

Groote Eylandt Pile Grouting Clamp

Offshore of Northern Australia Coast

Gulf of Carpentaria

Sector: Marine
Client: Neptune Diving & ROV Services
Value: Unknown
Completion: November 2017

Technicus Consulting was appointed by Neptune Diving & ROV Services to provide structural design services for a steel shelled grout clamp required to facilitate grouting of the annulus between installed offshore piles and headstock sections.

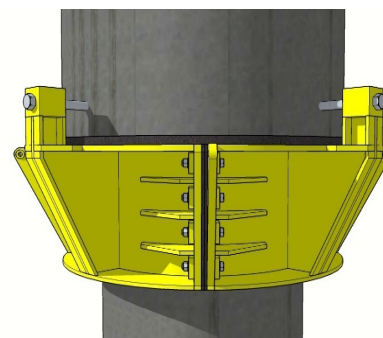
The piles were installed to form an offshore walkway to access vessel mooring dolphins.

The grout clamps comprised 2No steel half shells lined with neoprene to generate grip on the outer pile face and to form a seal to eliminate excessive grout loss during installation. Grout was installed via 2No pumped grout lines attached to the upper clamp ring.

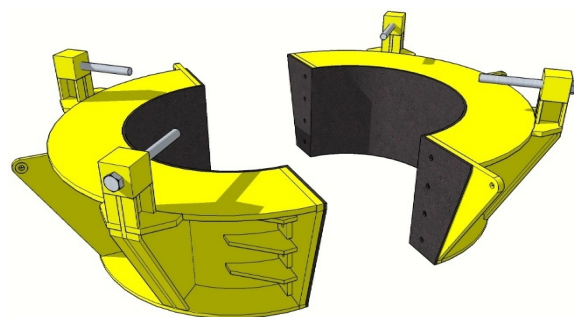
The client advise that the piles could be installed at a maximum out-of-plumb angle of 1 in 50. Therefore a softer neoprene type material was specified for the top sealing ring to allow localised deformation whilst maintaining the required seal.

Technicus Consulting's scope of works included the design of the primary clamp elements, calculations of bolt pretension forces required to generate adequate slip resistance in the clamp assembly, design of padeyes for lifting and handling the clamp and production of fabrication drawings.

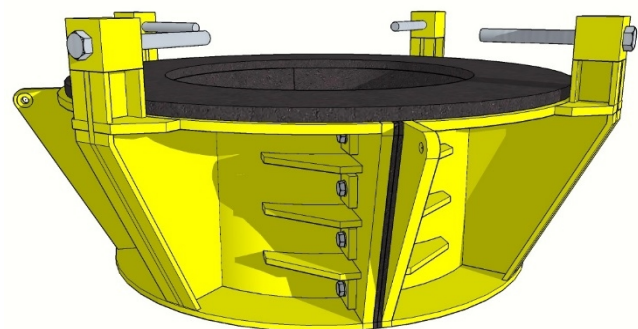
The design was produced on a tight timescale and was delivered on time for Neptune to fabricate 3No clamps to allow simultaneous grouting of 3No piles over a 24 hour period.



Clamp Installed on Pile



View Showing 2No Clamp Shells



Assembled Clamp