‘Standard’ is modified for Kenya Ports role

Now in its fifth generation, the family run Cheoy Lee Shipyards has been building Robert Allan Ltd designed ASDs for some years now and a particularly successful model has been the 32m RAstar 3200 Class.

The first examples of this class to be built were a quartet ordered in 2012 by Smit Lamnalco from the Hong Kong headquartered builder, although construction took place at Hin Lee Shipyard on the Pearl River Delta in mainland China. The four were for the LNG terminal being established in Papua New Guinea. Numerous examples have been constructed by the company since and *IT&O* has decided it is time to report on the latest manifestation.

Eugene, the newest of this terminal tug type to come off the Cheoy Lee production line, has now been delivered to its owners Kenya Ports Authority (KPA), Mombasa, Kenya. It measures the same as its predecessors, namely 32m LOA with a beam of 12.8m and a draft of 5.8m. It is classed and built according to the following Lloyd’s Register of Shipping notation: ✠100A1 Escort Tug and Unrestricted Voyages.

Main propulsion consists of a pair of the latest Caterpillar 3516C HD high-speed diesel engines, each rated 2,240kW at 1,800 rev/min – the same power as earlier versions but this time driving Rolls-Royce US255 fixed pitch Z-drive units. Rolls-Royce thrusters were an owner preference.

Jonathan Cannon, sales manager at Cheoy Lee, told *IT&O*: “Starting with the basic RAstar 3200, we kit the vessel out as per the client’s requirements. While we have our regular suppliers, we generally do not impose them on a client if they want to go their own way on particular items.”

Cummins generators were another customer request, but three equal-size generators is quite unusual. However, as ***Eugene*** has main engine PTO-driven hydraulic winches, the main generators themselves are fairly small at 80ekW. An extra harbour generator was also needed and, according to Cannon, looking at which Cummins models were available, it was sensible to have all three the same size for spare parts compatibility and maintenance purposes.

The fire-fighting system supplied by FFS is typical but in this case it has a dedicated diesel rather than a main engine driven system, a Cummins engine again preferred. The system uses a single pump feeding two bridge deck mounted 600m^3/hr monitors giving what is commonly called FiFi½.

On trials, ***Eugene*** met or exceeded all performance expectations, with a bollard pull ahead of 75.6 tonnes. Astern, the figure is even better at 76 tonnes. The free running speed is 13.5 knots.

The vessel has been outfitted with full accommodation for a crew of up to 10. The master’s and chief engineer’s cabins are located on the main deck, with four additional two-person crew cabins on the lower accommodation deck. All have en suite facilities. The galley and a spacious mess/lounge room complete the deckhouse arrangement.

The deck machinery comprises a ship-assist hawser winch forward, manufactured by MacGregor, and a radial type tow hook on the aft deck. In addition, a capstan is installed aft to facilitate line handling operations. Cannon said: “We have a good relationship with MacGregor. They have a competitive product which we see is gaining recognition and acceptance. Some clients do prefer the European brands and that is also fine by us. We are using a few different crane suppliers these days, including Heila, which was requested by KPA as they have them on their existing tugs. Cranes are standard on our stock RAstars, but this one has a bit more capacity: 1.6 tons @ 9m reach.”

At the bow is one row of cylindrical fender at the main deck level, with ‘W’ block fenders between the main deck and the knuckle. Two hollow ‘D’ fenders provide protection at the main and forecastle deck sheer lines, and ‘W’ block fenders are used at the stern.

The unique hull form of the RAstar tugs gives these vessels a level of crew safety and comfort that will enable operation in conditions previously deemed unworkable. Developed and used exclusively by Robert Allan Ltd, this has been proven in both model and full-scale testing to provide significantly enhanced escort towing and sea-keeping performance. The motions and accelerations are significantly less than those of comparable sized, wall-sided tug hulls.

According to KPA, ***Eugene*** is the first of its kind in East and Central Africa and will be instrumental in undertaking marine operations including the berthing and un-berthing of ships. It becomes the largest tug in a fleet of five and made an impressive arrival at the Port of Mombasa after a 26-day journey from China. The vessel is named after the late Capt Eugene Okoth, who passed away while performing pilotage duties on board an inbound car carrier in April 2016.

Cheoy Lee, which has now completed well over 100 Robert Allan Ltd designs, reports that the RAstar 3200 terminal design

is currently gaining even greater momentum with seven already on order and a further two to be constructed for stock.

For years, Mombasa has been known as "the city of merchants". It dates back to the times of Vasco Da Gama (1460-1524), when Mombasa Old Port was being used for trade between the east coast of Africa and the Far East. It became an increasingly busy trading post for the region due to its strategic location, midway between South Africa and the Gulf of Aden, and has experienced tremendous traffic growth through the years and is now one of the busiest ports along the East African coastline. It is linked to a vast hinterland comprising Uganda, Rwanda, Burundi, Eastern Democratic Republic of Congo, Northern Tanzania, Southern Sudan, Somalia and Ethiopia by road whilst a railway line also runs from the port to Uganda and Tanzania. **Andy Smith**

Fire-fighting ASD is mix of Japanese tradition and modernity

Naiko Tug Boat Company in Japan has recently taken delivery of a new ASD tug designed and built by Daizo Corporation, a company founded in 1936 in Osaka, where its shipyard and design offices are still based. Named *Hirata Maru*, the vessel is extensively fitted out for external fire-fighting with one of its two monitors on an extendable mast. The tug has been constructed to rules and regulations imposed by the Japanese government.

Measuring 38.83m LOA with a beam of 8.9m and a draft of just 3m, ***Hirata Maru*** retains much of the traditional appearance of many of this nation's tug output but is state-of-the-art equipped and a thoroughly modern example.

Power is provided by a pair of 6L28HX Niigata main engines, each developing 1,618kW at 750 rev/min. These drive Niigata Z-Peller azimuthing thrusters type ZP-31CL with 2,300mm diameter Kaplan style fixed pitch propellers surrounded by nozzles. They are fitted with built-in idle slipping clutches. This propulsion arrangement gives the vessel a bollard pull of 52 tonnes and a maximum free-running speed of 15.2 knots. Other important items of plant in the engine room include a pair of 88kW Yanmar type 6CHL HTN generator sets and a 400kW/hr fire-fighting pump driven by a dedicated diesel. This is manufactured by Kashiwa Co, a well established marine fi-fi company founded in 1947 and headquartered in Tokyo. The system feeds a water drenching arrangement plus two 180m³/hr monitors, one on the wheelhouse roof and the other atop a 7m high extension arm.

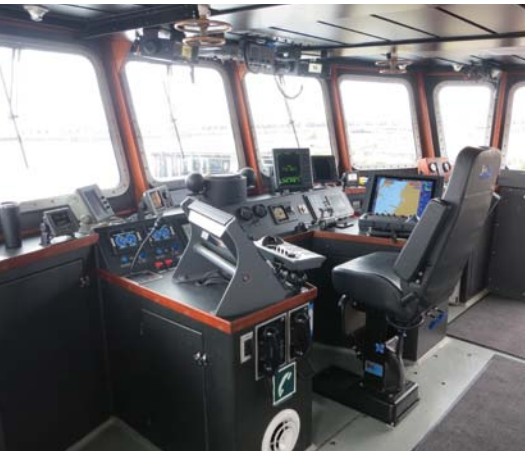
The vessel was designed for supporting vessels entering and leaving Imabari Port, towing work in the coastal areas around the port and acting as a primary fire-fighting asset, and dealing with chemical fires.

The living quarters are laid out on a single deck and comprise five single-crew cabins set out around a mess, galley and separate saloon. The wheelhouse above is particularly well equipped with a comprehensive suite of electronic navigational and communication items by Furuno. Niigata, however, provided the autopilot.

Two separate winches are installed on the foredeck at an angle to share adjoining fairleads. These have been supplied by Marine Hydrotec, a company with manufacturing facilities all around Japan. It launched its own brand of substantial marine winches in 1971 and these have been developed ever since.

Daizo, the builder and designer of the tug, has grown and diversified over the years since its foundation and now employs more than 800 people. Its customer for ***Hirata Maru***, Naikai Tug Boat Service Co, is headquartered in Kobe and serves a number of local ports with a fleet of some 22 Z-Peller ASD tugs with bollard pulls ranging from 49 to 62 tonnes. It also operates a number of 75 tonne bollard pull, twin screw boats. **AS**

Proven design is revised for Hawaii service



Washington State-based Dunlap Towing has taken delivery of *Sigrid Dunlap*, a 121ft x 38ft (36.88m x 11.58m), 5,346bhp ocean towing tug designed in Seattle by naval architectural and engineering firm, Hockema Whalen Myers Associates.

Hal Hockema, president and managing principal of the company, said that the prime purpose of the new vessel, which was built by Hanson Boat Company of Marysville, Washington, is to tow flat deck cargo barges for Alaska Marine Line on a round trip from Seattle to Honolulu that takes 24 to 26 days. "HWMA also designed these barges which will carry a combination of container and break bulk freight," he told *IT&O*.

The new tug is both ABS and SOLAS classed with an endorsement for unattended machinery room operation, the most automated and reliable platform possible. "The towing speed for this duty is 10 knots," he continued.

In a trial the vessel, which went straight from the yard to start on a tow to Hawaii, achieved a bollard pull of 81.6 tonnes.

Designer and owner have a well-established history covering several vessels including an ASD. More to the point, the new tug outwardly looks the same as the ***Phyllis Dunlap*** built in 2001.

Mike Whalen, project naval architect, said: "It is not common that we get the opportunity