

Options Open

Pipe bursting and CIPP lining technologies give Miksis Services a large arsenal of trenchless tools with which to build business in northern California

By **Scottie Dayton**

The company's motto, "I Shall Fear No Sewer," has propelled Miksis Services Inc. (MSI) of Healdsburg, Calif., into many places no other contractor wished to go. Using tenacity and ingenuity, owner Gary Miksis, 55, and crew tackle challenging projects almost daily. They can cite a long history of firsts.

Miksis opened his industrial cleaning company in 1981. Cleaning industrial and municipal pipes, vaults, manholes, tanks and ponds evolved into sectional point repairs, then manhole-to-manhole fold-and-form PVC-alloy lining, custom-sized cured-in-place felt liners, pipe bursting and leak locating.

The small but mighty company developed such a reputation for professionalism and innovation that the U.S. Department of the Navy recognized and commended those traits in 1995 after MSI completed an eight-year contract. Entering his 28th year in business, Miksis is content, having found the secret to success in a sound night's sleep.

Tipping point

MSI operates throughout northern California, and many major

customers are vineyards. The high-strength winery wastewater (called lees) corrodes the 4-, 5- and 6-inch cast-iron drains, mostly running inside processing plants. "Lining small-diameter pipe is far more diffi-

cult than lining large-diameter," says Miksis. "Once we proved ourselves, word-of-mouth among vineyard owners brought lots of work."

Miksis uses MaxLiner CIPP felt liners because they are custom designed and withstand the lees' temperature, almost 180 degrees F. However, crews kept hitting speed



A Miksis Services worker makes a confined-space entry down a manhole to prepare a pipe-bursting pull. (Photo courtesy of Miksis Services Inc.)

bumps when short sections of pipe needed bursting. Other contractors were unwilling to pull men off a

pipe left to rehabilitate. Only the rubber in the no-hub connectors remained at the joints, and that protruded into the line, impeding the camera's progress. After lining the other drains, Miksis went to the Pumper & Cleaner Expo, where he met Gerry Robinson of Pipe Genie in Vancouver, British Columbia.

"I've used cables for 20 years to clean and pull, and I know what their failure is," says Miksis. "Gerry's static bursting machine had a chain and was easy to modify, and replacement parts are available at any supply store." Miksis bought a 40-ton unit, capable of upsizing to 8 inches, and Robinson agreed to supervise the job.

The real thing

Back at the winery, the crew couldn't pass a tagline through the blocked 5-inch drain pipe, so Miksis fetched his empty soft drink bottle, tied a nylon line around it, and blew it through with an air compressor at the upstream manhole and a Vactor truck at the downstream end generating 27 inches Hg vacuum.

"The bottle works slick because it rattles up the vacuum hose, telling you when to shut off the machine," says Miksis. "We attached the cable

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Gary Miksis

major job to help Miksis, or were plumbers with bursting units limited to 4-inch pipe. "My customers were unhappy, preferring to deal with one contractor who provided a total package," he says.

The day of reckoning happened in early 2006. Miksis won a bid to line drain pipes at a winery without knowing the condition of a 5-inch, 230-foot-long line running to a lift station. The pipe passed under high-voltage lines in a 12-foot-deep trench and couldn't be excavated. "All those pipes had limited access, and my video technician, Steve Miksis, couldn't get a push camera through this one," says Miksis. MSI uses cameras from RS Technical Services Inc.

After installing manholes, the inspection revealed a 45-degree bend in a nasty spot and hardly any

P R O F I L E

MIKSIS SERVICES INC., HEALDSBURG, CALIF.

OWNER: Gary Miksis

FOUNDED: 1981

EMPLOYEES: 15

SERVICE AREA: Northern California

SPECIALTIES: Trenchless rehabilitation of pipelines and manholes

WEB SITE: www.unplugu.com



to the nylon line and winched that through, then pulled the chain.” Robinson orchestrated the difficult pull and burst the pipe in four hours.

Pipe bursting opened a new world for Miksis and completed the company’s trenchless solutions package. “We’re not as nervous pipe bursting as we are shooting CIPP liners,” he says. “The HDPE pipe is already round, and it’s okay to destroy the host pipe. A failure with cured-in-place is ugly. It doesn’t pull

sewer pipe for the city of Belvedere, Calif. The pipe had a slight offset and a rough interior. Saltwater engulfing the outfall at high tide had eroded most of that end.

MSI planned to pull 140 feet of 14-inch HDPE pipe from Belvedere Bay to a drop inlet in the street. Concerned that his hydraulic winch might lack sufficient power, Miksis turned to the static bursting machine.

The compact unit wasn’t small enough to fit inside the 15- by 21-

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Troubleshooter

The bursting system has rescued Miksis more than once. A recent example involved downsizing 131 feet of decomposing, half-submerged, 15-inch corrugated metal

inch drop inlet, so Miksis modified it in his shop. “The machine is versatile and often eliminates the need to excavate pulling pits, which are enormous advantages,” he says. “When done, we burned everything off the Pipe Genie and welded the other parts back on.”

Feeding the 5/8-inch chain off a small boat without capsizing was the

STAIR MASTER

The toughest pipe-bursting job for Miksis Services Inc. involved replacing a 4-inch clay line buried under a 300-foot-long antique concrete staircase with an 18 percent grade. Six homes, one at the top of the hill, flanked the stairs. A one-lane road at the bottom of the hill was the only access.

“We couldn’t use any vehicles, and we carried everything up the stairs by hand,” says owner Gary Miksis. “The city didn’t want to replace them, and CIPP was out of the question because the liner would fall into the major voids under the staircase.”

The sanitary district first removed the appropriate stairs to cut back the laterals so the bursting head wouldn’t fracture them or dislodge joints. Using hand trucks, the MSI crew hauled the static bursting machine from Pipe Genie up the staircase.

They moved the 5/8-inch chain in 50- and 100-foot lengths. “That was our most labor-intensive task,” says Miksis. “The guys were really panting.” Pulling the chain through the pipe took 2 1/2 hours because it kept falling into the voids. “Huge rats lived in them, too,” says Miksis. “Roots were another problem.”

The burst, from the top of the hill to the cleanout down at the curb, took six hours, partly because tight quarters kept the men from welding the 4-inch HDPE pipe in lengths longer than 80 feet.

“We heaved the stairway in some places, but considered ourselves lucky when we cut the last reinstatement hole for the laterals,” says Miksis. “I can’t imagine those people carrying everything they need up and down those steps.”

crew’s first challenge. Each 100-foot length weighed 514 pounds. The next obstacle was not damaging the moored boats as they pulled the chain through the line with the

winch. After fusing the 40-foot sections of HDPE pipe on a 6-foot-wide pier, the men sealed the pipe ends with 12- to 15-inch pigs from Plug It Products. With the utmost caution to avoid sinking the pipe, they floated it into Belvedere Bay using the boat.

“The tide was going out, increasing the difficulty of the pull, but the Pipe Genie had the power to prevent us from getting stuck,” says Miksis. “If a company has just one element of pipeline rehab, it can’t cross over and form solutions using other technologies. For example, we used the boiler from the Ultraliner system to retract a 4-inch CIPP liner when it twisted in a clay pipe.” The boiler produces 250-degree F steam, and the resin softened at 220 degrees.

Gary Miksis (left) and Sal Galindo spread neopoxy over a sheet of fiberglass that will be used as a cured-in-place repair patch. (Photo by Chad Surmick)





Steve Miksis, left, and Sal Galindo carry an Omni Eye-2 camera from RS Technical Services Inc. while preparing to send it into a sewer line. (Photo by Chad Surmick)

Business sense

Such versatility enables MSI to bid jobs in which municipalities offer contractors the options of lining or pipe bursting.

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which method or combination of methods will work best."

Although cross-trained, MSI employees are divided into two for pipe bursting, seven for rodding laterals. Three more work in the office. "We're small enough that everybody is on the same wavelength," says Miksis. "I want to keep the company this size so I can sleep at night. I've been bigger. It's ugly."

Competition in pipe bursting is

Storm of perfection

Miksis credits his good fortune to his blackest moment. When a municipality rezoned his business and mandated \$400,000 in improvements, he didn't have enough equity in the property to get a loan. The city red-tagged the building.

"It was a hardship for two years," says Miksis. "The property was in escrow 12 times because the city had encumbered it with curb, gutter, sidewalk, storm drain and

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ruthless, creating the biggest challenge for MSI – warding off rumors that the company can't do what it advertises. Miksis retaliates by giving free demonstrations and revealing unscrupulous contractors.

In one case, a federal invitation to line 300 feet of pipe involved a mandatory job walk (only contractors who see the job are allowed to bid). Inspecting the pipe was part of the contract. After the other companies left, Steve Miksis offered to televise the line and found the problem in a lateral. "Some contractor had recommended lining, thinking the Feds would hire his company," says Miksis. MSI dug up the lateral and repaired it for 10 percent of the price.

underground utilities improvements. When I finally sold it and bought this one-acre lot, everything

exchanged and I didn't have to pay capital gains. The new location is near a freeway on/off ramp, and I'm two minutes from home. I keep pinching myself because I can't believe everything worked out so well."

In 2007, Miksis bought a Fell 21 high-performance water leak correlator from Metrotech Corp. in Santa Clara, Calif., and he is giving demonstrations to municipalities. "Nobody around here knows the equipment exists," he says. "It's opened another new door for us."

Being the first to embrace new technology has helped MSI stay ahead of the pack. By keeping growth of the business within his capacity to maintain control, Miksis faces his daily challenges – content and fully rested from a sound night's sleep. ■

MORE INFO :

Metrotech Corp.

800/446-3392

www.metrotech.com

PipeGenie

877/411-PIPE

www.pipegenie.com

Plug-It Products

209/334-4904

www.plugitproducts.com

RS Technical Services Inc.

707/778-1974

www.rstechserv.com

Vactor

815/672-3171

www.vactor.com



Sal Galindo prepares an Omni Eye-2 camera for a trip through a sewer in Belvedere, Calif. (Photo by Chad Surmick)



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