

Hourglass shaped timber piles prior to installation of repair system.



Repaired timber piles with the SeaShield Series 400 system.



Compression testing of timber piles.

Project Data

Location	Louisiana Tech University - Ruston, LA
Project Type	Test Program for Rehabilitation of Deteriorated Timber Piles Using the SeaShield Series 400 System
SeaShield™ Series 400 System Includes	SeaShield Fiber Form Jackets, SeaShield 510 UW Grout and C-Grid® 450 Carbon Fiber Grid

2017 Timber Piles Tested in Axial Compressive Load

Test Setup: Five each 8" diameter x 4 ft. long timber piles with fiberglass reinforced jackets, grout and carbon fiber grid. To simulate deterioration, five of the piles had a hourglass-shaped varying depth cut into them at mid-span. There were two more piles that were used as baseline controls, one specimen was a plain timber pile with no repairs and the other had a hourglass-shaped cut into them at mid-span with no repairs. The repairs were installed 8" above and below the hourglass area. The objective was to evaluate the behavior of the mid section repair of a deteriorated timber pile and quantify the additional axial compressive strength from the repairs vs. the baseline control specimens.

Results: The results of showed that the repair will increase the axial capacity of the damaged pile from 198% to 483%. The ratios between the peak loads of repaired piles and undamaged pile varied from 1.03 to 1.22, which means that the repair not only restores the original axial capacity of the pile but also enhances it by 3% to 22%.

Please contact Denso for a copy of the complete Louisiana Tech Independent Test Report. All Testing & Results by: Fatmir Menkulasi & Hadi Baghi - Louisiana Tech University - Ruston, LA

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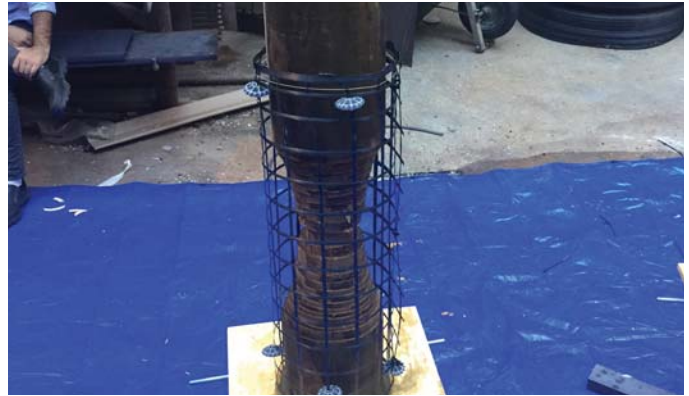
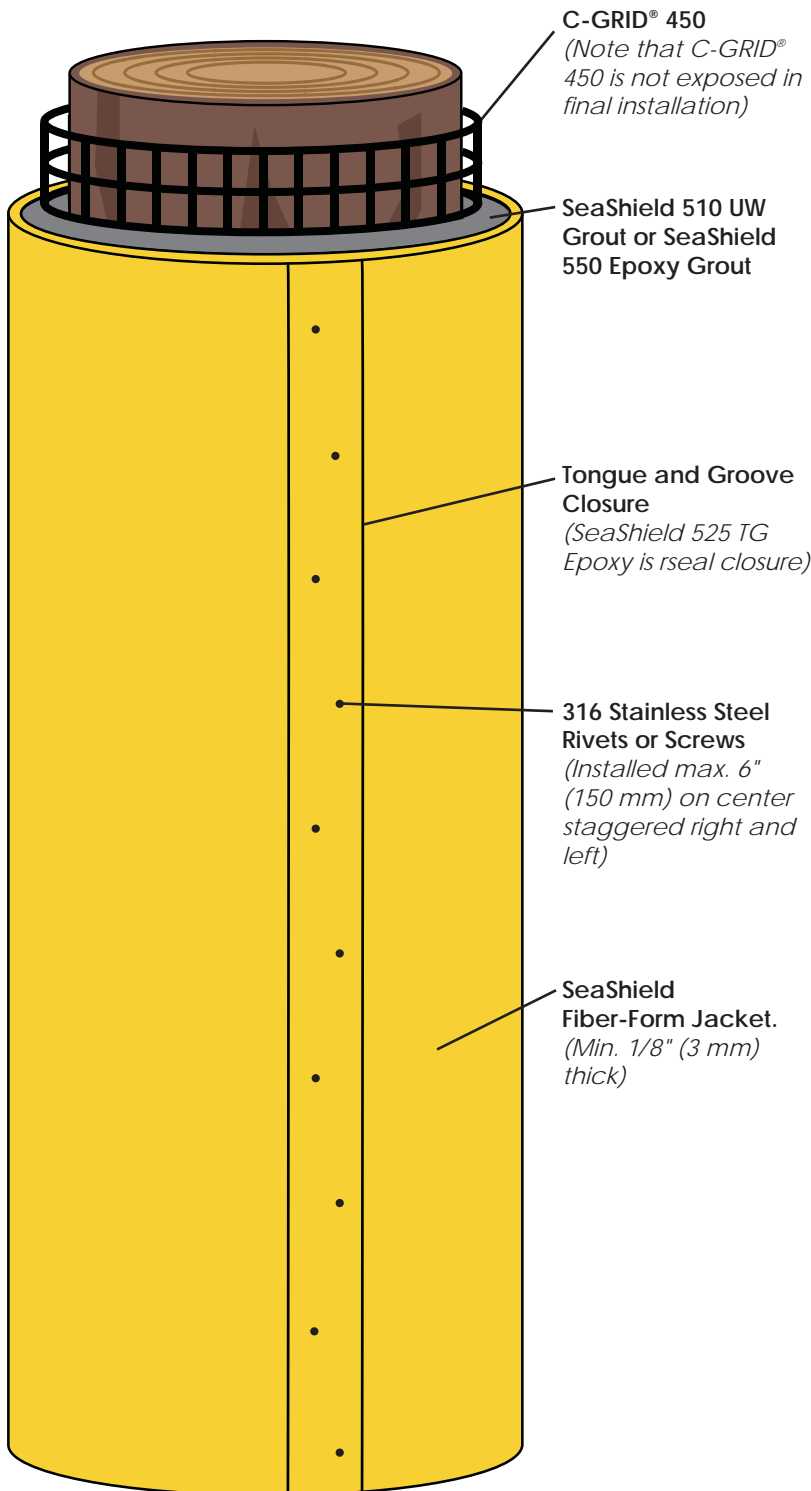
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SeaShield Series 400

Structural repair system that doubles the strength of the original timber pile

A revolutionary encapsulation system that not only protects timber piles from aggressive saltwater environments and marine borers, but also strengthens deteriorated piles with a durable, lightweight and non-corrosive reinforcement.



Hourglass shaped timber pile setup with the SeaShield C-Grid® 450, the first step installation with the SeaShield Series 400 Sya



The SeaShield C-Grid® 450 with spacers that provides strength to timber piles prior to the SeaShield grout being poured.



Completed SeaShield Series 400 System with freshly poured SeaShield 510 UW Grout protecting and strengthening a timber pile.



SeaShield Series 400 System repair not only restores the original axial capacity of the pile but also enhances it by 3% to 22%.