

# Project

## Product loading jetty, Ichthys LNG Project, Darwin, Australia

The jetty is part of the INPEX-operated Ichthys LNG Project being developed in Darwin. The design consisted of two separate vessel load-out berths, one for LNG and a second for LPG/Condensate. A Y-shaped approach jetty consisting of a 680-metres leg connecting to the LNG berth, and a second 630-metres leg, connecting to the LPG/Condensate berth, provides access from the onshore facility.



**Location** Bladin Point, Darwin, Northern Territory, Australia

**Client** JKC Australia LNG Pty Ltd (JKC) (a joint venture between JGC Corporation, KBR and Chiyoda Corporation)

**Design** BAM Infraconsult

**Contractor** BAM Clough Joint Venture

**Contract type** Design and construct

**Contract period** March 2012 – April 2015

**Contract sum** €300 million

*'Built with BAM's in-house equipment.'*

### Scope of work

The product loading jetty included steel spiral welded piles with concrete headstocks and TT-beams. Both LNG and LPG/condensate platforms consist of a steel main structure with in-situ concrete deck. The scope also included a seawater intake including pump casing, waste water outfall structures, navigation aids, corrosion and cathodic protection systems.



Extended side template of the cantilever bridge

### Precast yard

For this project, a total of 728 precast elements (22,630 m<sup>3</sup>) were manufactured at BAM International's precast yard in Cilegon, Indonesia, while adhering to and maintaining stringent Australian standards on Health and Safety, Quality and Quarantine. In total, 438 TT-beams and 174 headstocks were produced.



Construction of the jetty

### Equipment

Construction methodology was primarily a combination of a jack-up barge, crane barge and cantilever bridge (CLB). This arrangement maximised work fronts and created schedule flexibility and optimised land based activities.

Another BAM in-house piece of equipment used was the Beam Placing Unit, unique in its capability to lift and transport the 120 tonnes heavy TT-beams. The project utilized one of the world's largest Heavy Lift Vessels for transport and installation of the LNG and LPG/condensate platforms. Due to the dimensions, installation distance and weight of more than 1200 tonnes this was a record-breaking operation.

### Cantilever bridge

The in-house designed and fabricated CLB and its supporting equipment was used for the construction of the approach trestle from the abutment to the loading platforms which covered the initial land based portion and a section over water which was not accessible by conventional marine spread.

The cantilever bridge

