End is near for a platform when steel cutter arrives

By Ford Gunter

This story profiles one of the Offshore Technology Conference’s Spotlight on New Technology Award winners.

The 3,000 or so platforms in the relatively shallow waters of the Gulf of Mexico shelf are anchored in place by pipes driven 300 feet into the seabed. When production ends, federal regulations spell out in detail how these platforms are to be dismantled, and one of the tasks is sawing off these anchor pipes, or caissons, 15 feet below the mudline.

“Tha’s a problem when you’ve nailed these things down and you’ve got to cut these steel pipes,” said Jon Khachaturian, president of Versabar, a company that has now nabbed four OTC Spotlight on New Technology awards since 2007.

The latest winner, for 2015, is called the VersaCutter: Invented by Khachaturian himself, it’s billed as a safer, more efficient and more environmentally friendly way to cut through those pipes, replacing mechanical cutters or explosives, the latter of which wasn’t exactly friendly to marine life.

The VersaCutter drives steel spears into the ground using high-pressure water jets shooting out the tips. A cutting wire armed with tungsten carbide blades connects the two spears, sawing the whole way down.

“It looks like a cheese cutter,” Khachaturian said.

Traditionally these cutting operations also involve divers, especially if the caissons or drill strings, which also need cutting, are filled with concrete.

“It’s weeks, or even months, of diving that’s gone,” Khachaturian said. “We can do the job in a couple of days. The other stuff works well and it’s fairly reliable, but this really solves that concrete-in-the-way problem.”

This is especially invaluable considering the weather offshore often delays longer jobs.

“If it’s a two-month job, you’re going to have weather issues,” Khachaturian said.

Khachaturian got the inspiration for the VersaCutter in the salvage industry, where it is common to use chain cutters on wrecks, albeit in an upward motion.

He estimates that his tool can be used on more than half the platforms on the Gulf shelf. Its main limitations are pipe size and water depth, which currently cannot exceed 150 feet. The prototype cut through a 60-inch caisson and the internal and external drill string — which usually takes two different kinds of mechanical cutters — in 10 hours.

“That’s fast,” Khachaturian said.

Ford Gunter is a freelance writer.