

Innovative solution leads to lucrative new markets



When Auckland-based company PB Sea-Tow needed two vessels modified to service a lucrative new contract, they turned to their design partners at MID. PB Cook and PB Gibson are two sister vessels - originally designed as harbour tugs - that were retro-fitted for a special project in Western Australia's Gorgon oil fields.

The vessels

PB Cook and PB Gibson are ocean towing and terminal support tugs owned by PB Sea-Tow. To equip the tugs for their new task of towing cargo-carrying barges, they needed to be fitted with new custom-designed towing pins.

Based in Auckland, PB Sea-Tow has extensive experience transporting project cargoes throughout Australia, New Zealand, Asia and the South Pacific. Their clients include natural gas and oil companies, navies, and multinational construction and engineering companies.

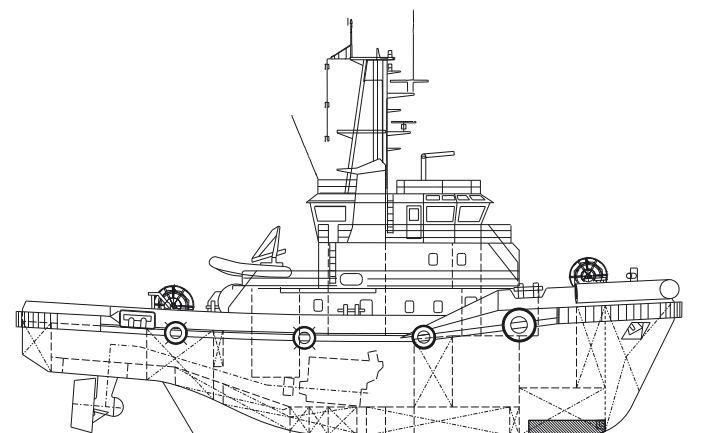
They have the ability to offer complete transport solutions - delivering directly from the manufacturing source to the construction/assembly site. Other services include: ocean towing, offshore support, and terminal salvage support.

PB Sea-Tow is a wholly-owned subsidiary of Pacific Basin Shipping, a Hong Kong-listed company that is the largest dry bulk shipping operator in the Pacific.

The task for MID

In 2009, PB Sea-Tow won a 2.5-year contract to supply support vessels to clients working on the \$40 billion Gorgon oil project in Western Australia.

Originally designed as harbour tugs, PB Cook and PB Gibson required modification for their new role towing barges carrying cargo and aggregates. MID was engaged to design and oversee the installation of 80mt towing pins on the stern, to provide 55-tonne bollard pull.



The stern roller and towing pin module has been specifically designed to meet the rigorous demands of deep sea ocean towing. The three retracting towing pins and tow line hook along with the stern roller are housed in the module and is complete ready for installation into the stern of the tug or supply vessel.

Each unit is supplied with its own hydraulic power pack and controls for remotely raising and lowering the towing pins and rope hook from the wheelhouse.

The towing pins roller are manufactured from high tensile hardened steel hollow bar for long life are mounted on tapered roller bearing as is the stern roller. The heavy duty tow line hold down hook folds down flush with to deck when not in use.

Managing director of PB Sea-Tow, Ian Coombridge, says this particular retro-fitting project was possibly the first of its kind. It required a design solution: "The boats weren't built to have pins installed, and there was very limited space to work with."

Another challenge of the project was that it was extremely time-critical. Having the boats in dry-dock for the refit would cost many thousands per day in lost earning potential. The second part of the project was to work with MID to ensure stability and ballast design.



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Ian Coombridge, PB Sea-Tow

PROJECT OVERVIEW

Main features

- Design of new 80mt towing pins
- Ballast design changes
- Improvements to boat stability

Vessels: **PB Cook and PB Gibson**

Owner: **PB Sea-Tow**

Engines: **2 x Niigata 61-28 HX**

Horsepower: **4300 BHP**

Bollard pull: **57 mt**

Max speed: **12.5 knots**

The results

Ian Coombridge says MID were impressive in their ability to come up with a design solution – and fast.

"I'm very happy with the final result. We were looking for an innovative solution that worked, and 24-hour support, and that's exactly what they delivered."

PB Sea-Tow has worked with MID for more than 20 years, and has become a preferred supplier. "There would be no-one else in New Zealand with the tug and barge experience that the MID team has. We only use MID – I don't even think about going to anyone else," says Ian Coombridge.

Innovation and adaptability is another key strength of MID. "They have a real depth of knowledge, and they also have an imagination. You know that if you threw them any job – for example a RO RO ferry that needed to carry a lot of trucks – they would adapt and come with a good solution."



The MID designed towing pins