



Hay Point Piling and Drilling Template

Installation of over **500 piles** (piling and drilling) for the Australian jetty construction **in 3 months**





Hay Point Jetty Construction (Australia)

TWD designed the piling and drilling templates for the project of Hay Point jetty construction in 2011. This project was conceived to provide mooring and berthing space for the dolphins of the Hay Point Australia coal terminal. Thanks to our creative designs (for piling/drilling templates & outriggers), multiple pile types were installed on 4 different jack-up barges with an advanced working sequence. As a part of the full-service package, we also provided integrity checks, on-site engineering, and fabrication services to ensure this challenging design project was completed within only a 3-month period.



Piling & Drilling Templates

To install the piles efficiently, a 2-layer gripper design (i.e., top and bottom) was utilized on both sides of the outrigger. The identical grippers in both layers can be moved independently, facilitating the installation of piles at various inclinations. Large hydraulic cylinders were also applied in the design to manipulate the grippers with sufficient flexibility, enabling large numbers of piles to be installed within tight positioning and inclination tolerances.

To place the piles in the rocky seabed (20m underwater), the drilling template was mounted on the same outrigger to drill sockets. An oscillator, casing, and a drill head are equipped on the template. The oscillator was used to drill the socket into the rocky seabed, followed by inserting the drill head in the casing to complete the drilling hole.

Project highlights

- Installation of over 500 piles (piling and drilling)
- Outriggers reused during piling and drilling
- One creative design for four jack-up barges
- On-site assistance in Australia
- Lead time of only 3 months

