

# Build quality gives Cheoy Lee the edge

China's leading tug building yard continues to develop its global reputation for delivering tugs of high quality and technical sophistication

Cheoy Lee Shipyards has established an impressive track record in the tug building sector over the past few years. Between 2010 and the end of 2015, the company will have built close to 60 tugs for operating companies based not just in the Far East, but also in Australasia, the Middle East, South and Central America, India and Europe. Many of these projects have involved the construction of technologically advanced designs, often developed in partnership with the naval architects of Robert Allan. To date, over 80 tugs have been produced as a result of this exceptionally close working relationship, which is still only a decade old.

One of Cheoy Lee's most significant and loyal customers in recent times has been PSA Marine in Singapore. The yard has recently completed a series of seven new RAmports 3200CL tugs for the operator, with the final delivery, *Resolute*, leaving Cheoy Lee's yard in June. Many of the tugs it has built for PSA Marine are on duty in the port of Singapore, but four of the latest series have been deployed in Oman where are being used for berthing and unberthing liquefied natural gas (LNG) carriers at the Qalhat terminal.

The RAmports 3200CL design was developed by Robert Allan specifically for Cheoy Lee, and the builder can deliver this tug type with a range of engine options. For example, within the latest PSA Marine contract, four of the tugs were fitted with twin 2,000kW Caterpillar 3516C diesel engines, coupled to Schottel SRP1515FP fixed pitch azimuth stern drive (ASD) propulsion units, and are capable of 70 tonnes bollard pull ahead. The most recent delivery, *Resolute*, and another tug of this design that was handed over earlier in 2015, *Resilient*,



*RT Enterprise* is one of four ART 80-32 Rotortugs that Cheoy Lee has built for Kotug over the past year

were, however, fitted with 1654kW Niigata engines driving ZP-31 Niigata Z-Pellers, giving a bollard pull of 65 tonnes ahead.

Cheoy Lee is a firm believer in this design and, in a demonstration of this confidence, is constructing a further eight RAmports 3200CL tugs on speculation. The first of these was completed in July this year and is now available to prospective customers. Four of the stock newbuildings will be fitted with Caterpillar and Schottel propulsion systems, and four with Niigata equipment. All of the stock tugs will be completed before the end of this year and will offer a speed of 13 knots, 70 tonnes bollard pull ahead and 67 tonnes astern.

Cheoy Lee has also been building RAmports type tugs for a new client, Port of Tauranga in New Zealand. In this case, the contract was for two 24.40m long RAmports 2,500kW units, *Tai Pari* and *Tai Timu*, which were delivered to the port in June, both having a maximum bollard pull of 72 tonnes. These are the smallest Robert Allan designed tugs to be built by the yard, and have been configured lengthwise to come within a threshold for more demanding manning regulations in New Zealand. This pair has been equipped with Rolls-Royce US255 FP azimuth drive units with fixed pitch propellers.

Another notable series completed this year by the Chinese shipyard, demonstrating its versatility, comprised four ART 80-32 Rotortugs for the Dutch company Kotug International. The last in the series, *RT Enterprise*, was handed over to its owner, Elizabeth Ltd, in April this year, prior to deployment in Port Hedland, Western Australia, where the four 85 tonnes bollard pull tugs are being used to handle bulk carriers transporting iron ore for a charter to BHP Billiton. According to a



*Tai Pari* and its sister *Tai Timu* are the smallest Robert Allan designed tugs that Cheoy Lee has built to date

Cheoy Lee operates a modern shipyard which has been expanded three times in the past 16 years



statement from Kotug, Cheoy Lee's high building standards have helped ensure excellent performance since delivery, in all conditions.

The ART 80-32 type tugs built by Cheoy Lee differ from conventional ASD, tractor or Voith designs as they use three ASD propulsion units, in a triangular configuration, with a significant degree of separation between the two forward thrusters and a single aft drive unit. According to Cheoy Lee, the manoeuvrability of this type of tug is superior to conventional designs, while enhanced safety during towing and escort operations is another key attribute. Other benefits include an added level of redundancy with the triple engine arrangement, and higher bollard pull in all directions. These latest Rotortugs for the Port Hedland contract have been designed by Robert Allan in conjunction with Rotortug, which owns the patent. As with the RAmports 3200CL, Cheoy Lee's confidence in this design concept is reflected in the fact that it is building a number of tugs of this type for stock in anticipation of its longer term market success.

While benefitting from repeat business, Cheoy Lee continues to add to its client base and has, for example, recently secured a first contract with the Mauritius Ports Authority. The yard is now constructing its 73 tonnes bollard pull RAStar 3200 tug, for delivery in the first half of 2016.

One of Cheoy Lee's advantages compared with many of its rivals is that it has a very modern, and relatively new, shipyard. Located in the Pearl River Delta at Doumen, the yard is just 60km from Hong Kong, where Cheoy Lee has additional facilities, and can be easily accessed by fast ferry. The yard was opened 16 years ago, in 1999, and has already been through three major expansion phases to meet high levels of demand – not just for tugs, but for a range of other commercial vessel types and yachts, up to 60m in length.

The 28 acre Doumen yard is equipped with a 150 tonnes Travelift,

and has dedicated painting sheds and on-site dormitories to house its 1,000 employees. The new facility is bristling with advanced production machinery, including Prop Scan equipment, 5-axis CNC (computer numerical control) cutters, milling, rolling and bending machines, lathes up to 8m in length and Numerical Control (NC) water bath plasma cutters. The yard has its own in-house design office, although overall vessel design is always carried out by outside design houses. In the case of tugs, this is typically Robert Allan.

Cheoy Lee says it has no plans to expand its shipbuilding facilities any further at present, and it intends to keep construction of all its tugs, and other craft, in China only. Equipment on site is, however, constantly upgraded to keep pace with technology development.

Like all tug builders, Cheoy Lee is facing difficult market conditions at the moment, although it has managed to maintain a healthy orderbook in the face of increasingly tough competition. Demand is particularly resilient for the more powerful tug types, and there is most call for harbour tugs in the 60 tonnes to 80 tonnes bollard pull range, the company suggests.

There are some significant challenges that the yard has to face. Jonathan Cannon, sales manager, says: "We have seen that the tug market has softened in the past 12-18 months. With shipyard stock builds now becoming more widely available, competition is fierce. This is having the effect of driving down prices."

Mr Cannon is, however, upbeat about the company's own market prospects. He says: "Our build quality, and our reputation as the premier tug builder in China, gives us a competitive edge over our rivals. Our shipyard also has expertise in the construction of a range of vessels and build material types, and that means we are agile enough to follow changes in market demand as they take place." **TTB**