



PROJECT INFORMATION – Adriatic LNG Terminal

Information about the project:

- Offshore import terminal for liquefied natural gas (LNG), receiving, storage and processing facility
- Concrete gravity based structure
- Main structure was constructed in a dry dock near Algeciras in the south of Spain as combination of cast in-situ and precast modules
- Mooring dolphins were constructed in dry dock in Italy
- All parts were towed to the Adriatic Sea and installed offshore



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More information about the project can be found in:

J.Naess, S.I.Giske and L.Bjerkeli; Concrete gravity-based structure used for offshore LNG storage and regasification in the Adriatic Sea. *Structural Concrete 2010, Volume 11, Number 2*

Client: Terminale GNL Adriatico S.r.l.
Contractor: Acciona Infraestructuras S.A.
Consultant: Aker Solutions AS (former Aker Kværner), Skanska Norge AS
Construction time: 2004-2008



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Terminal structure under construction



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Nearly finished main structure

HRC-Europe has delivered the following products to the project:

HRC 100 series T-headed reinforcement

HRC 400 series reinforcement couplers

Products were produced both in Norway and on site in Spain.



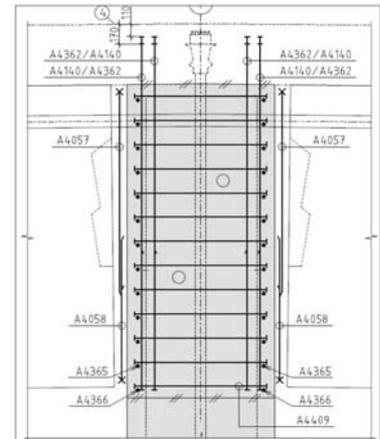
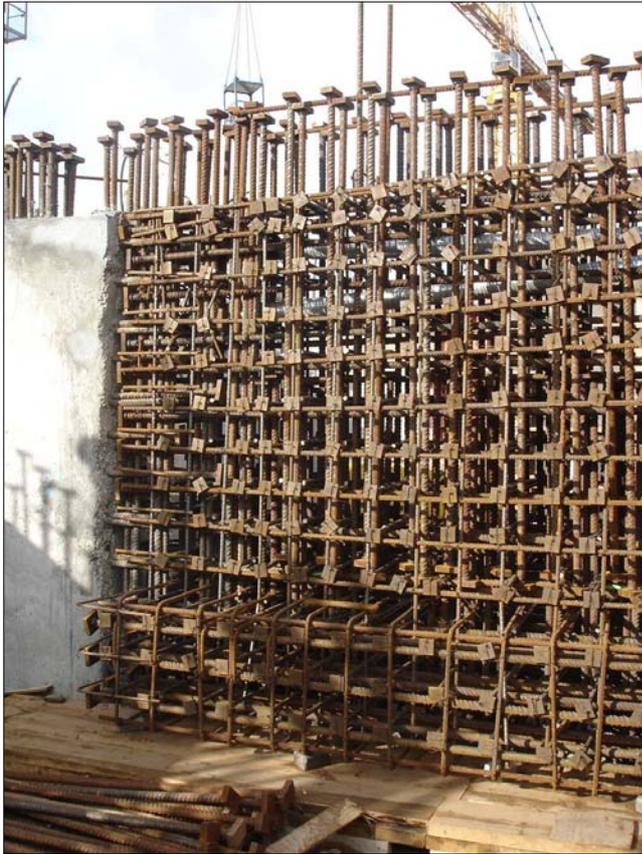
HRC 400 Coupler

HRC 100
T-head

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Examples for the use of HRC-products:

T-headed cross-ties in walls and T-headed bars for wall/slab connection:



T-headed bars as confinement reinforcement at anchorage of post tensioning:



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Connection of supporting beams and top slab:

The terminal structure contains large storage tanks for the LNG. To support the top slab spanning over the tanks, prefabricated supporting beams were used. The connection between supporting beams and top slab was secured by T-headed bars. No rebar was protruding sideways from the beams. Thus handling of the beams and installation of the formwork for the top slab was eased.



Close-up of top slab beam with protruding T-headed bars



Transport of prefabricated beam



Installed beam



T-headed bars of supporting beam with formwork for top slab in place

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Easy placement of straight headed bars:



Open layout of the reinforcement:

T-headed rebar are often straight bars. Those bars are easier and faster to place compared to bend rebar. Additionally, the use of T-headed bars allows the use of larger bar diameters, relieving congested areas. The effects are not just savings in material and installation hours, but also improved casting conditions.

