

L.B. Foster Company Provides Steel Sheet Piles Used In OPEN CELL™ Structures

L.B. Foster was selected to supply PS 31 flat web sheet pile used to construct 43 OPEN CELL structures for this project. The OPEN CELL design was determined to be the most cost-effective solution to construct a bulkhead for the LNG docking facility. The initial rolling began in July 2006 at the then Chaparral Steel (now Gerdau) plant in Midlothian, TX. Gerdau is L.B. Foster's strategic supply partner for steel sheet piling. The 69-foot face sheets used in the construction were transported to Houston, transloaded and sent to a Houston-based coater. They were then transported via truck to the Sabine Pass jobsite. The tail wall sheets — in 77- to 80-foot lengths — had to be shipped via rail to a public port near the jobsite, transloaded and then barged down the Sabine River to the jobsite. Construction began in the spring of 2007 and was completed by the end of the year. In all, the 43 individual OPEN CELL structures required over 4,300 tons of PS 31 flat web steel sheet pile.



Ground level view of OPEN CELL structures

OPEN CELL Bulkheads

OPEN CELL bulkheads are used primarily in docks and similar marine structures. The bulkheads are simple to construct, often resulting in shortened construction time frames, and by design, they eliminate the need for labor-intensive tie backs consisting of walers, tie rods and deadmen, as well as related issues of backfill settlement often associated with these tied-back designs. The OPEN CELL bulkhead can also serve as a temporary excavation support that would enable the contractor to eliminate the need for walers, as well as internal bracing resulting in an easily accessible excavation in addition to potential time and cost savings. L.B.



LNG Tanker docking at Cheniere Terminal

Foster's strategic alliances with PND Engineers, Inc., who currently holds two U.S. patents for the OPEN CELL technology as the designer, and Gerdau, who manufactures the Flat Web Sheets which the designs utilize, ensure cost-effective design as well as timely supply of the OPEN CELL system.

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