

Project

LNG offshore mooring structure, Tanjung Priok, Jakarta, Indonesia

Golar is one of the world's largest independent owners and operators of LNG carriers. In addition our client developed the world's first Floating Storage and Regasification Unit (FSRU) projects based on the conversion of existing LNG carriers.

The mooring that BAM has constructed outside Tanjung Priok, Jakarta, is suitable for the permanent berthing of an FSRU and the delivering LNG carriers which will be moored alongside the FSRU. The FSRU receives LNG offshore from the LNG carriers, which is then transported to shore through pipelines.



Location	Tanjung Priok, Jakarta, Indonesia
Client	Golar LNG Energy and affiliates, ultimate client: Nusantara Regas
Contractor	BAM Indonesia
Contract period	June 2011 - December 2011
Contract sum	€16 million

'A project with off-the-scale dimensions.'

Large scale structure

The basic concept behind the project looks simple enough: fabricate the piles and build the topsides, then take them on a barge to site and put them into place. The twist: dimensions were slightly off the regular scale. Each pile is 60 metres long with a diameter of 4.5 metres and weighs up to 325 ton.

Assembly in fast lane precision yard

The project's design, the fabrication of the piles and the top sides were carried out almost simultaneously. The piles were being assembled together in a fast lane precision yard near Singapore. Assembly of the piles took place in three stages:

First steel plates ranging from 30 to 60 millimeter were rolled into cans. These were then spliced inside a workshop until their combined weight reached the maximum the workshop's gantry crane could lift.

60-metres long piles were driven to a depth of 40 metres.



The FRSU in position at the mooring structure.



These sections were then transported outside, where they were joined under two bigger gantry cranes. Finally, the lifting of the full length piles on self-propelled modular units (SPMT's), required the combined use of the two gantry cranes and a 250 ton crawler crane.

Transport and driving of the piles

At the quay wall, the 800 ton crane barge loaded the 10 piles on its deck and transported the piles to the site, 15 kilometers off the coast of Jakarta. There the crane barge, specially equipped with a 800-ton ringer crane and a 110-ton piling hammer, drove the piles to a depth of 40 meters. The nine topsides, ranging in weight from 18 to 125 ton, were fabricated near Singapore as well and were transported to site on separate barges.

Offshore installation of the offloading platform on two monopiles.

