

SPOTLIGHT ON WIRE SAWING



A mega concrete core is removed during a wire sawing demonstration at World of Concrete.

Team CSDA a Big Hit at WOC Mega Demo

The Concrete Sawing and Drilling Association sponsored a wire sawing demonstration as part of the World of Concrete Mega Demos on February 19, 2004. The demonstration was part of the Demolition Derby and featured "Team CSDA," a group of CSDA contractors and manufacturers who demonstrated how wire sawing can be used to cut perfect large-scale holes in concrete walls of any size.

Wire saws are extremely versatile and appropriate for a wide variety of applications, but for this demonstration a wire saw was used to cut a 6-foot-diameter circle in a wall measuring 8-feet-square by 2-

feet-thick. A wire saw consists of a multi-strand cable with diamond segments that is threaded through a series of pulleys. The pulleys are attached to a hydraulic-powered drive wheel that continuously pulls the wire through the concrete. The spinning wire and the constant pulling force cuts a path through the concrete.

To cut the large-scale hole using a wire saw, Team CSDA first drilled access holes to attach the wire saw assembly and the saw's rotating arm. The access holes were drilled on opposite sides of the circle's circumference, near the 3:00 and 9:00 points on the circle. To perform the actual cutting, operators rotated the wire saw mechanism 180 degrees. When the

cutting was complete, operators removed the wire saw mechanism and used a forklift to remove the massive concrete section. The entire process took approximately 12 hours over the course of three days. The Mega Demo audience saw Team CSDA drill the center, 3:00 and 9:00 holes. On day two, the wire saw was mounted and cutting operations began. For the Demolition Derby on day three, the final cut was completed and the 6-foot-diameter by 2-foot-thick core was removed with a forklift.

“Holding the demonstration at WOC allowed a large audience to see the capabilities of wire sawing firsthand,” said Team CSDA Captain Tim Beckman of Cutting Edge Services in Cincinnati, Ohio, who organized the demonstration. “The precision and unlimited cutting depth achieved with wire sawing makes it the best solution for a wide range of jobs, including cutting large-diameter holes or ‘circles.’” Wire sawing is also ideal for removing large sections of heavily reinforced concrete such as piers, towers and bridge sections and for cutting in areas where workspace is restricted.

CSDA manufacturer members exhibiting at the World of Concrete assisted in the wire sawing demonstration. ICS, Blount Inc. supplied a wet vac and drum vac to help control slurry produced during the cutting process. Diamond Products core drilled the holes necessary to set up the wire saw.

About 1,500 spectators watched the demonstration from bleachers and many more spectators lined the demonstration area. For more information about wire sawing or the wire sawing demonstration, contact CSDA at 727-577-5004 or info@csda.org. ■



Top: Team CSDA ready to complete the 6-foot-diameter circle cut.
Bottom: The wire saw completes the final cut to free the 6-foot-diameter core.