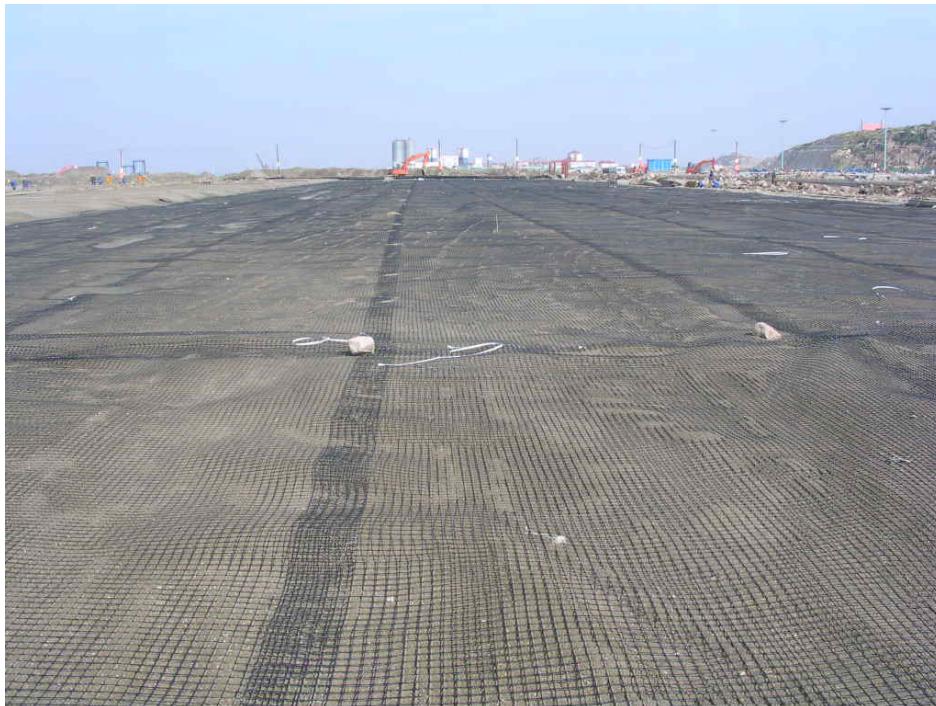




Case Study

Phase II, Yangshan Deepwater Port, Shanghai International Shipping Centre

Structure Type: Geogrid-reinforced foundation for new Container yard	
Project Investor Shanghai Tongshen Investment (Group) Co., Ltd.	
Project Location: Yangshan Deepwater Port South of Shanghai	Construction Company Shanghai Harbour Engineering Company
Type & Quantity of BOSTD Geogrids used: BIAXIAL GEOGRID EG3030 : 400,000m ²	Project Start Date: June 2005
	Project Completion Date: September 2007



Background

The **Yangshan Deep-Water Port** (洋山深水港) is a new port in Hangzhou Bay south of Shanghai. Built to circumvent growth limitations for the Port of Shanghai as a result of shallow waters, it allows berths with depths of up to 15 metres to be built, and is capable of handling the largest container ships today. The port achieves this by building on the offshore islands of Greater and Lesser Yangshan (part of the Zhoushan archipelago), which have been amalgamated by land reclamation and connected to the mainland via the Donghai Bridge, which was opened on 1 December 2005 as the third-longest bridge in the world at 32.5 km in length.

Project Description:

Phase II was built partly on reclaimed land to provide 4 berths for the largest container ships currently in use or planned, with 15 quay-side cranes. Total project area was 72 Hectares.

In areas where roads and the container yard were built on softer ground reinforcement by EG 3030 Geogrid from BOSTD was used to control differential settlement. Within the thickness of the foundation 3 layers of geogrid were installed.

Construction started in June 2005 and by the end of December 2006 it was in use. Final approval and acceptance was in September 2007

Outcome:

This port expansion has now been in use for 3 years, providing much-needed capacity to ease congestion in Shanghai port. The geogrid-reinforced parts are performing to expectations with no significant differential settlement