



Dockside

Babcock [NZ] Ltd Ship Repair and Marine Engineering News

June 2018

Welcome - Tēnā koutou

I trust that 2018 is proving to be a good year for you and your teams.

We are encouraged by the marine industry economic comments this year, such as international shipping association BIMCO writing that “it has been quite some time since macro-economic development has looked this positive and as supportive of shipping.” Locally, there is positive feedback from the New Zealand Cruise Association that visiting cruise ships will be involving New Zealand in more of their South Pacific itineraries through the 2018/2019 season.

Also, with Team NZ winning the 2017 America’s Cup, Auckland is now building towards the Challenger Series in 2020 and America’s Cup matches in March 2021. We expect that the regattas will significantly increase

the number of superyachts visiting New Zealand through 2020/2021. With enquiries for Auckland berths and maintenance already coming in, we recommend that our regular commercial customers consider early booking for docking projects planned over this period.

We can report that the last 12 months have been very busy for Babcock in New Zealand, with a variety of commercial and New Zealand Navy maintenance and docking projects successfully completed.

In addition we have initiated an inclusive Health & Safety relations programme with our sub-contractors, which is instilling the highest level of confidence that each worker is supported to carry out their tasks as safely as possible.

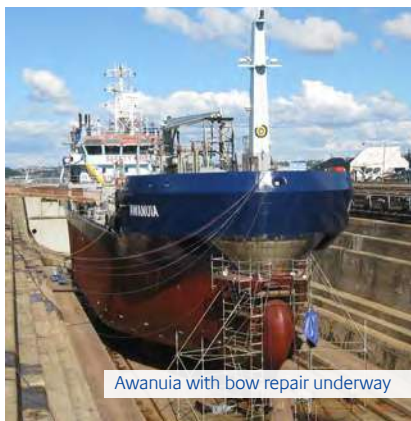
Our design consulting company, Marine Industrial Design, continue to be active across many different vessels, with work on superyachts, fishing vessels, barges and ferries, as well as assisting Babcock in providing naval architectural support to the existing Royal New Zealand Navy fleet and for future projects and vessels.

Thank you for your continuing support. We value your business and look forward to hearing about your successes and working with you on future projects.

Ngā mihi

Chris Saxby
Managing Director

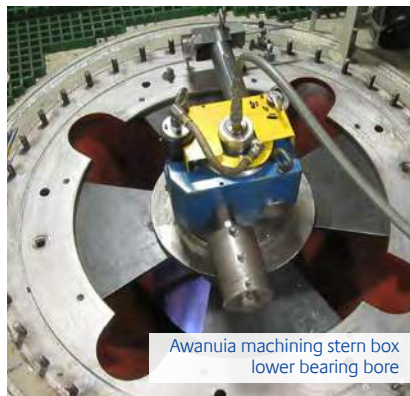
Products tanker Awanuia



Awanuia with bow repair underway

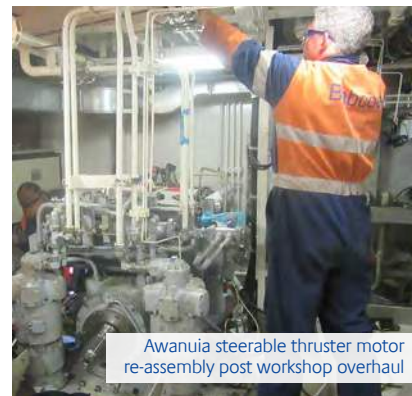
New Zealand coastal vessel Awanuia, a 79.9m, 2,747 grt - the oil products tanker was docked in 2017 for an overhaul of the vessel’s two steerable thrusters and a survey package. This included water blasting and preservation

of u/w and topsides hull, main mast, funnel, boat davits and deck winches. Sea valve survey; cargo tank steel repair and washing and inspection of ballast tanks were also completed. Under direction from attending Wartsila service engineers, Babcock’s marine workshop



Awanuia machining stern box lower bearing bore

team, supported by our local machining specialists, carried out repairs to the thruster units including; machining and sleeving of blade carrier bushes, bearing housings and top plates, as well as in-situ machining of the stern box lower bearing and seal carrier bores.



Awanuia steerable thruster motor re-assembly post workshop overhaul

For enquiries about dry-dock or repair, please contact Keith Drake, Business Development Manager.
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Buffalo dry-docks at Devonport

The 130m, 6,311 grt bulk cement carrier Buffalo dry-docked at Devonport in January to complete a survey, repair and preservation work package. Buffalo, managed by Holcim New Zealand part of the LaFargeHolcim group, was introduced to the New Zealand coastal shipping operation in 2017 to replace the long serving coastal cement vessels Milburn Carrier II and Westport.

The critical activities for the Buffalo dry-docking were the propeller shaft survey, renewal of cable locker steelwork and under water hull and topsides hull preservation. Repairs were made to



the rudder, becker flap assembly, sea water cooling pipework, strainers and miscellaneous deck and internal steel work repairs. Ballast tank preservation, electrical motor overhauls and survey of ship side valves and under water

fittings was also undertaken. Due to the considerable repair work required on the vessel's cable locker structure, two shift working was employed to minimise dry-dock time.

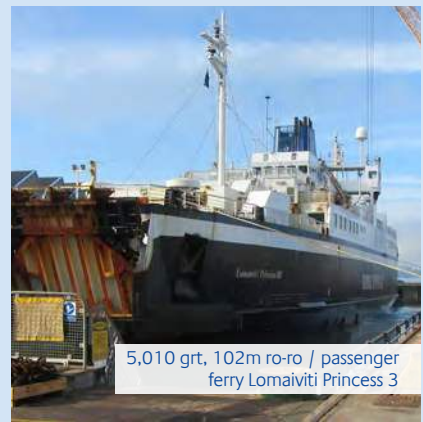
Cargo vessels operating in the South Pacific

Babcock provided docking services to a number of international commercial vessels operating in Australasian and South West Pacific waters. These included the passenger ferry Lomaiviti Princess 3, which operates in Fiji as part of the Goundar Shipping interisland



shipping fleet; the general cargo vessel Imua II managed by MarConsult Schiffahrt Hamburg and the LPG Tanker Bougainville managed by Executive Ship Management Singapore. Work packages

for these vessels spanned intermediate surveys and hull preservation, i.e. rudder, propeller and bow thruster clearances, propeller polishing, hull anodes and more. Imua II also required assistance with cargo hatch repairs.



Health and Safety News:

Babcock New Zealand's Health & Safety team have initiated an inclusive health and safety relations programme to work more closely with its dockyard sub-contractors.

The programme has resulted in sub-contractors:

- 1 attending Babcock Health & Safety Committee meetings,
- 2 consulting with the Health & Safety team at the risk assessment stage of planning their work,
- 3 improved responses for the reporting and notification of incidents and near misses,
- 4 being involved in problem solving to improve safety.

While the main aim of this programme is to create an environment that encourages open

and transparent communication between all of the teams involved in dockyard projects, this initiative will instill a high level of confidence that each worker is supported to carry out their task as safely as possible. Babcock's group-wide goal is to never compromise on health and safety and to ensure everyone goes home safe every day.

Superyacht visits

We were pleased to assist the 63m Lürssen explorer yacht, Polar Star, in October 2017. The work package for the 16 day dry-dock period included removal of rudders and propellers for survey and inspection of the stern thruster. Under water hull preservation, ballast tank cleaning and painting, survey of plimsol and draught marks were also completed along with replacement of impressed current system and hull anodes polishing anchor pockets and fairleads. This was Babcock's first docking of Polar Star and first opportunity to work with Master Yachts, the Mallorca based managers of the vessel. The communications and co-operation throughout the project with both the crew and management company was excellent.

Other superyachts dry-docked for survey, preservation and repair work included the 87m, 2,610 grt exploration yacht Arctic P and the 78m Feadship luxury motor yacht Tango.



Polar Star in dry-dock



Tango entering dry-dock



Polar Star - starboard propeller being aligned and re-installed by Babcock technicians



Arctic P on completion of underwater hull painting

New Zealand Navy Maintenance

The Royal New Zealand Navy's 118 m, 3,600 t, Anzac Class Frigate Te Kaha was dry-docked in November 2017 in order to carry out bilge keel repairs, replace a leaking controllable pitch propeller blade seal and to carry out essential maintenance e.g. dismantling and preservation of the gas turbine air intakes, as well as preparation of key weapons systems prior to the ships departure to

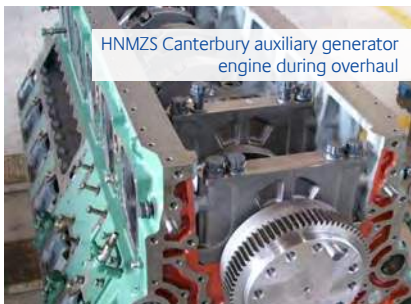
Canada for the Frigate Systems Upgrade project. Babcock technicians recently completed over 5,000 man-hours of maintenance Te Kaha's sister vessel Te Mana, including an overhaul on one of the ships MTU diesel generators.

Babcock recently undertook the major overhauls of both main engines on HMNZS Canterbury, the Navy's

131 m, 9,000t sealift and amphibious support vessel. While the ship was in maintenance, a number of other key activities were completed including the preservation of the ro-ro deck, overhaul of the ships hydraulic accommodation ladder, cleaning and inspection of the sewage treatment plant, repairs and maintenance on the ships Landing Craft Medium vessels.



HMNZS Canterbury load testing LCM cranes



HMNZS Canterbury auxiliary generator engine during overhaul



HMNZS Te Kaha - Babcock Technicians Replacing Propeller Blade Seals



Ballast Water Management

International Maritime Organization regulations, introduced for ballast water control, have resulted in increased enquiries over the last year for production of Ballast Water Management plans (BWMP) on vessels. This has led MID to develop a template that can be customised for each vessel, and is applicable across many different vessel types. The template provides guidance to operators on all of the applicable regulations for each country and regulatory zone visited. Vessel information, tank layouts, ballast systems and ballast load sequences are all input into the BWMP. MID has recently gained approval from class societies for BWM plans as applied to medium sized fishing vessels.

Stability Calculator

MID have developed a stability calculator to aid vessels to perform stability calculations onboard. This improves safety of operations and allows the operators to ensure the most up to date stability information is generated. The calculator can be applied across a range of vessels and allows operators to enter specific loading data for the vessel condition on the day. The calculator mimics the approved stability book and assesses stability for compliance against the applicable rules. Complex tank layouts can

The screenshot displays a complex data table with columns for 'Current WFT', 'Max. Total', 'Min. Total', 'Total', 'Total', 'LCS', 'TGS', 'WGS', and 'ISM'. Below the table are several diagrams: a side view of a vessel's hull, a cross-section of the deck and internal structure, and a detailed view of the hull's internal compartments. A note at the bottom right of the diagrams reads: 'Stability calculator – typical screen view'.

be accommodated and the calculator will plot the waterline for visual reference. The calculator can also be used for damage scenarios providing fast information to the master on stability compliance and survivability from damage caused by collision or grounding. The calculator is not intended to replace the approved vessel stability book.

Cargo Lashing Calculations

MID have been supporting a long term project to upgrade wharf facilities in the Chatham Islands (650 kms east of NZ). Shipment of plant (including a 50t excavator and a 130t crawler crane), machinery and wharf materials (up to 1,000t) was towed by barge on multiple voyages from mainland NZ to the Chathams. Lashing and stability calculations were required to ensure

the safety of the barge and cargo in transit. MID carried out lashing design and calculations for each voyage using recognised standards and also determined appropriate weather limits to guide the operators. Details of lashings to use, including deck tie downs and dunnage arrangements, were supplied.



Lashing design is a specialty of MID with experience in many different project cargo load outs.

For any enquiries or more information regarding MID, please contact Jason Smith, MID Manager MRINA C.Eng
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Ship Repair and Marine Engineering Enquiries

If you are considering NZ docking or refit projects, or if you would like further information regarding Babcock services, please contact:

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 or Email: Keith.Drake@babcockinternational.com or shiprepair@babcockinternational.com
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We are currently scheduling dry-dock space for October to December 2018, with dry-dock openings also available from February 2019 onwards.



Babcock [NZ] Ltd
 Ship Repair & Refitting | Engine & Machinery Repairs | Mechanical Fitting & Machining
 Steelwork Repairs & Fabrication | Painting & Outfitting | Electrical & Electronics
 UT Measurement & Testing | Calibration | Project Management | Design & Naval Architecture
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