PERTH WAVE ENERGY PROJECT

TAMS GROUP

PROJECT SPECIFICATION SHEET

CASE STUDY

Project Background:

Perth Wave Energy Project - CETO5 Technology supported the first commercial-scale grid connected power and desalinated water wave energy project

Integrated service offering:

TAMS tugs, construction barge, crew transfer, survey and utility vessels were engaged to facilitate installation and maintenance of all subsea infrastructure components. Dive Support Vessels with Enriched Air Nitrox capability were utilised to increase efficiency and safety at the 25m profile of the offshore lease.

TAMS' Work Scopes:

- Installation of a 3.5 km dual high pressure pipeline from Garden Island to the offshore site, including:
  - 120 m conduit and rock bolting campaign to restrain the pipelines and control cable in the nearshore approach and through the shore crossing.
  - Pipeline stabilisation (using 290 tonnes of concrete strap weights) between the nearshore approach and offshore lease.
  - Freespan correction using innovative split style concrete blocks and subsea drilled rock pins.
- Installation of 3.5 km bundled control umbilical from onshore plant, through shore crossing and to each of the units in the offshore lease.
- Installation of an 800 m desalination outfall pipeline and diffuser end from shore.
- Installation of interconnections to valve sleds, pods and remaining subsea infrastructure to support latter deployment of the mid-water pump and buoyant actuators.
- Deployment of three separate units including the buoy, pump, tether and lower connection arrangement into the existing foundation, thereby initiating operation of the system.

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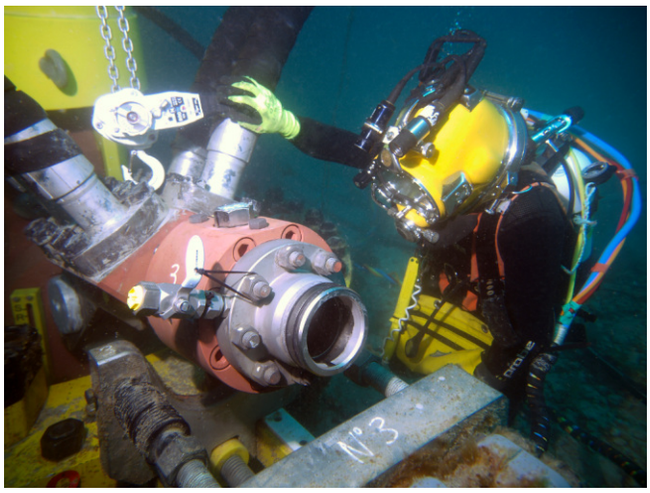
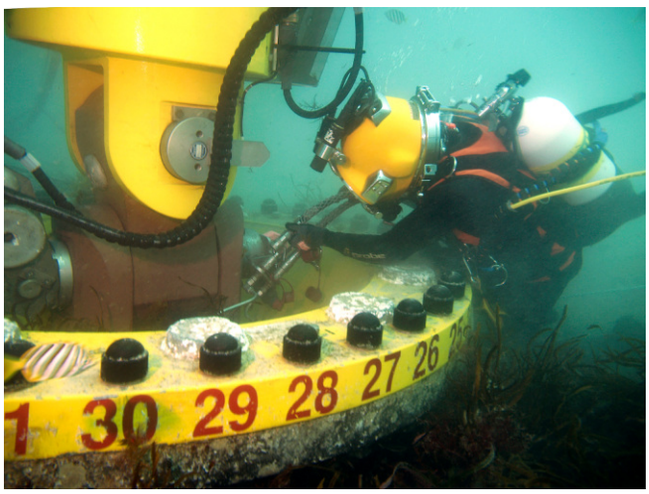
TAMS crane barge in mooring spread ready to lay dual high pressure hydraulic pipelines from 3.5 km offshore.

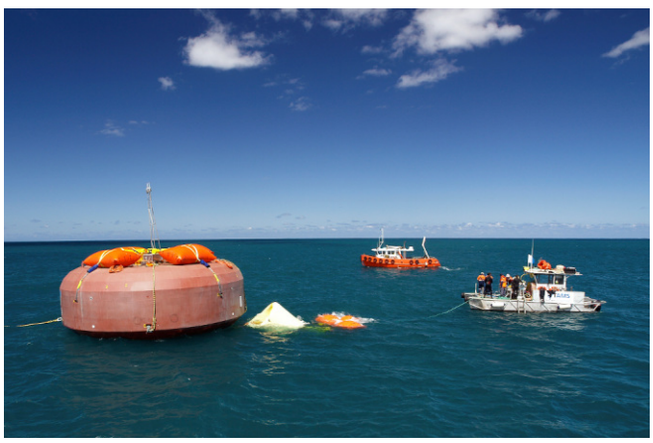


Diver intervention on all technical aspects, including hydraulic and electrical connections.



Installation and hydraulic fastening of all components and connections were undertaken on Enriched Air Nitrox.

Mobilisation of barges at TAMS Fremantle shore base, utilising wharf and onshore facilities, plant and labour.



Buoyant actuators were towed offshore from Fremantle, and ballasted utilising local shore-base resources.

Shore-pull to onshore plant through pre-installed conduit, using a fully integrated service offering.

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