The audience will be able to vote for their favorites and the top 3 vote getters will be the winners.
- * All materials submitted become the property of COLE Publishing, Inc. and may be used for promotional or other purposes.







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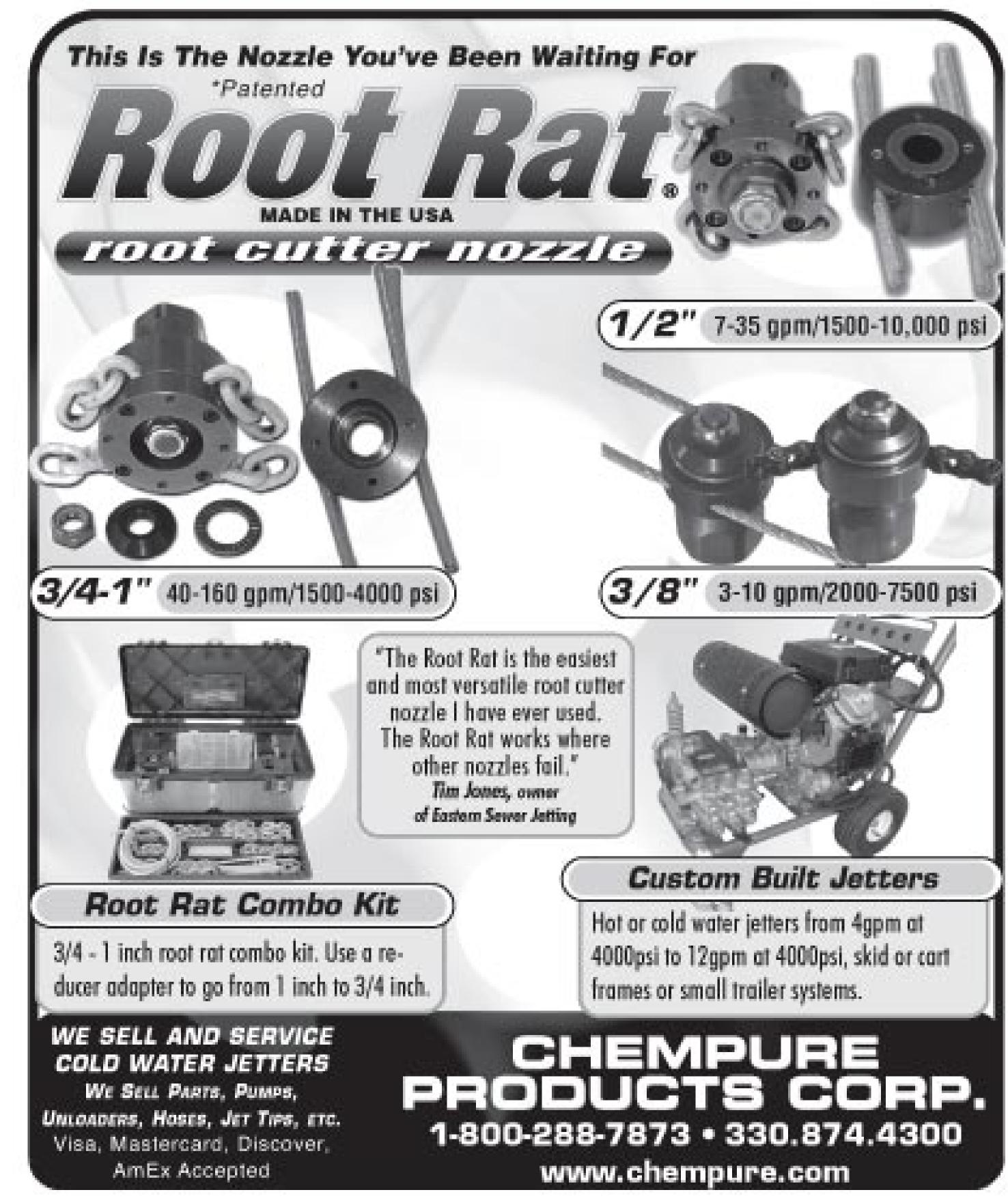
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Versatile Performer

A jet/camera truck from Sewer Equipment Co. of America helps an industrial cleaning company keep working in tough weather

By Ken Wysocky

ewers don't stop clogging just because it's 40 degrees below zero with the wind chill factor northern-Canada winters. Technicians at D&S Industrial Inc. in Winnipeg, Man., have to keep working, too, no matter how brutal the conditions.

Machines "Once you start flushing, you're good to go. But you need to have your ducks

That's exactly what they do, thanks to an 800-HPRTV jet/camera truck made by Sewer Equipment Co. of America. When the jetter isn't in

use, the insulated truck's recirculation system keeps water from freezing without the use of antifreeze. But once the truck arrives at a job site, technicians sometimes have just five minutes to set up and start jetting, or the water in the unit's two, 750-gallon plastic tanks may freeze.

> "Some days you have to be really quick," says Dale Adair, operations manager. "Once you start flushing, lined up in a row. If the

water freezes, we close the doors and let the truck's heater run until it thaws. We do what we can to avoid that, like facing into the wind when



The truck's rear hose reel swivels to simplify alignment with the job at hand.

MONEY MACHINES



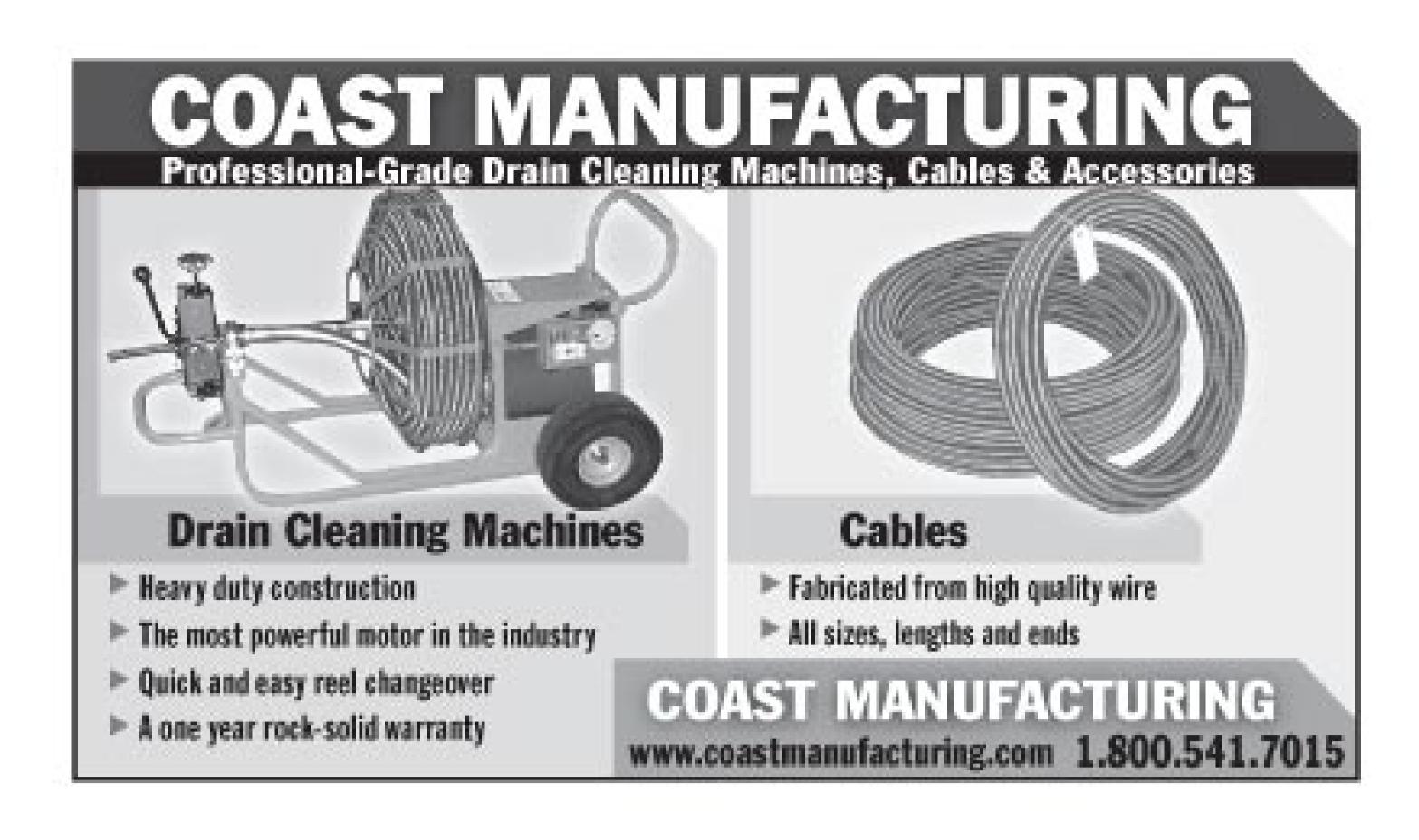
we park. But the bottom line is you have to be ready to go."

Rear hose reel

It helps that the truck has a rear extending hose reel that swivels up to 180 degrees. That means the driver doesn't have to spend time maneuvering the truck until it's lined up perfectly.

"Instead, we just pull up close, then extend or retract the reel as far as we need to, and swivel it as much as we need to," Adair says. "That's huge when you're on a narrow street or road and can't line up straight with what you're working on."

The truck's pump generates up to 2,500 psi at 70 gpm. The vehicle carries 700 feet of hose and a nofrills inspection camera with 600 feet of video cable.



"The TV camera allows us to find out right away what the problem is if we encounter an issue on a flushing job," Adair says. "We've obtained a lot of extra work because of the camera. It's also good because a lot of people want to take a quick peek at their sewers after they've been

efficiently because it turns what used to be a two-man job into a one-man operation. The feature is especially handy at more remote setups, like a manhole in the courtyard of an apartment complex, because the technician doesn't have to be at the truck to pay out or retrieve the hose.

"The TV camera allows us to find out right away what the problem is if we encounter an issue on a flushing job. We've obtained a lot of extra work because of the camera."

Dale Adair

cleaned, and this is a nice alternative to buying a separate, full-fledged camera van."

Versatile system

Adair also likes the truck's hydrostatic drive, which allows it to pump very little water at a low pressure when needed for certain applications. "If our old truck ran at too low an rpm, it would choke out," he says. "But with this one, we can have just a dribble coming out of the hose and it still works. We can run the pump as fast or slow as we want. It's very, very versatile."

A remote control unit allows D&rS to deploy manpower more

"This truck has been very important to our operations," Adair says. "It has generated a lot of revenue we otherwise wouldn't have made without the camera option. And it definitely does jobs faster. It's made a financial impact and improved our productivity dramatically. It's been a great asset to our business."

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Camera System Combines Mainline and Lateral Inspection

By Ed Wodalski

he self-propelled LAMP II inspection system from CUES Inc. performs pan-and-tilt inspections of mainline sewers as well as connected laterals. The system includes a self-propelled lateral launcher, transportation platform and two cameras – a pan-tilt-optical zoom mainline camera mounted on an articulating platform for easy invert entry, and a camera for lateral inspection. The system is available with a stainless steel or fiberglass push cable that can inspect up to 120 feet into a lateral. The fiberglass push cable can be wound on a reel.

"With the fiberglass cable, you can actually accomplish complete operations — insertion, traversal and retrieval — from the viewing console, and no person is required to be in the rear to monitor the reel or to retrieve cable," says Paul Stenzler, vice president of sales for CUES. The stainless steel cable can inspect up to 100 feet, but requires a second person to monitor retrieval.

"Why different types?" Stenzler asks.

"Because the stainless steel pushes out with about double the force of any fiberglass cable. So there's a tradeoff. You can operate the system with one person, but there are tough conditions with 90-degree turns that are very difficult to push through. So it depends on what you want to accomplish and what the task at hand is."

The entire inspection operation also can be run from a handheld, wireless game controller, including all lateral launcher functions, the transport, camera functions, and all reel functions. "Another bonus is any standard game controller will work with this system," Stenzler says. "So if you have a problem with the controller, you can go to the local discount store and for less than \$30 replace your entire control system."

Color video from the two cameras can be displayed in a picture-in-picture format or on separate monitors. The unit measures 32 inches from the front of the camera to the rear connection. The camera also offers maximum clearance in a 6-inch line.

"We have special setups for 6-inch lines to produce the required top and bottom and side clearance required in most situations," Stenzler says. "Six-inch pipe is a difficult challenge for any inspection company due to offsets, meandering conditions, and collapsed crowns. We've created a 6-inch setup that can negotiate most of those conditions."

The LAMP II is designed to inspect 6- to 30-inch mainlines and 3- to 8-inch laterals with a pan-and-tilt zoom camera that has a 40:1 optical/digital zoom. Other features include automatic centering and built-in auto upright that keeps the image stabilized at all times.

The system also has a built-in sonde for line locating and comes with four sets of single-point removable wheels with a combination of rubber tires for most conditions and semi-pneumatic tires to negotiate pipes with more debris. High-traction tires with a steel-abrasion base are available for greasy conditions and PVC pipe. 800/327-7791; www.cuesinc.com.

Giant Industries Introduces GP7500 Series Pumps

GP7500 Series highpressure pumps from Giant Industries feature an integrated gear-end cooling system for



maximum longevity. The 100 hp, continuous-duty pumps are capable of flows up to 85 gpm and pressure to 3,000 psi. They are available in solid crankshaft design, gearbox with pinion shaft and gearbox with hollow shaft hydraulic drive. Standard components include solid ceramic plungers, nitrile seals with fabric reinforcing and stainless steel valves. 419/531-4600; www.giantpumps.com.



Waterless Introduces Soybean-Based Urinal

ENVIREZ soybean-based resin urinals from Waterless Co. Inc. are ADA-compliant, have a 2-inch interior drain for easy cleaning, and do not need to be removed from the wall for snaking. The urinals are available in white and other colors. 800/244-6364; www. waterless.com.

RIDGID Introduces Digital Recording Monitor

The CS1000 digital recording monitor from RIDGID is compatible with all SeeSnake reels and includes an upgraded LCDPak and keyboard with built-in recording and reporting capabilities. The system also comes with SeeSnake HQ



software for job sharing, reporting and uploads to RIDGIDConnect. The light-weight, battery-powered monitor has a 12.1-inch screen with enhanced day-light readability. The unit has three recording modes: digital stills, full-frame video and auto-recording. The report writer enables the operator to generate a full report on site with integrated inspection footage and descriptions. 800/769-7743; www.ridgid.com.

RapidView Introduces Rear-Viewing Camera Connector

The RETRUS rear-viewing camera connector from RapidView IBAK North America connects between the cable and the tractor on IBAK mainline pipeline inspection systems. The unit features LED lighting and full-color



image quality for a clear view behind the inspection crawler during retrieval. 800/656-4225; www.rapidview.com.

General Offers Drain-Cleaning Handy-Stand

The Handy-Stand from General Pipe Cleaners turns handheld drain cleaners into countertop or floor machines. The stand fits the Super-Vee, Power-Vee and Handylectric models and can be positioned horizontally or vertically. Additional features include quickrelease clamp, four-point base, power cord holder, built-in cutter caddy, and



lift handle that doubles as a spare cable cartridge holder. 800/245-6200; www.drainbrain.com.

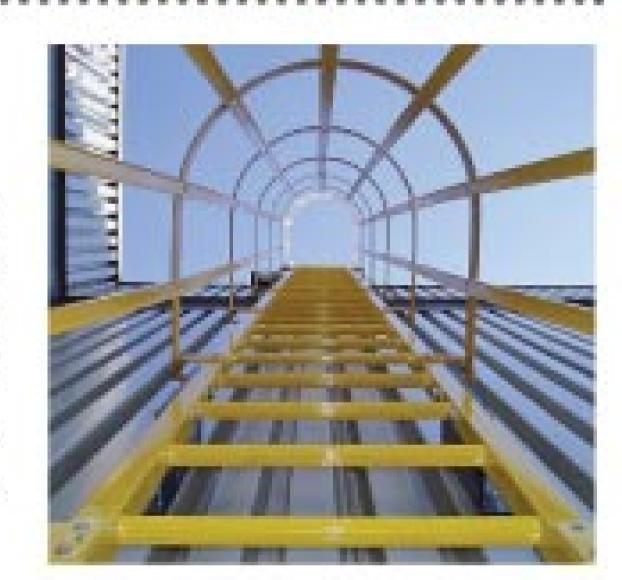
> Coxreels Introduces SG Series Side-Mount Reel

The SG Series side-mount reel with multi-position guide arm from Coxreels features a two-bolt mounting pattern for tight spaces. The guide arm and roller assembly can be moved to one of six positions with a 1/2-inch wrench. The side-mount reel can handle up to 50 feet of 1/4-, 3/8- and 1/2-inch hose for low-, medium- and

high-pressure uses. 800/269-7335; www.coxreels.com.

Fibergrate Offers Dynarail and Ladder Systems

Dynarail modular and fabricated handrails and ladders from Fibergrate are designed to be slip- and corrosion-resistant. The systems meet or exceed OSHA, IBC and other building code requirements for safety and design, and are easily assembled in the field. 800/527-4043; www.fibergrate.com.





NLB Offers Saflex 2000 Tube Cleaner

The semi-automated Saflex 2000 tube bundle cleaner from NLB Corp. can clean two tubes at once on both the in and out strokes. Flex lances at the tube openings can be fed at rates up to 2 feet per second. The lances can be automatically placed with an optional X-Y position using wireless controls that let the opera-

tor stand clear of the action. The cleaner operates at pressure up to 40,000 psi and can clean tubes from 4 mm to 15 mm in diameter. Stroke lengths are adjustable to accommodate tube bundles of different lengths. 248/624-5555; www.nlbcorp.com.

Radiodetection Offers RD7000, RD8000 Locators

Lightweight RD7000 and RD8000 locators from Radiodetection feature a highcontrast, backlit LCD screen for viewing in any light condition. Both locators also feature the Centros measurement engine and eCAL validation with Centros Manager that lets users manage the locators' receivers from a



desktop or laptop computer. iLOC linking enables the operator to control the transmitter remotely, while SurveyCERT enables the operator to pass survey information to third-party applications for audit or analysis on a PC or PDA. 877/247-3797; www.radiodetection.com.



Tnemec Introduces Ceramic Epoxy Lining

Series 431 Perma-Shield PL ceramic epoxy lining from Tnemec Company Inc. is designed to protect carbon.

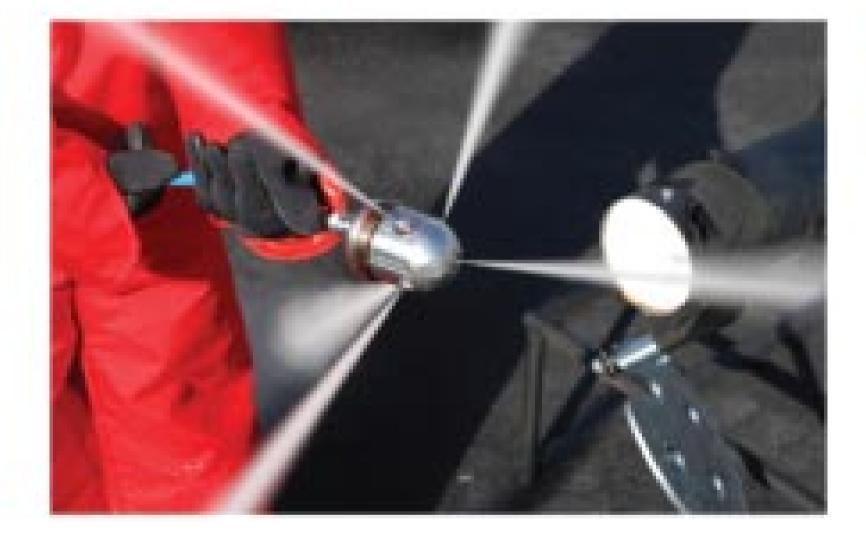
steel and ductile iron pipe used to transport wastewater. The 100 percent solids, ceramic-modified polyamine epoxy, applied at 40 to 50 mils dry film thickness, provides a barrier to hydrogen sulfide and other sewer gases. 800/863-6321; www.tnemec.com.

Lowell Introduces Valve-Key Socket Kit

Valve-key sockets from Lowell Corp. are designed for use on valve nuts that have become rounded or corroded. Each kit includes three valve-key sockets and hardware for connecting each socket to a valve key. All sockets are made of zinc-plated,



hardened steel and feature a high-visibility yellow color for easy locating. 800/456-9355; www.lowellcorp.com.



StoneAge Introduces 40K Badger

The Badger BA-H6 40K five-jet nozzle from StoneAge Inc. features a compact design with rotation speed control. The viscous fluid governor and highpressure seal enable the 2D nozzle to remove hard scale, plastics and polymers from

pipes and elbows as small as 4 inches. The nozzle also features OS6 Sapphire Tips with jeweled orifices for long-lasting performance. 866/795-1586; www.stoneagetools.com.



Healing Hands

A contractor executes cured-in-place pipe repair in the radiology department and physical therapy area of a Florida hospital without disturbing patient care

By Scottie Dayton

wo or three times per week, sewage backed up into the emergency room, radiology department, and cafeteria of the Martin Memorial Hospital in Stuart, Fla. Despite constant jetting by the maintenance contractor, stoppages continued in the 6-inch cast-iron sanitary sewer servicing the north side of the building.

While the hospital maintenance staff searched for solutions, a plumber tried unsuccessfully to rod the line. Other plumbers trying to inspect the 400-foot-long pipe through a 4-inch cleanout in the emergency room reported massive trenching and much of the invert missing. Three plumbers declined to try rehabilitating the line.

Open-cutting to replace the pipe would cost millions of dollars and take eight to 10 months. Then officials found David Shortz, project

manager for Engineered Lining Systems (ELS) in Jacksonville, Fla. For a fraction of the cost of opencutting, his crew restored the pipe with felt cured-in-place liners in five weeks.

Site preparation

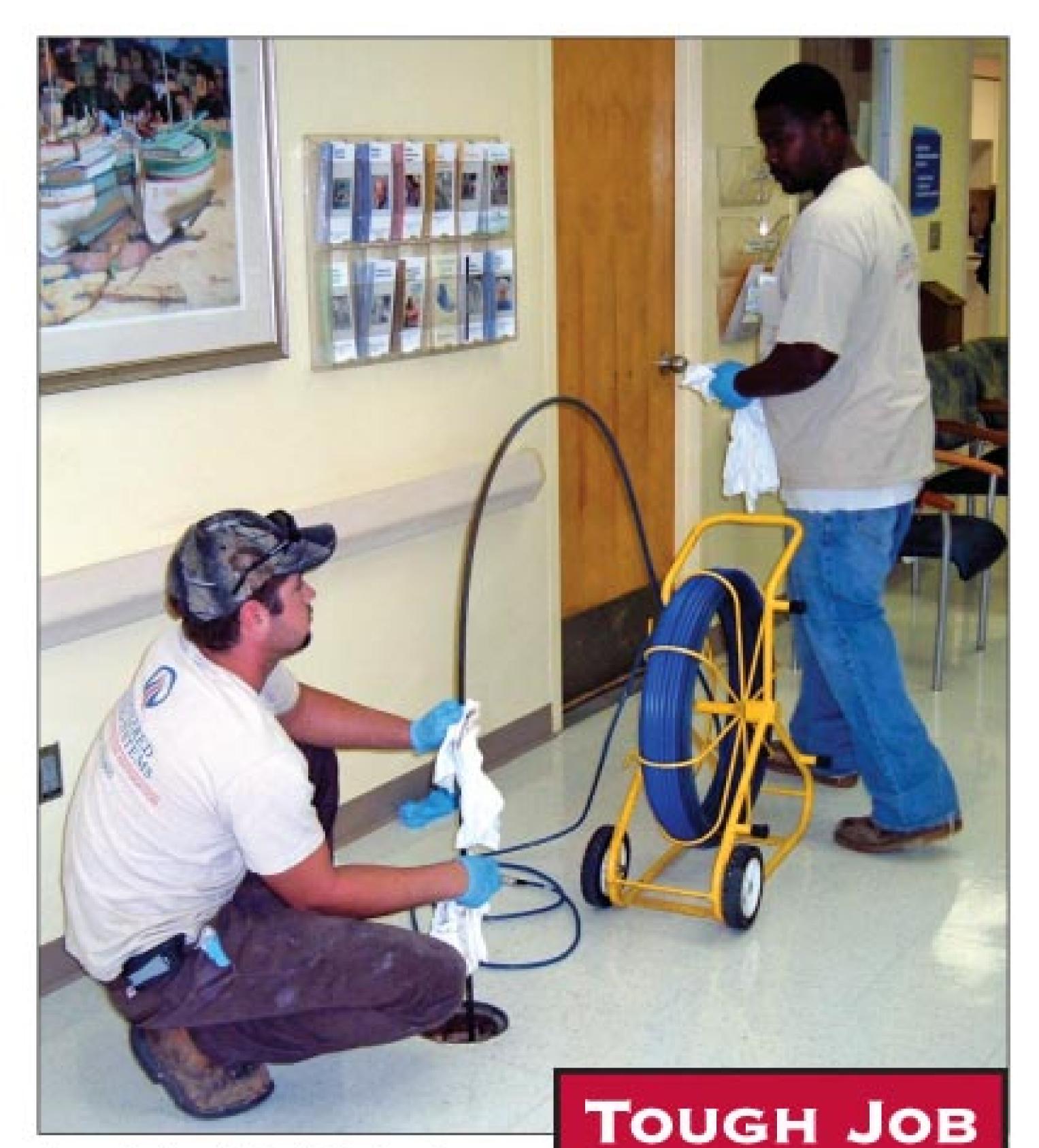
A massive breakwater separates the hospital from the St. Lucie River. Because the building is almost below sea level, dewatering pumps keep it dry during high tides, downpours, or hurricanes.

Six ELS technicians inspected and mapped the line using a push camera with self-leveling head from Ratech Electronics. It sent back images of debris hanging on trenched areas and rough sections, causing huge blockages.

The 5-foot-deep pipe rose 12 inches as it traveled 220 feet from the cleanout to an area under nuclear medicine, turned 90 degrees, and ran



Tides influenced the water table in the 6-foot-square access pit in the nuclear medicine department.



James Macko and Dennis Gaskins of Engineered Lining Systems inspect the 6inch cast-iron sanitary sewer line through a cleanout in the cardiac rehabilitation department. (Photos courtesy of Engineered Lining Systems Inc.)

180 feet to an area under physical therapy. It then connected to a 12-inch cast-iron main flowing to the hospital's 30-foot-deep, 20,000-gallon lift station, which discharged to the city's lift station.

"Our first logistical challenge was keeping the hospital running at capacity," says Shortz. "That involved bypassing the entire sanitary system for the north side without shutting down surgical scrub sinks, bathrooms, and the cafeteria."

The second challenge was dirt and infection control. Following hospital guidelines, workers laid sticky mats on either side of doorways and enclosed work areas to remove contaminants from the soles of their shoes. They also erected plastic enclosures around doors.

"Our air filtration units ran constantly," says Shortz. "While sawcutting the 6-inch-thick concrete floors, we wet the dust to a workable slurry, then vacuumed it." The men cut two 6-foot-square penetrations, one in nuclear medicine at the

PROJECT:

Rehabilitate 400 feet of 6-inch sewer without disrupting medical procedures

CUSTOMER:

Martin Memorial South Hospital, Stuart, Fla.

CONTRACTOR:

Engineered Lining Systems, Jacksonville, Fla.

EQUIPMENT:

Lining system from MaxLiner USA

RESULTS:

Line rehabilitated in five weeks, saving the hospital millions of dollars

90-degree elbow and the other in physical therapy where the pipe joined the 12-inch main.

Bypass systems

Hospital maintenance relocated the nuclear medicine laboratory during the project. ELS workers excavated with picks and shovels to the pipe, then well-pointed the areas, started electric diaphragm dewatering pumps, and set up the bypass system.

After plugging the sewer line, the men reversed the flow of the grease interceptors and diverted sewage to them. Waste was pumped to a city lift station 300 feet away. Flows from scrub sinks, bathrooms, and a cafeteria were diverted through a hose running 160 feet to a manhole.

"Our biggest concern while dewatering was the weather," says Shortz. "Summer in Florida means storms and lightning. Any one could knock out the electricity with devastating results."

Shortz was concerned that the groundwater pressure was high enough to buckle or collapse ambient-cured liners as they formed to the host pipe. Therefore, he chose the MaxFeltLiner system (MaxLiner USA) with Hot Kick, a mobile dieselfueled boiler that would counteract the groundwater's cooling effect.

ELS workers also rerouted condensate from the hospital's airhandling units to keep it from flowing back into the pipe and the liner epoxy from curing.

Cocked and ready

ELS worked at night. One crew parked a GapVax MC 1510 combination truck outside, then dragged in hoses to clean the lines while another crew televised the work. "Our main concern in jetting was collapsing the pipe and removing more of the bedding," says Shortz. "Fortunately, the occlusion was soft and the 220-foot line cleaned quickly."

A third crew prepared the liners in a nearby service tunnel. As they brought the resin-impregnated liner through the calibration rollers, they folded the felt back and forth inside a large plastic stock tank filled with ice and water. This retarded the epoxy's chemical reaction as they wheeled the tank 200 feet to nuclear medicine and loaded the liner into the inversion machine.

"Because we were shooting into a hole, we wanted the gun as close to the pipe as possible," says Shortz, "So the men built a carrier system that spanned the excavation and pointed the gun downward."

The inversion machine installed the liner a few feet at a time. Working it required two men topside to feed the liner into the gun and handle the controls, and another in the hole to align the liner with the pipe and start it rolling.



James Macko, Mikal Biegner, and Dennis Gaskins of Engineered Lining Systems set up a camera system from Ratech Electronics to inspect the 6-inch line serving the kitchen.

"It's a step process," says Shortz. "After pushing in three to four feet of liner, the men close a valve that seals the air bladder. Then they pressurize the gun to 7 psi to force that section up the pipe. Once all the liner is As the crew began cleaning, they encountered heavy groundwater infiltration. As the water flowed past the rehabilitated upstream pipe, it washed in the surrounding mud and sand.

"Our biggest concern while dewatering was the weather. Summer in Florida means storms and lightning. Any one could knock out the electricity with devastating results."

David Shortz

inverted halfway, they pressurize it to 14 psi, and that pushes the remainder to the end."

The inversion took 10 minutes. A lay-flat tube pulled in with the liner connected to the input and output fittings on the boiler. After filling the liner with water and pressurizing it to 14 psi, the men started the boiler, located outside the building.

"By monitoring input and output temperatures, the crew gauged what the liner was doing," says Shortz. "The normal cure time is two hours, but we cured it for seven to eliminate any chance of something going wrong." The men reinstated 12 laterals using proprietary tools.

Fun starts here

Years of pouring x-ray film-developing chemicals down the 180-foot pipe had left it with major cracks, trenching, and missing sections.

"This section was in such bad shape that jetting it could have created enough voids under the hospital floor to collapse it," says Shortz. "We estimated three or four days to clean the line, but it took seven because we worked so slowly."

Once the pipe was cleaned, onethird of its invert was missing, enough for the liner to shoot out a void or snag on a jagged edge. To prevent that, the men pulled back a 1/4-inch cable, fitted a nose cone over a plastic pre-liner from MaxLiner, duct-taped the cone to the cable, and winched the pre-liner into the penetration in nuclear medicine.

"The pre-liner served as a sleeve and guided the felt liner as we inverted it," says Shortz. "Heating the felt fused the plastic liner to it. In both runs, resins from the liner migrated and sealed any spaces between it and the host pipe."

With the pipe rehabilitated, I&I flooded the penetrations faster than the dewatering pumps could keep up. The crew added more pumps before they could reinstate the four laterals and complete the job. "It's amazing what they did and how much money they saved the hospital," says Shortz. "The client was very happy."

MORE INFO:

Engineered Lining Systems

888/384-9549 www.engineeredlining.com

GapVax, Inc.

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MaxLiner, USA

276/656-1225 www.maxlinerusa.com

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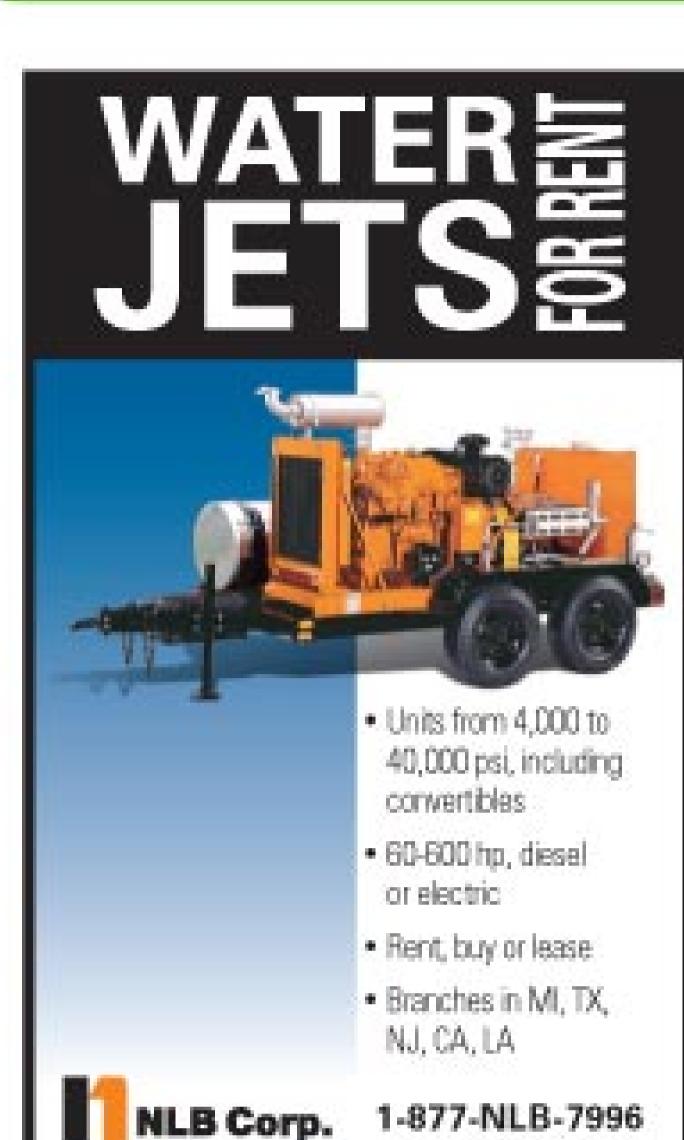
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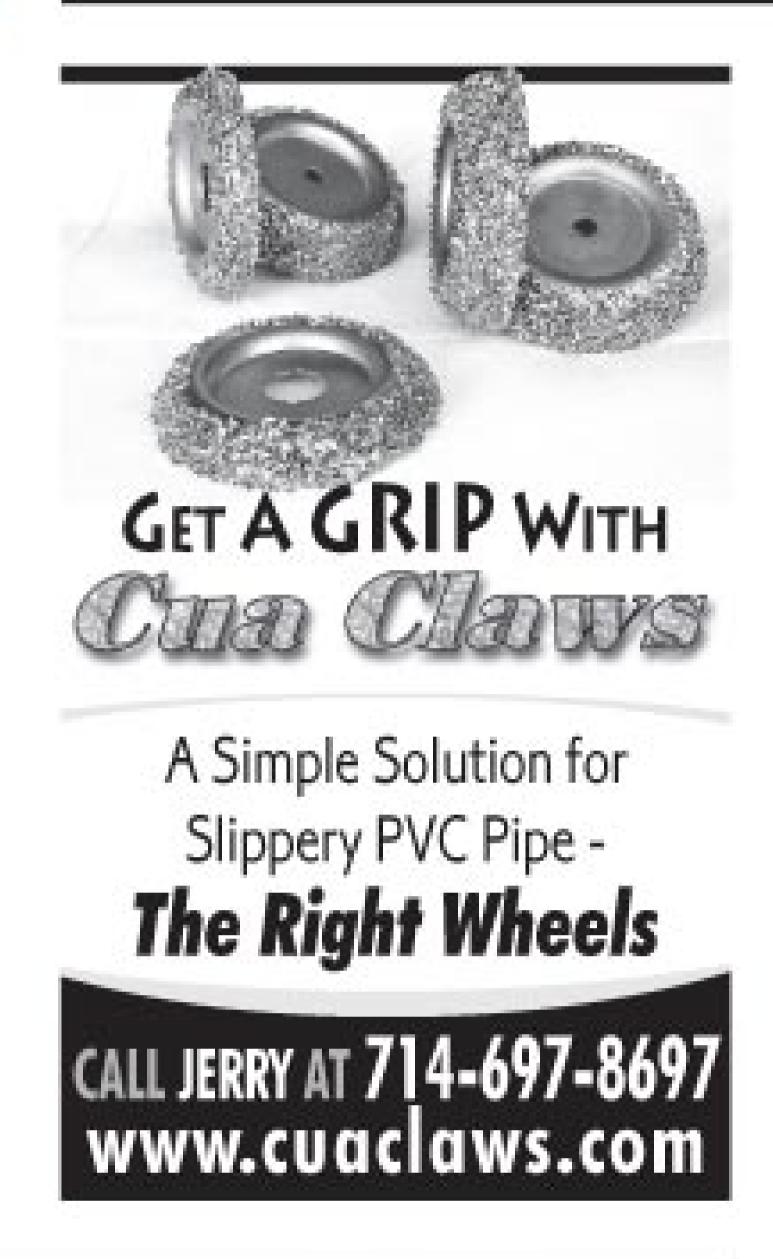
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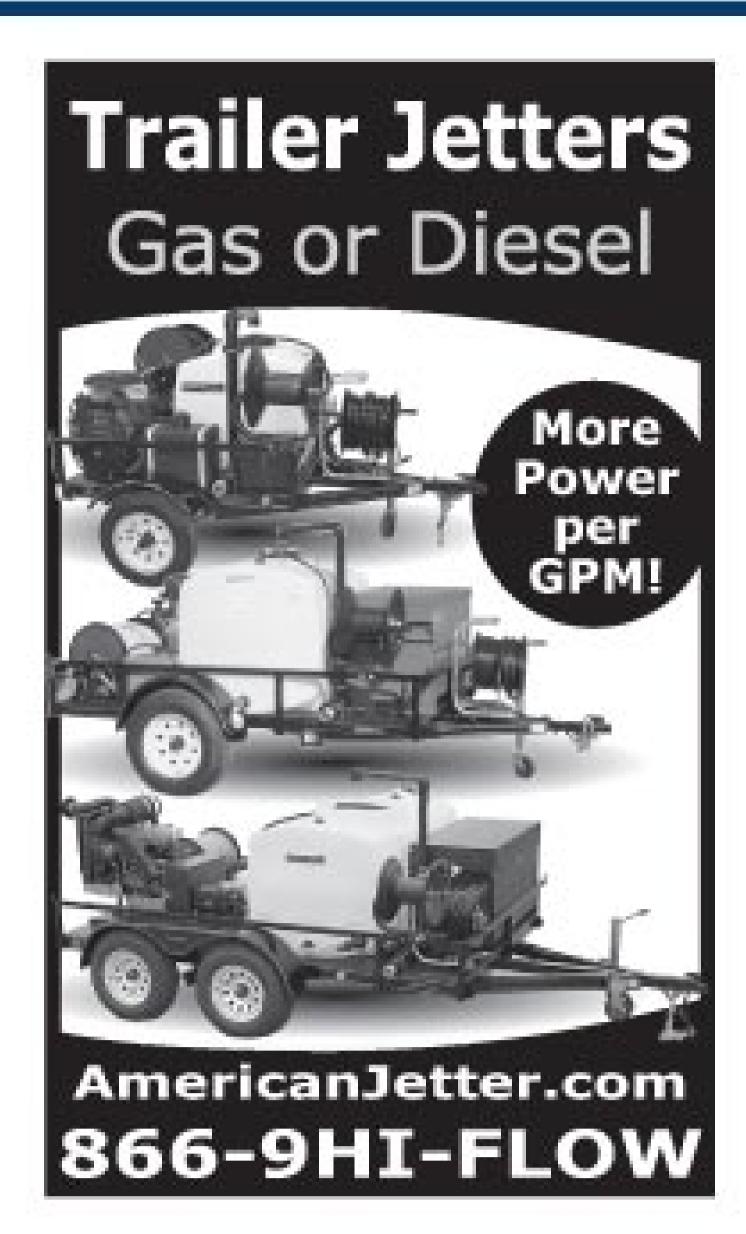


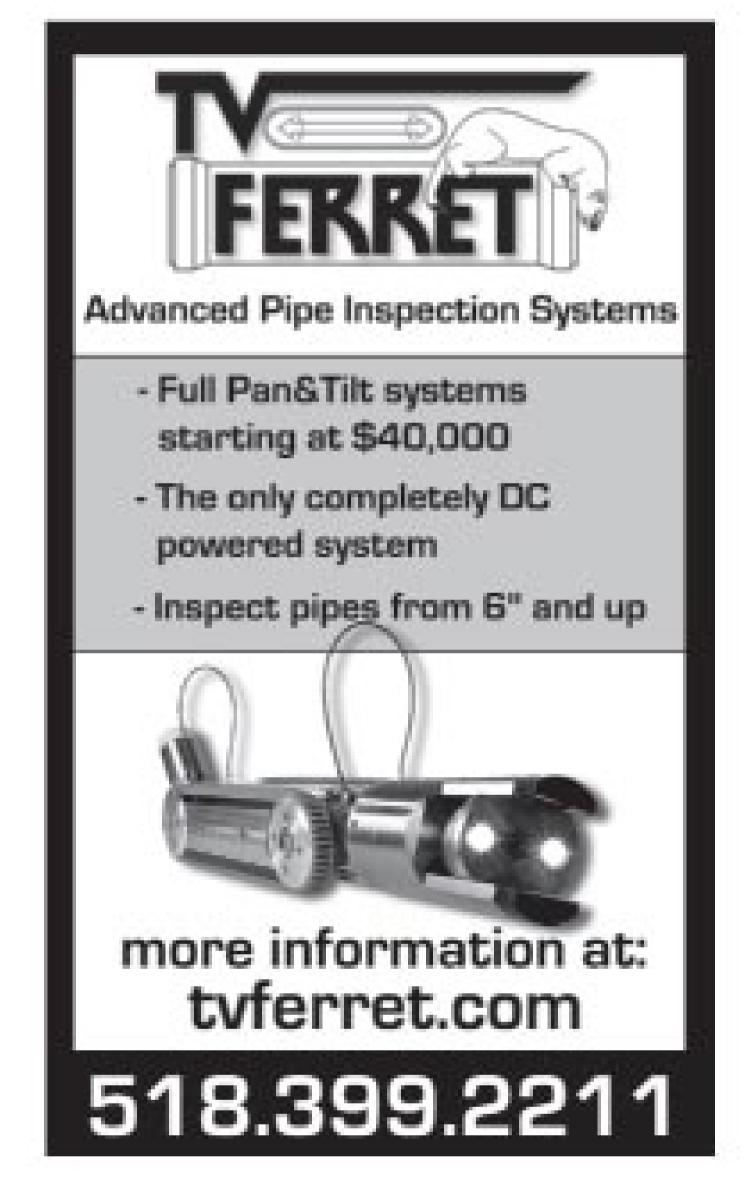


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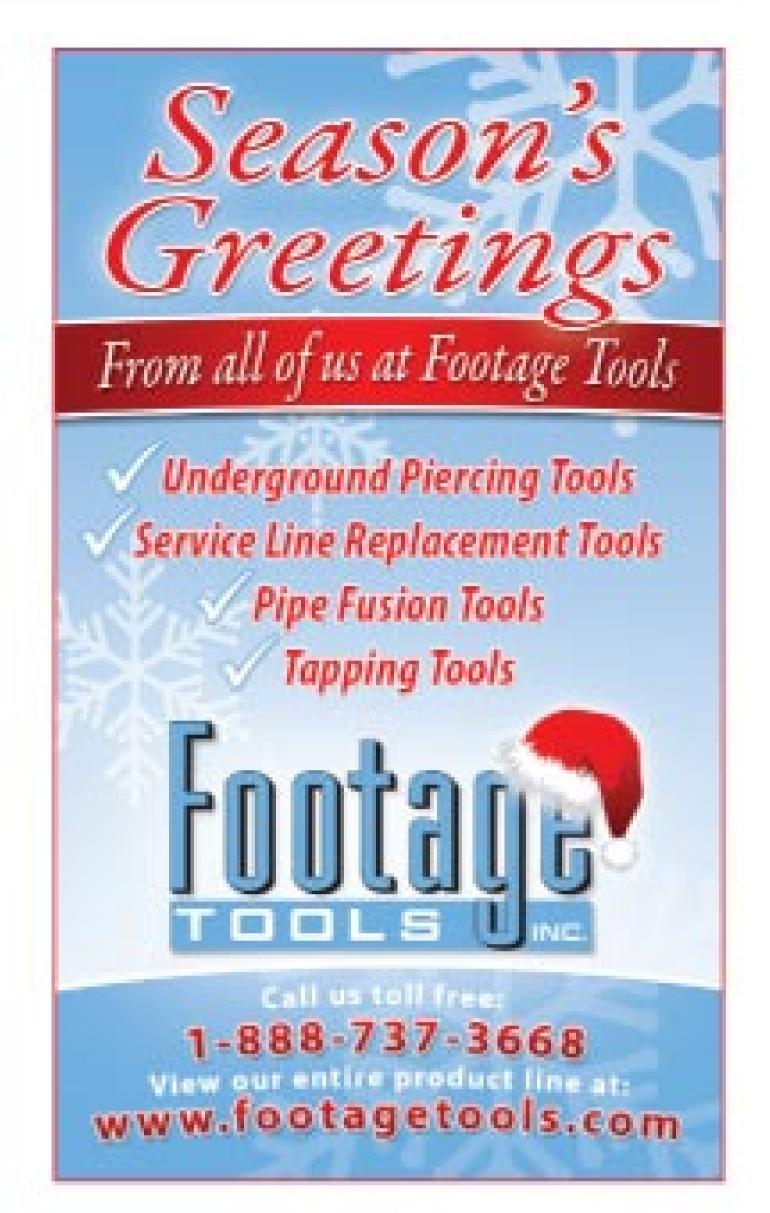
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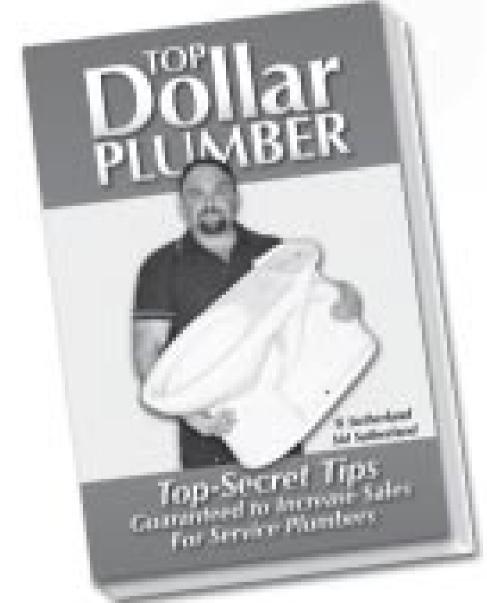








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1990 Camel 200 80 GPM/2000 psi, Roots TS32 blower, mounted on Ford with 240 HP diesel, automatic. Just over 40,000 miles. Municipally owned and in great shape. \$48,000 OBO. Call Jack @ 614-419-4579, see at www.ziamunicipalsupply. com. (CBM)

Vactor 810 parts - Call with needs. 810 extendable boom we built and used for 10 years - easy mount. Myers pump D65-16.717-766-1990 PA. (C12)

2008 Sterling LT7501 with a VacAll AJV1015, 10-yd. debris body, 1500 gal. water, combination vacuum/jetting unit. (Stock #13366) www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).

(C12)

Clean Earth combo truck, mounted on a 1998 Volvo, 10-yd. debris tank, 1500 gal. water tank, 16 inch Roots blower - rebuilt 2010, Cyclone rebuilt 2009, 80 gpm Meyers pump. Truck is in good condition. Please call Bill Kendrick @ 604-341-3497. (CP12)

1997 Camel 200 Triplex 80 GPM pump w/ PD Blower, Behind cab reel mounted on Ford with 275 HP Cummings diesel, Allison automatic transmission. Just over 66,000 miles. One owner and in great shape \$78,000 OBO. Call Jack @ 614-419-4579, see at www.zia municipalsupply.com. (CBM)

JET VACS

SALE! Visit www.ahequipment.com for a wide selection of makes, models and years. We also **BUY** used equipment! (C02)

Jack Doheny Supplies Inc. offers a full range of late model combo units and DOT industrial vacuum loaders. Call us @ 1-800-3DOHENY. (CPBM)

2008 Camel 200 Demo Unit. 80 GPM/2000 psi, Hibon TS32 blower, aux. water, wireless remote & hydroexcavating kit. Mounted on Sterling LT7500 with Cat C9 335 HP. Never titled, just over 10,000 miles. Why pay for new, buy new and save \$80,000. \$235,000. Call Jack @ 614-419-4579, see at www.ziamunicipalsupply.com.

(CBM)

1991 Camel 200, 6-speed, 65 gpm, 2000 psi, Roots 624 blower, tandem axle, ready for work, 169,000 miles, excellent condition. \$28,900. Call 920-655-7302 or 920-866-9109. (CBM)

1998 Vactor 2110 on a Freightliner FL80, 28,213 miles, 2-stage fan, 80 gpm, 2,000 psi pump off system accumulator. Was a city owned unit. Located in Dallas. 972-938-1905. www.empireequip.com. (CPBM)

LEASE/ FINANCING

North Star Commercial Credit:
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Equipment. Flexible purchase programs to fit your budget. 21 yrs. in the
industry. Contact Tom Myers - 877804-2274. (CPBM)

MANHOLE

LIQUIDATING BUSINESS: Steel Manhole forms, various sizes; Asphalt street cutter for frame removal, (skidsteer mount); Holiday Tester; SCBA 30 minute air pack. 660-827-0894 or 660-460-0336 MO. (C12)

MISCELLANEOUS

Pearpoint GatorCam3+ camera, bluetooth, flash drive, recorder, full color, 400 ft, RD4000 locator. New in 2008. Asking \$6,250 OBO. 843-902-9171 SC. (C12)

PARTS & COMPONENTS

US JETTING provides aftermarket rebuilding services and replacement parts for Harben® pumps. Low prices, fast response. Why pay more? Call today. 1-800-538-8464, ext 25 or 18. (CBM)

PIPELINE REHABILITATION

Pipe Lining Trailer for lateral lines and point repairs. Complete with 3' thru 8' point repairs. Ability to perform two point repairs at the same time. Lots of PermaLiner stock materials, including resins. All equipment and trailer like new. Located in Meadville, PA. Total Trailer, Equipment, Materials = \$150,000.814-333-3191. (C12)

2010 UVC Tec ultra violet curing system. 6 - 24" diameters - new system - never used. Mounted in 2006 F450 14' Cube Van, c/w 30 kilowatt generator. PH: 250-962-9382. (C02)

One trade-in model of Pipe Genie heavy duty pipe bursting equipment. Excellent condition, looks new. 30-ton, 100 feet cable, full 2 year warranty. 877-411-7473.

(CBM)

Maxliner Gun complete system except compressor, 4, 6 & 8 rings. 330' 4" thick liner resin & hardner. \$17,500. Brian 901-461-8776 TN.

(C12)

POSITIONS AVAILABLE

Looking for Field Technician/CCTV
Operator for sewer pipe manufacturing/construction company.
Experience in pipeline rehabilitation is a must. Send resume to sachiko.ueno@sekisui-spr.com or fax to 404-856-4004. (C12)

GapVax, Inc. is seeking two highly motivated individuals to fill two full time sales positions in the Southeastern US and Western US. Check details on our website at www.gapvax.com or send resume to betty@gapvax.com. (C01)

Industrial Cleaning Company has immediate opening for experienced sales person for the Northeast Region of Ohio and Pennsylvania. Must have sales experience in Vacuum and Waterblasting of power plants. Please email resumes to vacquallc@att.net.

(C12)

POSITIONS AVAILABLE

Experienced Jet-Vac Truck Operator. Fast growing company looking for Operators Camera and Vac Units. Full-time and part-time positions available (East Coast). Fax work history to Pipeline Investigations, Inc. 410-242-1038 or fleetbarnes@pipelineinvestigations. (C02)

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Since 1943, Spartan Tool has been leading the way in sewer and drain cleaning. We're dedicated to helping our customers work quickly, efficiently and safely. We are seeking territory sales managers who possess good customer relationships, business to business selling skills and understanding of the sewer and drain industry. Our hands on products are marketed to a large customer base, offering repeat sales opportunities. If selected to join our growing sales team, you will benefit from base salary, commissions, great benefits and an opportunity to experience years of strong income and remarkable independence. Interested candidates are asked to forward their resume to Spartan Tool's National Recruiting Director, bkuty@spartan tool.com. (CBM)

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New Commercial Grade Trailer Special - Single axle, hot water trailer unit, 18 HP Vanguard, 5.0 gpm @ 3,000 psi, with 200 gal. water tank, General pump. List \$11,995. Sale only \$8,995. Fully loaded! Ready to clean! 800-624-8186; www.powerlineindustries.com.

(CPBM)

PUMPS

Buy & Sell all makes and models, new & used vacuum pumps & high pressure water pumps, and good used replacement parts. Call for an inventory sheet and save. www.VacuumSalesinc.com, (888) VAC-UNIT (822-8648).

(C12)

RENTAL EQUIPMENT

Liquid vacs, wet/dry industrial vacs, combination jetter/vacs, vacuum street sweeper & catch basin cleaner, truck & trailer mounted jetters. All available for daily, weekly, monthly, and yearly rentals. VSI Rentals, LLC, (888)VAC-UNIT (822-8648) www.vsirentalslic.com. (C12)

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RODDING MACHINES

1990 Ford F450 Rodder, SRECO unit in great operating condition. Must sell. \$5,250. Call Jack @ 614-419-4579 or www.ziamunicipal supply.com. (CBM)

SEPTIC TRUCKS

1998 Mack RD6885 with a 3200 US gallon stainless steel vacuum tank unit. (Stock #6653V) www. VacuumSalesInc.com, (888)VAC-UNIT (822-8648). (C12)

Three (3) 2003 to 2006 3200 US gallon stainless steel vacuum www.VacuumSalesInc. tanks. (888) VAC-UNIT (822com, 8648).

2010 Peterbilt 348s with new Presvac 3600 US gal. aluminum vacuum pressure tanks with Masport HXL400WV vacuum pressure pumps. (Stock #8807 & 8808) www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).

SERVICE/REPAIR

www.servicewithasmile.com Sewer Cam Reel and Camera Repair: Authorized for General Wire, Ratech & Ridgid. Quality service on all brands. Need more info? Give Chuck a call. Electronic Repair Birmingham, AL 35206. 205-836-0454; email: part@service withasmile.com. (CBM)

SERVICE/REPAIR

Sewer Cam Reel, Camera and Locator Repair: 48-hr. turnaround time. General Wire, Ratech, Ridgid, Pearpoint, Electric Eel, Gator Cams, Insight Vision, Vision Intruders. Quality service on all brands. For more info. give Jack a call. Dynamic Cable Repairs, Lodi, NJ 07644. 973-478-0893. (CBM)

TANKS

Three (3) 2003 to 2006 3200 US gallon stainless steel vacuum www.VacuumSalesInc. tanks. (888) VAC-UNIT (822com, 8648). (C12)

TOOLS

T&T Tools: Probes, Hooks, Probes feature steel shafts with threaded and hardened tips. The insulated Mighty Probe™ tested to 50,000 volts. Top Poppers™ open manhole covers easily. Free catalog. www.TandTtools.com. Phone 800-521-6893. (CPBM)

TV INSPECTION

Used and rebuilt color and black & white Ridgid camera SeeSnakes, General, Gen-Eye, Pearpoint. The Cable Center. 1-800-257-7209. (CBM)

2002 Aries Sewer Inspection Camera Mounted in a 1995 Isuzu NPR Box Truck: 104,000 miles, new engine. \$22,000. Call Eric @ 570-336-1088 PA. (CBM)

TV INSPECTION

Cues Single Conductor Plus System, PDR 90, 2 cameras, all or parts, removed from working truck, original owner. Make an offer. 303-277-1112 CO. (C12)

TV Ferret: Complete used, pan & tilt system, 600 ft. cable, 6" crawler. More turn-key systems. Starting at \$20,000. www.tvferret.com. 518-(CBM) 399-2211.

New Top-of-the-line Cyclops Sewer Inspection Van: P&T color camera, HD transporter, 1000' TV/tow cable, front and rear color LCD monitors, 1000 watt inverter, DVD rec/player, powered cable reel w/auto level wind. Dell laptop with PACP certified software. System mounted in good running 2005 Ford E-250. All for only \$61,000. Call Bill @ 830-249-9756. (C12)

Used Aries Saturn III inspection system complete with notebook computer (PipeTech Software) and Mini-Badger camera transporter. Great overall condition including weighted riser bars and assorted pneumatic tires. BRO Please contact for more information. bdavis@esi-team.com. (C12)

Pads and Chain Assemblies: Silicon carbide filled for maximum traction and long life. Single and double hole pads for all makes of tractors. Money back guarantee. Contact Pipe Tool Specialties (503) 1-888-390-6794 or fax 1-888-390-6670. Samples sent upon request. Same day shipping. We are a 6/12 company. (CMBM)

TV INSPECTION

2000 Workhorse FT-1460 Van. Pearpoint Camera. 14,000 miles, Onan Genset 1200 hrs., Pearpoint 420 tractor, 1,000 ft. cable, 599 autodrum, very good condition. \$55,000. Email questions. wesline services@gmail.com. (C12)

VACUUM LOADERS

2011 Peterbilt 365 with a Powervac 3800, 3250 US gallon, carbon steel vacuum tanker with a Hibon PD blower 3800 SCFM with vacuum to 27" mercury. Dump type, DOT 407 /412 regulations. (Stock #13434) www.VacuumSalesInc.com, (888) VAC-UNIT (822-8648).

1992 Vac-Con; Ford LNT 8000 (tandem axle); Allison automatic transmission MT653; 12-cubic-yard debris body; 6' telescoping boom; 3-stage centrifugal compressor; 80 GPM water pump (new '08). 487-(CP12) 902-6162 FL.

2008 Demo Internationals 7600 with a Guzzler Ace XXS4118TS wet/dry industrial vacuum loaders, 18-yd. debris body, dump-type, carbon steel vacuum tanks. Demo/ Rental unit. (Stock #'s 4400V & 4401V) www.VacuumSalesInc. com, (888) VAC-UNIT (822-8648). (C12)

1999 International with a Guzzler Ace 27" HG wet/dry industrial vacuum tank loader. Demo/Rental (Stock #7390) www. VacuumSalesInc.com, (888)VAC-UNIT (822-8648).

VACUUM LOADERS

1997 Guzzler Model XS4816TC Industrial Vacuum Loader, mounted on Ford L9000, 1024 Roots blower with boom, very nice condition. \$65,000.503-931-6026.

WANTED

WANTED!!!!! US Jetters/any jetter, Spartan machines, GatorCam push cameras, Spartan equipment. WORKING OR DEAD. Your trash is our treasure! Call Brad - 231-218-(C12)

WANTED: We buy sewer trucks. Any year, any condition. Results immediately. 915-239-2266 or mmachinerymexico@gmail.com. (CBM)

Wanted: ARIES Saturn III pan and tilt LED camera (camera only). Saturn III portable control box (control box only). Call 800-797-7473; email: fleetbarnes@aol.com. (C01)

Very serious and well qualified buyer looking for sewer, septic or industrial business in Dallas, Texas area. Must be grossing between \$500,000-\$1,000,000. All inquiries are kept confidential. Call Jeff at 800-257-7222. (CBM)

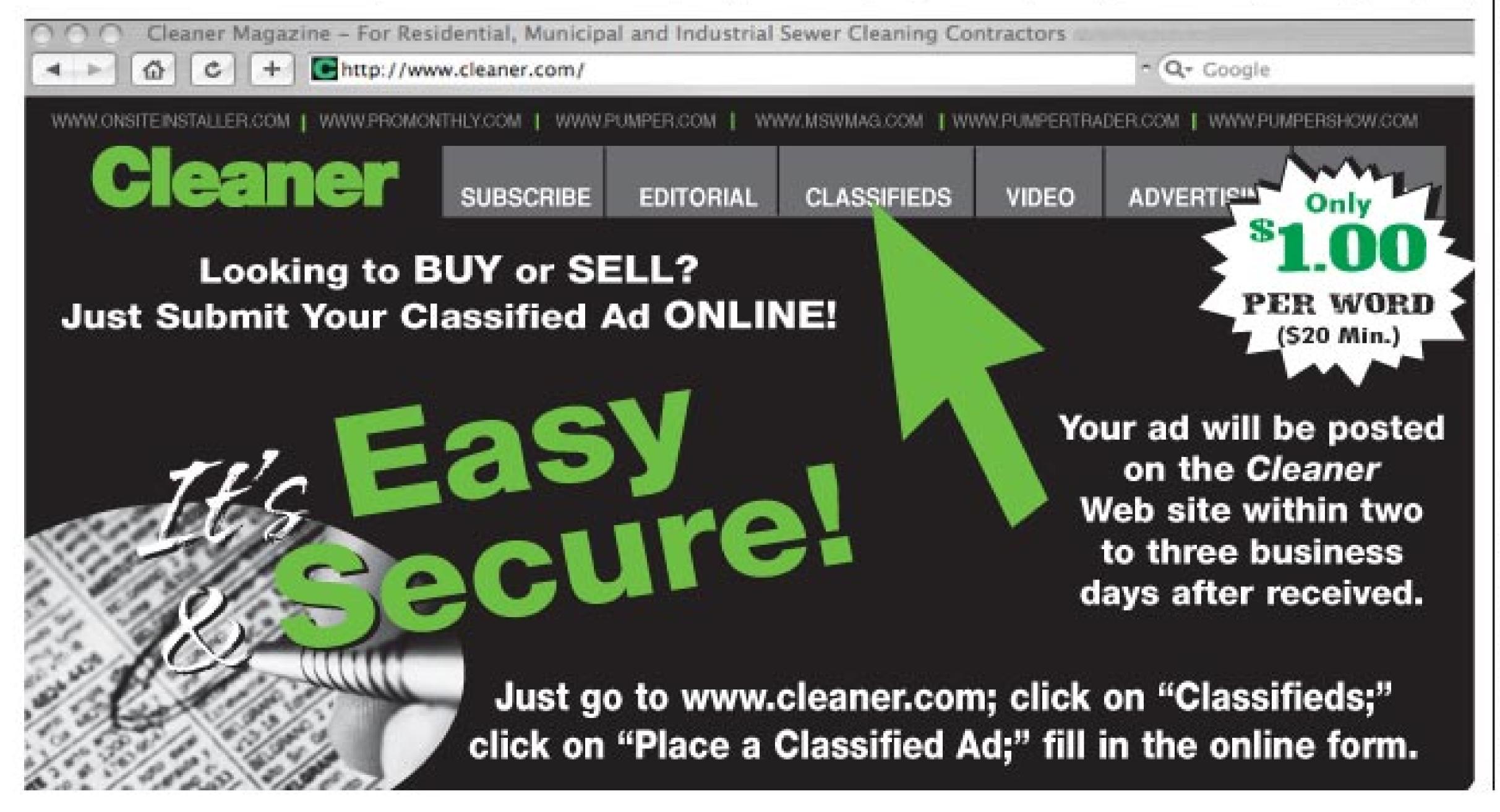
Wanted to Buy: Vactor 2100's and late model Guzzlers. Cash. 800-336-4369. (CPBM)

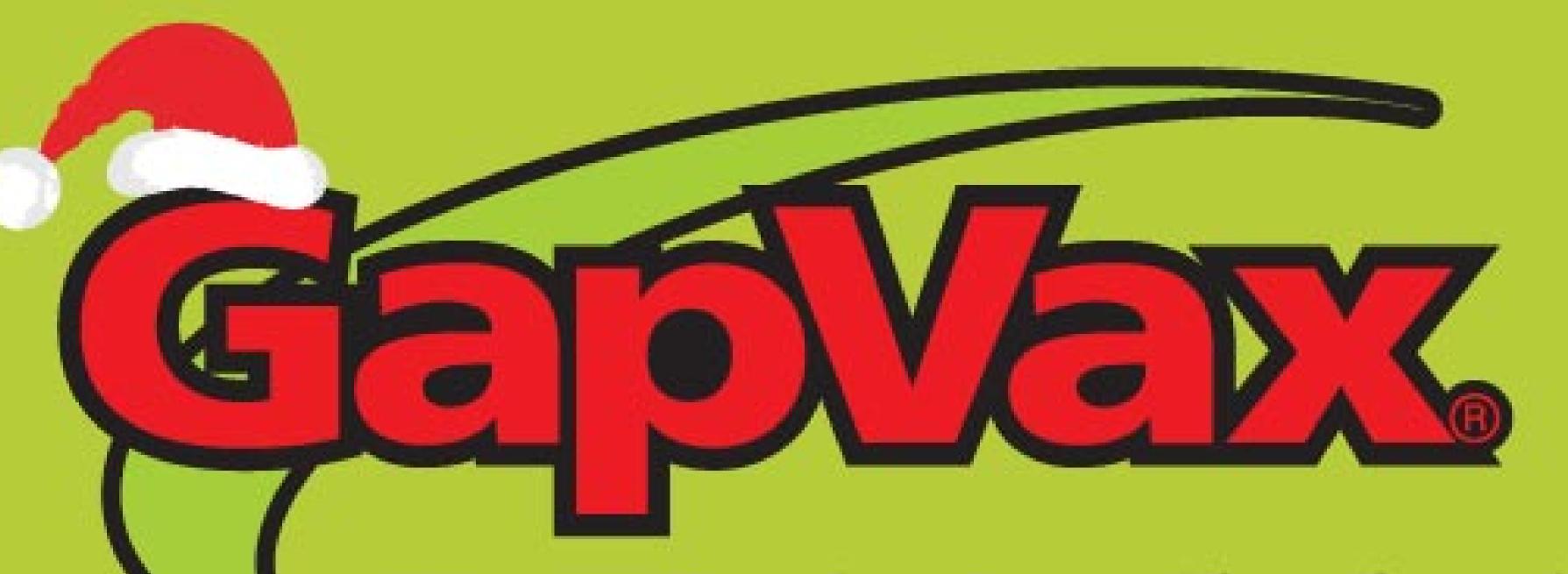
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40,000 PSI sapphire nozzles, UHP hoses & replacement parts. Excellent quality & prices. 772-286-1218; info@alljetting.com; www.all (CBM) jetting.com.

Gardner Denver T-450M w/Series 40 Detroit 10K 39GPM. Jetstream 4215 w/ Cummins 10K @ 39GPM. Gardner Denver TX-450SB w/V12-71 Detroit 10K @ 70GPM. Denver T-450 w/ Jetstream fluid end transmission 10K @ 40GPM. THE-500UH 50K bareshaft pump. NLB 10-600 104GPM. Cummins 10K @ Boatman Ind. 713-641-6006. View @ www.boatman ind.com. (CPBM)

2003 Aqua Miser Ultra Boss E-75, 1292 hours, looks brand new. Stationary, electric motor driven, 75 HP, 40,000 psi, 3-gallons per minute, 480 volt, 3-phase, 200 amp, remote start/stop pump control. New cost \$60,000. Comes with new, never used rebuilt rotary gun which is said to cost \$4,500, and misc. parts for the pump. MAKE AN OFFER. 231-218-6066 Brad. (C12)





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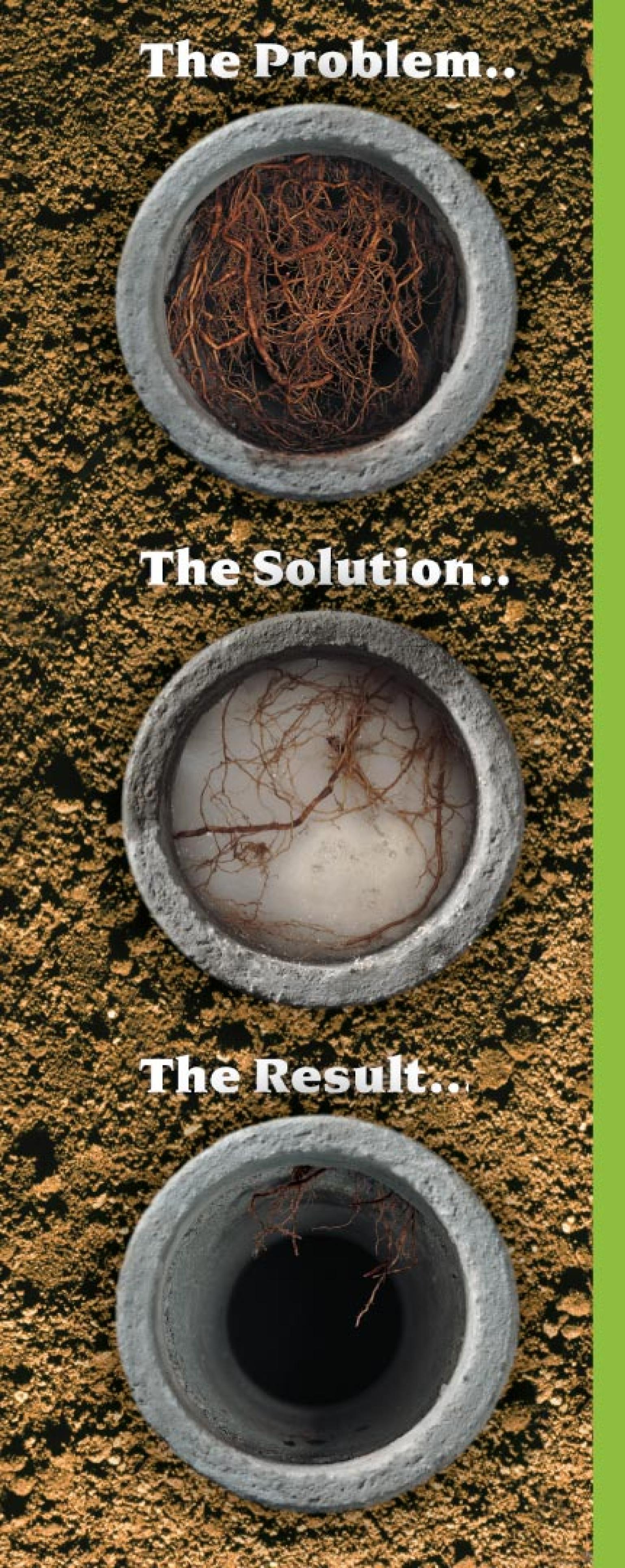




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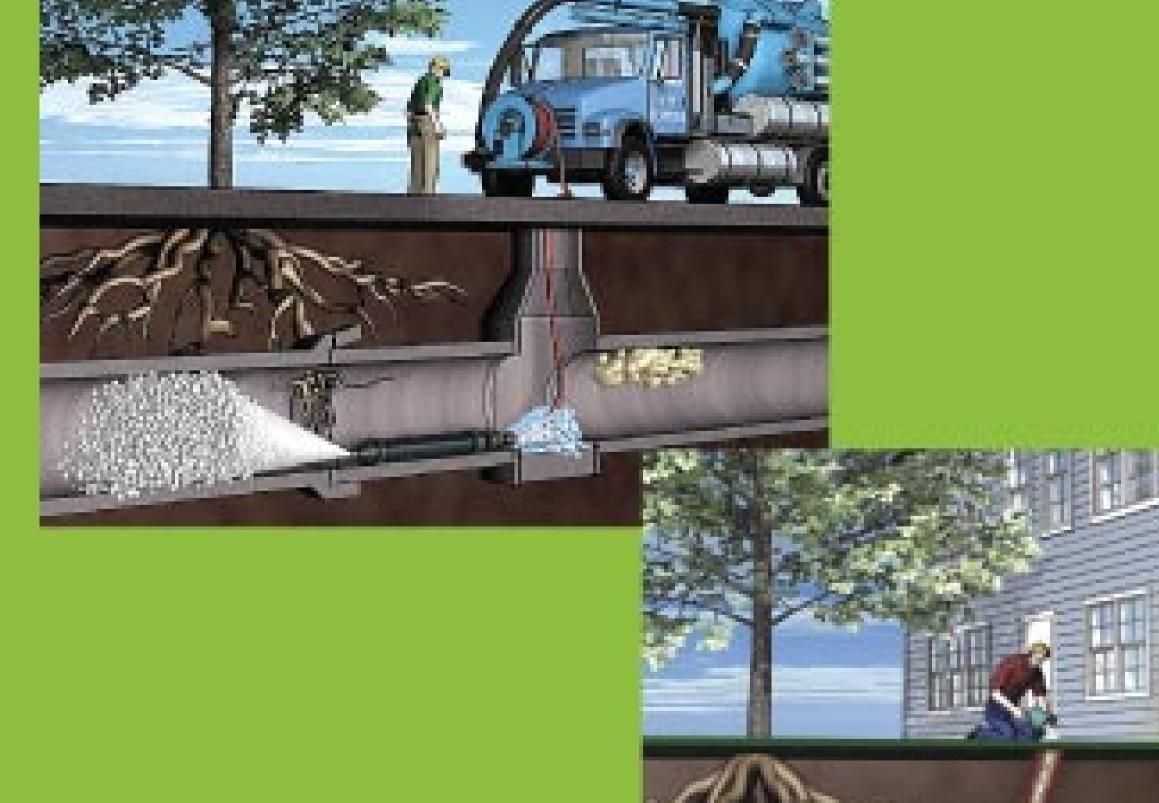
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