



AAL Kerbla on Sydney Harbour

STEADY

as she goes

After busy year just gone, the trend appears to be continuing with an uptick in demand for project cargo, writes **Paula Wallace**

International pundits say increased demand and better rates are on the cards over the next year for multi-purpose vessels - servicing breakbulk and project cargo - aided by a shrinking legacy fleet and reduced pressure from other ship types.

The big factor influencing the market globally is oil prices but aside from that, other market drivers that are looking favourable include activity in oil drilling and refining, construction of wind energy, steel production, mining and industrial infrastructure.

"The Australian economy and fortunes of many of our local customers are benefiting from a global recovery that began in 2017, increased spending in Asia, reviving commodity prices, strong steel exports to the US and low interest rates around the world," Frank Mueller, general manager Australia/Oceania at AAL, told *Daily Cargo News*.

Late last year, on the back of strong growth (16% in 2017/2018) for Western Australia's \$109bn mineral and petroleum industry, AAL boosted its scheduled north and south-east Asia to west coast Australia liner service (AUWC) to a monthly service with the addition of a second MPV vessel. The company added an S-Class vessel to expand the service and provide additional capacity to support increased volumes of mining, oil and gas and infrastructure cargoes. AAL's AUWC service has served the breakbulk and project heavy-lift shipping community in the region since 2006 and is the only MPV liner service between north Asia and the Australian west coast offering regular sailings from Shanghai, Pusan and Kaohsiung to Fremantle as well as Port Hedland/Dampier on inducement. The service currently employs tonnage from AAL's owned S-Class MPV fleet (19,000 dwt and featuring a combined maximum lifting capacity of 700 tonnes).

"At the moment we're filling the vessels... we don't have the full frequency the way we wanted but that was to be expected," Mr

Mueller said. "We currently have the two vessels that are servicing a lot of ad hoc and project cargo."

AAL also operates an MPV liner service from Asia to Australia's east coast, in conjunction with Swire Shipping.

"On the east coast, our vessels are relatively full and we are offering customers improved transit times on individual voyages to targeted ports," said Mr Mueller.

"We wish rates could be higher and more sustainable, but that is indicative of the current market challenges we face."

Mr Mueller indicated solid business during the past year.

"Over the past year, on the liner side, volumes were quite steady... there was a steady flow and our vessels were relatively full," he said.

In Australia we'll see an increase in dedicated project cargo going forward, maybe even in the second half of this year and beyond.

Frank Mueller, AAL

"Project and heavy lift cargo has been rather lacking in Australia in recent years. Nevertheless, going forward there are more project opportunities on the horizon, including BHP's significant South Flank project.

"In Australia we'll see an increase in dedicated project cargo going forward, maybe even in the second half of this year and beyond."

Located near BHP's Mining Area C operations, South Flank is to replace production from the 80m tonne per annum Yandi mine.



Port of Newcastle supports the mining sector via the import of mining-related machinery and equipment

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Frank Mueller, AAL



Large parcels of portside land at the Port of Newcastle provide flexibility to store and stage cargo

Expanding the existing infrastructure at Mining Area C, the project involves construction of an 80m-tonnes-per-annum crushing and screening plant, an overland conveyor system, stockyard and train loading facilities, procurement of new mining fleet and substantial mine development and pre-strip work.

“If people talk about projects in mining it's South Flank,” Mr Mueller said. “That's the next big project coming up and that's an indicator that things are going the right way.”

Mr Mueller noted “a bit of talk about lithium mines... alumina and coal as well”, adding that the march towards renewable energy would continue, possibly spurring demand for minerals and transportation of components such as turbine blades and solar transformers.

A key focus for AAL this year is continuing providing a premium service to breakbulk and project cargo customers. Mr Mueller doesn't see any major threats on the horizon and says the company is well prepared for the introduction of the IMO sulphur cap regulations in 2020.

“Our vessels are relatively new and can handle low sulphur requirements,” he said. “Of course you need to safeguard yourself as a carrier and it's a bit hard to predict what will happen in 2020 with fuel prices.

“I think we will see a spike in costs but hopefully that will come down... when they introduced unleaded fuel [for cars], originally it was more expensive but then it dropped,” he said.

“There's just this risk that needs to be shared and some of the potential costs may need to be passed on.”

PORT'S PERSPECTIVE

The Port of Newcastle specialises in handling large, project cargoes including generators, pre-fabricated structures, wind turbines, tunnel boring machines and heavy equipment. Heavy lift cargo operations can occur at three different locations within the port's precinct.

“The Port of Newcastle handled about one million revenue tonnes of breakbulk in 2018,” a spokesperson said, adding that this was consistent with volumes in recent years.

The port wants to increase the capacity, flexibility and options for cargo owners and will, this year, set out how it plans to do this with a comprehensive Newcastle General Cargo Terminal concept.

According to the port, what attracts this type of cargo to Newcastle is the fact that it is the only port in eastern Australia with a berthside rail line. Another advantage is the port's extensive storage space (120,000 square metres of hardstand) and flexible licensing, which can accommodate any delays in the customers' project timelines.

“Limited storage and competing cargo can result in cargo owners having to move their cargo out of port storage before they are ready to take it to the project site. This results in very costly extra handling steps, and the requirement to find a temporary storage space,” the spokesperson said.

An example of this is the wind farm components stored at the port's site in Mayfield.

“Half of the components (three shipments) were already on the



Tunnel boring machine "Bella" being unloaded by Patrick at East Swanson dock

water when the project hit a substantial delay. At other ports, cargo owners would have needed to arrange storage away from the port. This comes at a significant cost," the spokesperson said.

"Cargo owners would also have the extra administration for route surveys and oversize load permits to manage the additional truck movements associated with third party storage."

The spokesperson said Port of Newcastle had instead been able to accommodate this cargo for the extended duration with no extra movements of the wind turbine components required.

"Once the project is ready to receive the parts, the cargo can be moved directly to site," the spokesperson said.

Port of Newcastle has been able to cater for a variety of large and oversize project cargoes, including some of the longest wind turbines imported into Australia.

"Gaining authorisation to move oversized cargo through Port of Newcastle and directly out into regional NSW is simpler and does not involve a trip through Sydney," the spokesperson said.

BEYOND CONTAINERS

French shipping giant CMA CGM is perhaps best known for its role in the global container sector. But the company (a parent of local entity ANL) also does a busy breakbulk trade. In 2018, for example, CMA CGM experienced double digit growth year-on-year in that sector. The company handled 900 breakbulk projects as well as 250,000 TEU equivalent of Out of Gauge.

"Our heaviest piece to date was 457 tonnes, which was also the heaviest piece to be carried by a container carrier," a company spokesperson told DCN.

"Under deck stowage is our default stowage method; only in rare cases are cargoes loaded on deck, and in such instances, it is always with the express agreement of the customer."

The company sees growth opportunities in transporting breakbulk and project cargo in the Oceania market.

"Last year, growth both to and from Oceania exceeded our

expectations and we are doing everything so that our customers continue to trust us," the spokesperson said.

CMA CGM handles a wide range of industrial cargoes including mining equipment, transformers, oil and gas equipment, cranes and building machinery.

"BELLA" NO MATCH FOR PATRICK TERMINALS

■ Patrick Terminals recently unloaded a massive tunnel boring machine to help in the construction of the West Gate Tunnel in Melbourne.

The tunnel borer had been shipped to Melbourne on board the vessel *Caribbean Harmony*.

Patrick unloaded the largest piece at East Swanson dock, that being the head of the boring machine which weighed 295 tonnes and required a 30-tonne lifting beam. In total the machine consisted of more than 100 components.

Two cranes on the vessel were used in tandem to lift the load onto a specialised 16-wheel heavy lift trailer. Part of the challenge was ensuring the balance of the ship as the weight moved and was released on the wharf by two cranes working simultaneously.

Worth an estimated seven million Euro, the machine was built by Herrenknecht AG, global specialists in mechanised tunnelling systems. When fully operational, the tunnel boring machine named *Bella*, is to be 90 metres long, 15.6 metres high and weigh 4000 tonnes - making it one of the largest in the southern hemisphere.

Specialised training for the West Gate Tunnel Project has now started for more than 30 tunnel workers with a hyperbaric chamber installed onsite so workers learn about operating in pressurised conditions.

The tunnel boring on the longest of the West Gate Tunnel twin tunnels will start by the middle of the year.



AAL Dalian - Discharging a transformer in Geelong from Shanghai



AAL Kembla - Discharging tunnel boring machine "Kathleen" in Sydney

"MEGA" CARGO HIGHLIGHTS OF 2019

■ One of the highlights this year has been AAL's delivery of Victoria's – and possibly Australia's – largest transformers to the Stockyard Hill Windfarm Connection.

This was done on behalf of Australia-based global logistics solutions provider, Cargo Line International. The modern Toshiba-made unit is expected to help generate enough clean energy to power 390,000 average homes in the south east of the country a year with about two million tonnes of CO2 savings.

The Toshiba manufactured 'mega-transformer' measured about 14 metres x 5 metres and weighed more than 305 tonnes. It was shipped from Shanghai to Geelong aboard one of AAL's 31,000DWT A-Class heavy-lift MPVs, the *AAL Dalian*. The unit was safely stowed by the crew of the *Dalian* into the 38 metre x 12.8 metre cargo hold, harnessing the power of heavy-lift (700 tonne max) port-mounted cranes for loading and discharge operations.

Goldwind Australia operates the Stockyard Hill Windfarm Connection with support from Mondo, the commercial energy division of AusNet Services which owns and represents the Victoria electricity network. Wind farm construction began in May 2018 and consists of 149 wind turbines that, as well as 530 megawatts of renewable energy, is to provide environmental, community and economic benefits to the whole region.

The transformer is to be installed at the wind farm's "Haunted Gully" terminal station at Lismore about 170 kilometres west of Melbourne.

"As Australia's economy continues to perform well, with a supportive global environment and strong domestic demand set to maintain this growth for 2019, AAL is delighted to be part of a project that will have wide-reaching economic and community benefits,"

AAL commercial director Christophe Grammare said.

"We're also proud to contribute to such an important green power project and reinforce our reputation as carrier of choice for a growing number of Australia's largest renewable energy projects."

Cargo Line International Project manager Bronwen Grabe said being entrusted by Toshiba International to handle the end to end freight forwarding scope of the project was "a privilege".

"This project was years in the making and was a remarkable success which can be attributable to the professionalism and dedication of the project team at Cargo Line International achieving excellence," Ms Grabe said.

"As an Australian owned company, we are proud to assist in a project that directly benefits and impacts the community and the environment."

AAL has also made several notable deliveries to Australia this year. In February, it successfully completed a major shipment of two mega tunnel boring machines from Nansha in South China to Sydney and Melbourne respectively. They are to help progress important new multi-billion-dollar metro railway projects taking place separately in the two state capitals. The two units and their components totalled more than 2000 tonnes in weight and were shipped aboard the 31,000 dwt heavy-lift MPV, the *AAL Kembla*.

The two TBMs were manufactured by Herrenknecht AG and this is the sixth shipment of such units that AAL has been commissioned to operate in the past eight months on the manufacturer's behalf, via its selected logistics partner Geodis Hamburg.

The larger of the two units on this shipment (weighing almost 1000 tonnes) is part of a 130-metre boring machine named TBM "Kathleen". It is the last of

five mega borers for the Sydney Metro City & Southwest Project and will help to build twin 15.5km railway tunnels deep under Sydney Harbour - eventually enabling underground transport of passengers in state-of-the-art driver-less trains.

"Kathleen" was transported by barge from White Bay to Barangaroo, where it is to be assembled and plunged deep underground later this year for the section of the Sydney metro rail tunnel project that extends from Barangaroo to Blues Point.

Transport and infrastructure minister Andrew Constance was effusive about the concept.

"Not since Bradfield delivered the Sydney Harbour Bridge almost a century ago has there been a vision for public transportation on the scale of Sydney Metro," he said.

The TBM – named after Kathleen Butler who was a technical advisor in the construction of Sydney Harbour Bridge and the first Australian woman to have a senior role in an infrastructure project of that scale – is to tunnel through clay, silt and sediment to bore a rail route under Sydney Harbour.

"TBM Kathleen is shaping Sydney's future as she gets ready to build the first railways tunnels under Sydney Harbour—linking metro rail from the city's northwest, through the CBD and on to the south west," Mr Constance said.

"Each of our six shipments of these enormous TBM units over the past eight months has provided unique challenges, which we addressed and overcame every time," Ms Grabe said.

"On this occasion we had tight delivery deadlines. A four-day window to discharge the first unit in White Bay, Sydney – which we did directly to barge – and then to deliver the second unit to Melbourne by 28 February, which we also accomplished."

“We also handle a substantial amount of boats and yachts of all shapes and sizes, whether as breakbulk or containerised cargo,” the spokesperson said.

“In Oceania, our biggest market is made up of boats and yachts. CMA CGM is indeed actively involved in shipping Australian-made boats, mainly to the US market.

“We also ship worldwide many of the renowned New Zealand masts for racing yachts.”

One of the high points in the global racing yacht calendar is the Sydney to Hobart race, and CMA CGM has been involved in the transportation of a number of the bigger racing yachts.

“We also brought some boats which dropped out of the Vendée Globe race, from New Zealand and Tahiti back to France,” the spokesperson said.

“We are also seeing an increase in mining equipment being shipped to this region.”

CMA CGM said all “the pointers are that the project cargo market is relatively stable, albeit with differences across sectors”.

The company says the main challenge for the industry is the upcoming Low Sulphur IMO 2020 Regulation.

“In line with its commitments, the group will comply with the regulation issued by the IMO as from 1 January 2020. Liquefied natural gas, which is a real technological breakthrough, will be part of the group’s strategy in this regard,” the spokesperson said.

In November 2017, CMA CGM announced its decision to equip nine future ships of 22,000 TEU with engines using LNG, which are due to be delivered from 2020.

“CMA CGM thus became the first shipping company in the world to propel ultra-large containerships with LNG,” the spokesperson said.

“In March 2019, the group ordered five further 15,000 TEU vessels powered by LNG to be delivered from 2021.”

The company also has been involved in an environmental initiative with IKEA and the GoodShipping program to test sustainable marine bio-fuel oil. The 5095 TEU CMA CGM WHITE SHARK was successfully refuelled with sustainable marine bio-fuel oil on 23 March, 2019 at the Port of Rotterdam and the vessel was trialling the fuel on its transatlantic crossing throughout April.

“This world premiere partnership with IKEA Transport & Logistics Services and the GoodShipping program represents a major step towards the decarbonisation of ocean freight,” the spokesperson said.

The second-generation bio-fuel oil is completely derived from forest residues and waste oil products. It is expected to deliver 80-90% well-to-propeller carbon dioxide reduction versus fossil equivalents, and virtually eliminate sulphur oxide emissions – all without any requirement for engine modifications.

“Results from the trial will be communicated shortly. They will give the maritime sector a vital demonstration into the scalability, sustainability and technical compliance of sustainable marine bio-fuel oil,” the spokesperson said.

“This will benefit all industry stakeholders in their environmental strategies, in line with the impending IMO decarbonisation pathway.” ■



Loading of the Scallywag onboard the CMA CGM-operated Seatrade Orange in Sydney, January 2019