Louisiana Tech University
Trenchless Technology Center Newsletter
June 2006

NASTT Student Chapter Trenchless Technology Field Day

Everything was set for a series of outdoor demonstrations of trenchless technology as part of the NASTT Student Chapter's Trenchless Field Day — everything except the weather that is. Continuing the experience of a wet spring in northern Louisiana, the skies opened on Saturday, May 6, forcing a cancellation of the planned manhole rehabilitation and other activities. Alane Boyd, chairman of the AGC student chapter and officer of the NASTT Student Chapter, was the principal organizer of the event and had been able to arrange several demonstrations and presentations as part of the field day activities. The main activity was planned to be a manhole rehabilitation demonstration using a CIPP manhole rehabilitation system from Terre Hill Composites of Ephrata, Pa., with the installation being performed by Suncoast Environmental from Jackson, Miss. Other planned demonstrations were a conventional impact moling demonstration by the student team working to develop a steerable impact mole with the Gas Technology Institute and TT Technologies, a vacuum excavation demonstration by a utility crew from the City of Ruston, La., and a pipe/liner cross-section deformation measuring system under development by Andy Dettmer and Mikey Swanbom, Ph.D. students at TTC.

Rain fell on the NASTT Student Chapter's Trenchless Field Day.

Taking advantage of his visit, Bill Oberti from Terre Hill was invited to give a class presentation on manhole rehabilitation on May 5 to the undergraduate and graduate trenchless technology classes being taught in the spring quarter by Erez Allouche and Ray Sterling, respectively. It was also a homecoming for James Chaisson of Suncoast, who graduated from Louisiana Tech in construction engineering technology and was a former chairman of the NASTT Student Chapter.

On the day itself, the crews and the students showed up but the heavy rain both on the day and in previous days made the conditions for manhole lining undesirable – both due to potential problems with the site wet out of the liner and the need to hold a pressure on the liner while curing for longer than normal due to high groundwater levels. After scanning the skies and weather radar for about an hour after the planned start time, the field activities were reluctantly called off – but not before Oberti and Chaisson took the chance to at least run the students again through the steps involved in the field procedures for the rehabilitation.

Many thanks to Oberti, Chaisson, Mike Smith of Paradise Eco Solutions, Troy Whitman and Richard Aillet from the City of Ruston, the student research teams and, of course, Alane Boyd.

Class Visits to Trenchless Technology Manufacturers Masterliner and Amitech USA

The last day of classes for the quarter and the academic year — not the best day to organize a field trip for the students in the trenchless technology classes offered this spring but, in terms of finding a clear day when most students could get out of other class commitments and would be done with studying for exams, it proved to be the most attractive day to go and see firsthand how some trenchless technology products are made.

Sixteen students and three faculty joined the excursion, which combined visits to the Masterliner facility in Hammond, La., and the Amitech USA manufacturing plant in Zachary, La.

After more than a four-hour drive from Ruston, the group arrived at Masterliner and was met by Dwayne Rovira, president, Ed Trahan, vice president and Norman Flattmann, plant manager. Masterliner manufactures a range of cured-in-place (CIP) liner products for sewers and lateral connections and the Hammond facility is the headquarters for its operations worldwide. The group received an excellent tour of the liner fabrication and wet-out facilities, as well as the opportunity to view several videos and presentations regarding the design and installation of Masterliner liner systems. Several students commented how helpful it was to be able to see firsthand how the liners were prepared and wet out and to be able to ask questions to complete that understanding with the physical facilities in front of them. Supply and handling of the raw materials, quality control of the fabrication process and storage and transportation processes for the liners were key aspects of the presentations and questions asked. Following the tour and Q&A session, Masterliner provided a crawfish boil for lunch – always a big hit for Louisiana students.

Students visited the Masterliner facility in Hammond, La.

The students during their visit to Amitech USA in Zachary, La.

One more hour's driving and the group arrived at the Amitech USA plant, where it was met by Maciej Korbasiewicz, president, Gerhard Lang, managing director, Amiantit Meyer Polycrete, and Amy Ewing, executive assistant for Amitech USA. Two principal products are manufactured at the plant – polymer concrete pipe that provides a high jacking capacity and excellent corrosion resistance for trenchless and open-cut application and a glass fiber reinforced resin pipe for pressure pipe applications that is principally used in open-cut applications. The plant was completed less than four years ago and the students were able to observe two completely different approaches to pipe manufacture – a casting process for the polymer concrete pipe and a continuous pipe section build up for the fiberglass pipe. Again, it is not easy to describe such processes and to convey the scales involved in building a large diameter pipe without an in-person visit. The ability to meet key engineering design and construction concerns with special pipe manufacturing arrangements were key aspects of the presentations and visual understanding made possible.

After the visit, the group was sent on its way by Amitech with a bag meal for the ride home and about four hours later arrived back in Ruston at the end of a tiring but rewarding day. Many thanks to Masterliner and Amitech for opening up their plants to the students and taking the time to give them a tour and answer all the questions. Thanks also to Amitech for their support of the transportation costs for the students.

New Members

The TTC is pleased to welcome Terre Hill Composites as a TTC sponsor for 2006. Terre Hill Composites is division of Terre Hill Concrete Products Inc., a company founded in 1919 and is headquartered in Lancaster County, Pa. The Composites Division of Terre Hill Concrete Products produces a cured-in-place liner for manholes and other underground structures of a variety of shapes and sizes.

Update on National Trenchless Technology Research Facility

At the time of writing of this newsletter, TTC is waiting expectantly and somewhat fearfully for the bid opening on June 6 for the construction of its new facility. Despite the recent significant increases in construction prices, TTC hopes to be able to proceed quickly with the expected seven-month construction process on the new building. It is not too late to be memorialized with a plaque in the new building and to help a good cause. Please contact Ray Sterling if you are interested in contributing to the effort. More than $500,000 has been raised so far from the trenchless technology industry!

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