

Large Rig Market Speeds Ahead

by Robert Carpenter, Editor

In the late 90s, the fast and furious fiber backbone build-out forever changed the underground construction industry. The cutthroat race to install fiber trunk lines across America resulted in a construction boom like the industry had never known, and made horizontal directional drilling a staple in the utility contractor's toolbox.

HDD, primarily small rigs, was the perfect technology at the right time.

Of course, the inevitable bust that started in late 2000 forced manufacturers to radically cut back their operations and forced some to leave the business. It is also credited with sending as many as 30 percent of the HDD contractors to bankruptcy court. Still, the HDD industry survived, continued to evolve and today is a proven technology for an increasingly wide variety of applications. Even more importantly, for a growing number of utility contractors, HDD has become so commonplace that they "don't leave home without it."

Today, the industry is again seeing a boom – but at the opposite end of the spectrum. Large rig (with a minimum of 100,000 pounds of pullback force) contractors, are seeing unprecedented demand for their services. Driving the market is the frantic construction of energy transmission pipelines across North America – and even the world.

This interesting market dynamic is reflected in the results of *Underground Construction's* exclusive 10th Annual HDD survey. Conducted in April and May, contractors and utilities actively involved in HDD operations were queried about the status of the market, trends and concerns. Utilities continue to be a major factor in the HDD market with almost 20 percent of this year's respondents being utility owners/operators.

It's no wonder then, that as the pipeline market started booming, large HDD contractors would be very much involved. The problem, much like the pipeline contractors themselves, is that there is a shortage of equipment and manpower to meet the exploding workloads. To put the market in perspective, in 2007 there were approximately 29 major pipeline spreads constructed in the U.S. The ensuing mad scramble by construction groups eventually mustered up the equipment and manpower to complete the jobs – barely. Now, in 2008, an estimated 57 major spreads are scheduled to be constructed. The scramble is on again to find resources to complete these projects.

It is not unusual for pipeline companies to negotiate with large HDD contractors for contracts one, two, even three years out. Pipelines are concerned that if the current frenzied construction pace continues for much longer, large HDD contractors won't be available to handle their projects in the future.

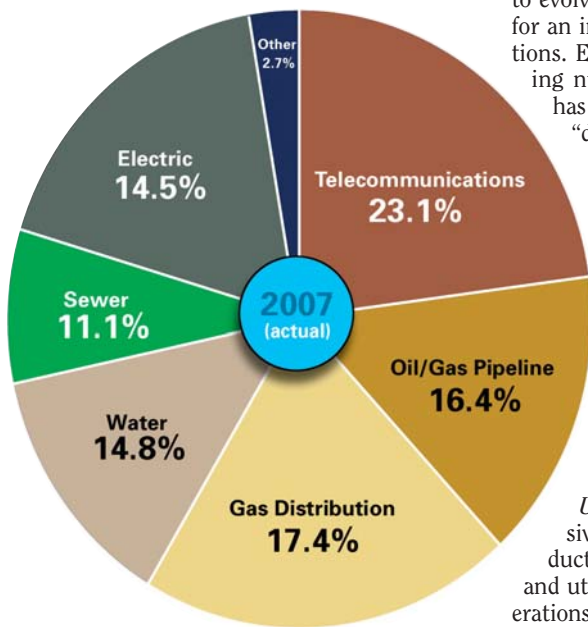
However, unlike the telecommunications boom, the pipeline construction explosion is not a friendly market for rapid increases in the number of players. Back in the 90s, the standard tongue-in-cheek statement was that if you had \$5,000, a used truck and an interest in getting into the HDD market, somebody would finance you. Telecom owning companies were not too particular about construction qualifications when it came to getting their fiber installed quickly.

Even with the pressing demands of rapid pipeline expansion, this remains a much different market. Because it is a small industry in terms of numbers of participants, pipeline companies tend to know the majority of the contractors and their work performance records.

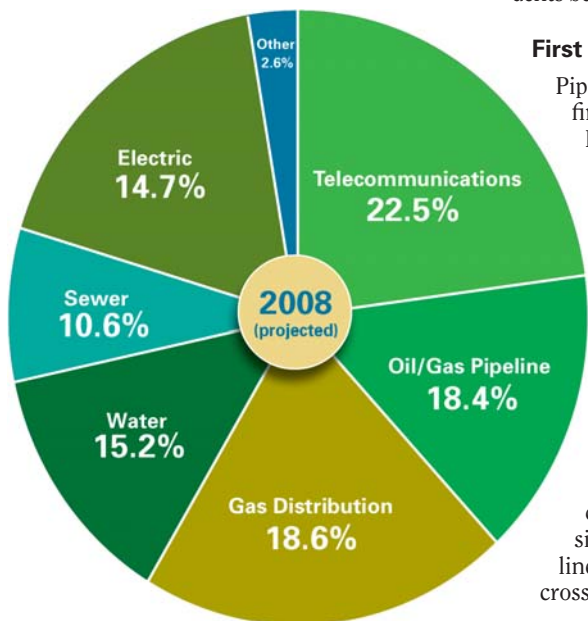
And perhaps the most important deterrent for jumping into the large rig market is that it takes a heck of a lot more money than \$5,000. To fully outfit a large rig can run into the millions. The operations and skill sets needed to successfully run a large rig are much different and more complex than small rigs. The rewards are great but the risks are high – even in a boom market.

Impact

Even with smaller numbers in terms of participants, the large rig market is making a significant impact on the overall HDD market in terms of market share and ancillary equipment, mud and pipe consumption,



Primary HDD Markets



First in

Pipeline companies were among the first to fully embrace the potential of HDD. A large part of that acceptance was due to the groundwork laid by a now defunct association, the Directional Crossing Contractors Association (DCCA). One of the primary functions of the group was to educate their pipeline clients as to the advantages and practicality of utilizing HDD for long distances and large diameter installations. The DCCA was very effective in encouraging the use of HDD to this finite, yet high-dollar, market niche. Now, HDD is considered an integral part of any significant pipeline project. Pipeline engineers typically factor in HDD crossings routinely in project design.

HDD Survey

etc. Of course, the value of large HDD project contracts (especially through rock or difficult soils) are astronomical compared to small jobs such as fiber-to-the-premises deployments. Large HDD contracts frequently run into the millions while smaller rig work relies upon volume and speed for profitability. In 2007, about 6 percent of the contractors reported gross revenues over \$20 million; 27 percent reported HDD income of less than \$500,000; 28.1 percent had volumes between \$500,000 and \$1 million; 20.9 percent had projects ranging from \$1 million to \$5 million; and 18 percent performed work valued between \$5 million and \$20 million.

Despite the growth of the large HDD business, it still represents only 18.6 percent of total market contract activity and 8.4 percent of all rig numbers. Though the numbers are showing a steady shift towards mid-sized and large rigs, smaller HDD units (under 50,000 pounds of pullback) continue to dominate the market place with their increasingly diverse applications. These rigs have a 67 percent market share, down from 74.9 percent a year ago. Mid-sized rigs (50,000 to <100,000 pounds of pullback) increased its market share to 24.6 percent.

“As the public and property owners become more aware of directional drilling, their demand for its use will increase the HDD portion of the underground market,” predicted a Southeast contractor. A mid-South contractor agreed. “Utilities are seeing the advantage of drilling.” A Northeast contractor observed that “with customer relations becoming more of a factor, HDD will only increase.”

Other contractors around the country report positive vibes as well. “We see HDD growing in the water and sewer markets,” said a mountain states contractor. “We specifically ask utilities to use directional drilling more and more on their projects,”

reported a contractor from the Pacific Northwest. “Always improving and growing,” added a Northeast contractor.

To back up this optimism for the future of HDD, survey respondents, including a sizable number of utility HDD rig owner/operators, believe that almost 40 percent of their total utility construction work will be installed via HDD in 2008, with that number increasing to over 50 percent within five years.

Market pie

The size of the HDD market “pie” continues to expand on an annual basis. The overall market share by speciality showed some change in this year’s survey. Though still by far the largest market segment, telecommunications installation continues to decrease in size as other niches gain market share. Telecom is projected to have a 22.5 percent market share compared to 23.1 percent in 2007.

Gas distribution had the next highest market share with 18.5 percent, up from 17.4 percent. The biggest statistical jump (though still small relative to the overall size of the market) was, not unexpectedly, the oil/gas transmission pipeline category which jumped from 16.4 percent in 2007 to a projected 18.4 percent in 2008.

Another minor surprise was that water installation via HDD climbed past electric. Water is projected to have a 15.2 market share in 2008 with electric coming in at a 14.7 percent share. Clearly, the water infrastructure is continuing to receive more – and much needed – attention. However, electric remains strong and, with a growing consensus that placing power cables underground is worth any extra expense, it quite possibly will regain market share in the near future.

With a projected flat spending year for sewer construction, plus time-consuming

methods required to bore on-grade, the sewer market share fell from 11.1 to 10.6. Speciality niches continue to be developed by enterprising contractors and are estimated to comprise 2.6 percent of the market.

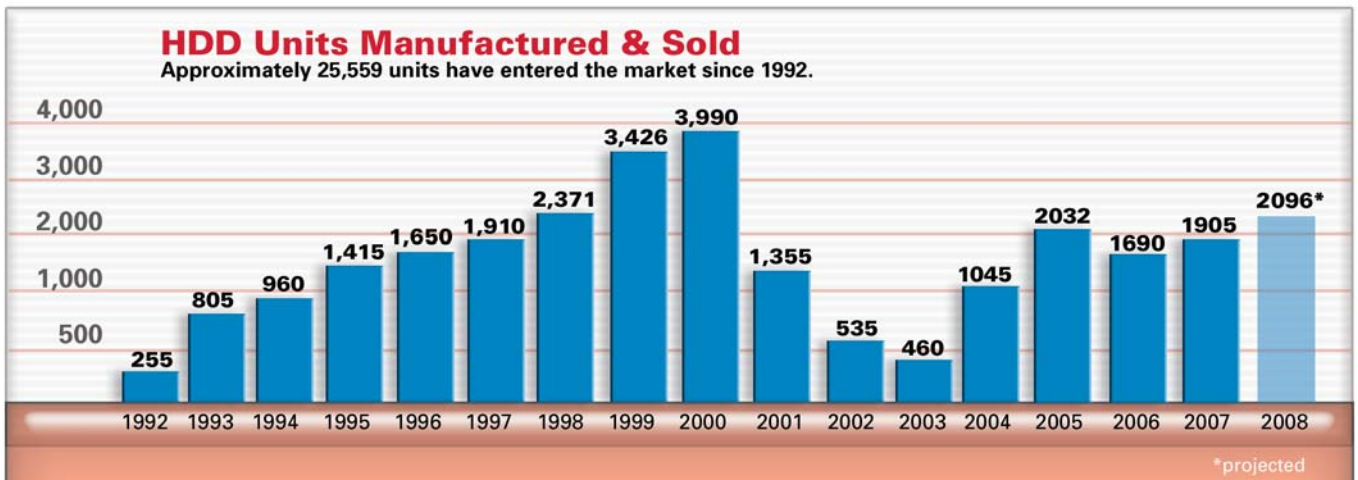
The HDD depression from 2001 through 2005 provided an opportunity for the used rig market to prosper and, even as new rig sales have climbed back to sustainable levels, the used rig market is now firmly established. Over 57 percent of survey respondents report that they have purchased used rigs and, of those who haven’t, 45.9 percent say they will seriously consider a used rig for their next purchase.

The total rig production for 2007 was 1,905 and is projected to be about 2,096 in 2008. As mentioned earlier, new rig levels have stabilized somewhat with the world economy. Obviously, China is a hot spot with an estimated 600 rigs purchased in 2007, mostly smaller rigs. The two largest U.S. rig manufacturers, Vermeer Corporation and The Charles Machine Works, both have established a strong presence in the China/Asia region.

Getting younger

The age of the HDD fleet is actually getting younger. Many rigs were lost after 2001 due to neglect as over-extended owners couldn’t afford to maintain their equipment. Hundreds of rigs sat rusting on bank repossession lots. Plus, improvements in system electronics have advanced substantially in recent years, pushing older rigs to near obsolescence as they are not nearly as efficient as their modern-day counterparts. Consequently, rigs over 10-years-old are becoming rarer, down to only about 7.1 percent of active rigs today.

Starting in 2005, market conditions were rebounding and, for the first time in several years, contractors could afford to invest in replacement equipment. As a result, 56.6 percent of the HDD fleet is under five years



HDD Survey

of age.

Along with the increase in activity for large rigs on major pipeline projects, the average bore length for big equipment has increased as well, from 1,590 feet a year ago to an estimated 2,106 feet today. The average bore length for mid-sized rigs actually decreased from 864.7 to 813 feet, while small rigs drilled further at 548 feet, up from 352.6.

Challenges, concerns

The survey respondents had an abundance of issues and concerns, many of which were simply new verses of the same old song. However, concern over drilling through unmarked laterals on city right-of-ways – commonly called crossbores – was at the top of the list for contractors. “If underground strikes remain at their current incident rate or go higher, you could see a turn away from HDD usage,” cautioned a Texas contractor.

So-called “cowboy” contractors – those poorly trained, ill-equipped or careless in their drilling – drew several concerned comments. “Contractors that are not trained properly are causing problems for all,” observed a California contractor. A Florida respondent pointed out that “poor past performances by contractors and damages on jobs,” represents a major industry challenge. Another contractor from the Midwest claimed that there are “just too many low quality contractors.”

Prices continue to be a hot spot as well. Underbidding was singled out by several respondents as representing a significant industry problem. “People are just not charging enough for their services” lamented a Southeast contractor. A mid-South respondent complained that too many “drillers don’t know their actual costs.” An East Coast respondent was concerned about “customers not realizing what it costs to send the crew out for the day.” On the bright side, a Midwest contractor pointed out that “prices are coming back – hope they continue!”

Several contractors commented that the availability of labor continues to be an issue along with the need to better educate the public to the benefits of HDD. This Midwestern respondent summed up market issues by stressing their biggest concerns were “safety, on-time completions and qualified personnel.”

One Mountain states respondent had an interesting observation. He cited his biggest challenge as “people that don’t know how to bore and salesmen that think they know how to bore.” ■

