

Oryx petroleum jetty, Freetown, Sierra Leone

Engineering, procurement and construction (EPC) of a petroleum jetty at the Kissy Oil Terminal of Freetown in Sierra Leone. The new jetty provides a key fuel import facility for the country and a modern export base for ethanol.

The jetty comprises a 240 meters steel trestle on steel piles, including a concrete abutment and loading platform of 12 x 25 meters, four mooring dolphins, two breasting dolphins, a fender rack and connecting catwalks.

This was the third project executed by BAM and Stefanutti Stocks in Sierra Leone. As part of the ongoing rehabilitation of African Minerals Ltd's loading facility for iron ore in Pepel, near Freetown, the joint venture completed a new jetty and renovated and extended an existing jetty. In addition, a string of navigation aids were placed along the Sierra Leone river, to facilitate ship movements by day and by night.



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| Location | Freetown, Sierra Leone |
| Client | PetroJetty Ltd (part of the Addax & Oryx Group) |
| Contractor | BAM International in joint venture with Stefanutti Stocks |
| Contract type | Design & Construct |
| Contract period | 2014 - 2015 |
| Contract sum | €26 million |

*'A key import and export facility
for Sierra Leone'*

Piling

Raked steel 914-millimetre diameter piles were piled by our barge with a fixed leader. These piles were pile driving analysed and dynamic load tested before starting the super structure. For the 'ship to shore interface' vertical steel 1,420-millimetre piles were used, after which the final topworks like the fender-rack, dolphins, catwalks and MEP equipment could be installed.



Placing of steel plates on the loading platform



Installation of the hose tower

Site acceptance tests

All systems including the fire fighting were assembled and commissioned within three months after arrival. The water that is sprayed onto the substructure protects the piles in case oil spills catches fire. This so-called deluge system was one of the many elements of the project.

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Piles testing



Topworks

Within five months, trestles, catwalks, the fender-rack and dolphins were all engineered and prefabricated in the Netherlands and transported on flat barges to Sierra Leone. The construction and commissioning of the complete jetty including the MEP works was done in six months.

Prefabricated concrete beams and deck sections with cast in steel plates for the loading platform were welded to the top of the piles. After placing rebar and inserts on the deck, a 25-centimetre layer of concrete was poured.

MEP works

BAM Leidingen & Industrie was responsible for the design and fabrication of the piping, hose tower, firefighting, detection and electrical systems. All these parts were factory accepted tested and shipped within eight months from contract agreement.

Testing fire safety

