



The Porthole

Volume 15 No. 01
January 2015

The newsletter of the South Australian Branch of the Company of Master Mariners of Australia.

PO Box 1, PORT ADELAIDE, SA 5015



From the Branch Master

G'dday to all our readers,

I trust that everybody had a great Christmas and is having a pleasant and productive New Year.

I'm afraid that our planned December Federal telephone hook-up was postponed due to a short sojourn in hospital by Frank, our Federal Secretary. According to the latest report received, he is on deck again and fit once more. While this is good news, it means that there is nothing to report on a Federal level. The fact that I have not been e-mailed from the Federal body usually means that nothing dreadful has happened, and that things are ticking over as per usual.

On a local note, as I have mentioned for some time now, I am stepping down as Branch Master at this month's A.G.M., and I will not stand for re-election. Three years is enough, and I'm sure that somebody with more drive and energy than me would do a better job. Beside that, my short term memory is getting worse, and I feel that I should fade into the background before I embarrass myself!

Pleasant Sailing to you all

Bob W (BM)

From the Editor

Please note that after 4 years as Hon. Editor I will be stepping down at this month's A.G.M and I will not be standing for re-election.

Paul Phillips (Hon Editor)

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29th January 2015: ANNUAL GENERAL MEETING

**The next Branch Meeting will be held at
the Largs Pier Hotel, 198 The Esplanade, Largs Bay,
on Wednesday, 29th January 2015 at 1145 for 1200.**

**Please confirm your attendance at the lunch or register your apology
before 1200 on Monday, 27th January 2015 with either
Ian Dickson (8396 1030) or Robert Westley (8536 4863)**



The Company of Master Mariners of Australia Ltd. is a Company established to promote and further the efficiency of the Sea Service generally, and uphold the Status, Dignity, and Prestige of Master Mariners in particular.

The Company of Master Mariners of Australia Ltd., S.A. Branch.

Branch Annual General Meeting
at the Largs Pier Hotel, on 29 January 2014

Minutes

Meeting opened: at 1345 hours

Members present: Captains Westley (Branch Master), Buchanan, Carr, Dickson, Fraser, Hammond, Hehir, Kemp, Parsons, Phillips & Pronk, and Mr Wynne.

Apologies: Sir Eric Neal & Capts. Bourne-Jones, Carrington, Carter, Ganesan, Ferrao, Holmes, Lydell, Marshall, Pearson, Rajagopalan & Don Sleath & Messrs Boettcher & Hales.

Minutes of last Annual General Meeting, 30 January 2013: (previously circulated in the Porthole). Capt Carr proposed, and Capt Phillips seconded, that the minutes be accepted as a true record: carried.

Business arising: Nil

Treasurer's Report:

Bank Closing Balance for 31 Dec 2013	*1-1100	<u>452.53</u>	
Opening Ledger Balance for 1 Jan 2013		458.21	
Plus Cheques and Cash Received		2,980.09	(Inc GST)
Less Expenses		<u>-2,985.77</u>	(Inc GST)
Ledger Closing Balance Dec 31 Dec 2013		<u>452.53</u>	
Cash on Hand	*1-1190	0.00	
Investment A/C -Short term	*1-1200	2,718.86	
Investment A/C -Long term	*1-1300	6,538.56	
Debtors	*1-1400	0.00	
Inventory	*1-1500	542.99	
Trade Creditors	*2-1200	<u>0.00</u>	
Total assets		<u>10,252.94</u>	

Ledger summary tabled.

Capt Hammond proposed, and Capt Kemp seconded, that the Treasurer's report be accepted: carried.

Branch Master's Report: Well here we are again. 2013 has flown past and we are now into 2014, in fact February is almost upon us and I have only just got over Christmas. The year has been successful on a Branch level and also at a Federal level. The Branch has ticked along nicely with our new members balancing those we have lost. Our after luncheon speakers have all been interesting and the food and drink standards high while the cost has been reasonable. The Branch Court officers have been very good – they should be – they've been at it for a while now. Our Editor, Paul, always produces the "Porthole" to extremely high standards and it is commented on favourably by other directors. Ian, the Secretary and Phil, the Treasurer also deserve a mention for jobs well done.

Federally, we moved on from a West Australian Federal Court to a system of Branch Masters becoming directors of the newly conceived Federal Court, having regular meetings by conference calls. Frank Kaleveld has remained as Secretary and it all seems to have worked quite well.

Our 2013 Federal AGM in Melbourne followed by the IFSMA conference was a noted success even if we only broke even financially.

Branch Annual General Meeting at the Largs Pier Hotel, on 29 January 2014
Minutes (continued from previous page)

Finally, if we have no new volunteers to help with the Branch Court, the present Court have agreed to press on for another year, but please note that we can't go on forever.

Thank you.

Election of Officers: There being no other nominations, the following members were elected unopposed to the Branch Court:

Branch Master	Robert Westley	Mariner Warden	Mike Hehir
Deputy Branch Master	-	Sea-going Warden	Michael Carrington
Treasurer	Philip Hammond	Sea-going Warden	-
Assistant Treasurer	-	Editor	Paul Phillips
Secretary	Ian Dickson	Speaker Co-ordinator	Robert Buchanan
Minute secretary	Mike Parsons	Past Branch Master	Iain Fraser

7. New Branch Master's comments: In the absence of new Court members, the present Court has agreed to continue for another year, as will I. Even though it is by default, I thank you for bearing with me for another year. Our guest speaker agenda is unsettled at the moment, but there are always a few irons in the fire. The direction that Company will be taking will become more resolved after the Federal AGM in Newcastle in early April.

8. The next Annual General Meeting is intended to be held on Wednesday, 28th January, 2015.

9. Meeting closed at 1405hrs.

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The following item is a transcript of a scanned item and was mailed to the Editor by a friend in New Zealand. It was found on the British Seafarers Facebook page. It was scanned from an unidentified publication, but the page carried the title "Cruising Outpost News"

Why I Want To Be A Captain

(Written by a 10-year-old British schoolboy)

"I want to be a captain when I grow up because it's a cool job that's easy to do. Captains don't have to go to school such a long time. They only need to learn figures so they can read instruments. I think they also have to be able to read maps so they don't get lost when they sail.

Captains have to be brave so they don't get scared when it's so foggy that they can't see and when the propeller falls off they have to know what to do about it. Captains have to have eyes that can see through the clouds and they mustn't be afraid of thunder and lightning which they have closer to them than what we have.

The captain's wages is another thing I like. They earn more than they can spend. That's because most people think it's dangerous to drive a boat, except captains, because they know how easy it is. There's not much I don't like, except that girls like captains. All the girls want to marry a captain, so captains are always having to chase them away to get some peace...

I hope I don't get seasick, because if I get seasick I can't be a captain and I'll have to start working."

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The Company of Master Mariners of Australia Ltd., S.A. Branch.

Branch Meeting at the Largs Pier Hotel, on 26 November 2014, at 1200.

Minutes

Opening & welcome to Branch members and guests: Meeting opened at 1205 hrs

Members present: Captains Westley (Branch Master), Buchanan, Carr, Carter, Dickson, Fraser, Hammond, Holmes, Kemp, Lydell, Parsons, Phillips & Pronk & Mr Wynne.

Guests: Messrs Alan Burgess (Guest Speaker) & Boyce, and Mesdames Dickson, Carter, Faria-Pronk, Fraser, Hammond, Lydell, Parsons, Phillips & Steenvoorde.

Apologies: Sir Eric Neal, Captains Bourne-Jones, Ganesan, Marshall, Pearson, Rajagopalan & Don Sleath, and Messrs Boettcher & Hales.

Minutes of last business meeting: 29 October 2014 (circulated in the Porthole). Capt Fraser proposed that the minutes be accepted as a true and correct record of proceedings. Seconded by Capt Carr and carried.

Business arising from the minutes:

a) Speakers:

???? Kate Linley: Topic: Under Keel Clearances (**Bob Westley/Howard Pronk?**).

Visits: Adelaide Oval Tour 10/12/14 11.00. Adults \$20, Concession \$15. Adelaide Oval Football Members and SACA (South Australian Cricket Association) Members admitted to standard tours free of charge on presentation of their membership cards. Those Branch members participating should meet at 1050 at the information desk adjacent to the south entrance.

Suggestions welcome.

b) Re-engraving of the *One and All* bell: Capt Carr reported that the engraving on the bell, which was originally presented by this branch, had been almost worn away by polishing. It was agreed that the branch

Treasurer's report: (**Table report**)

Balance at 29/10/14	510.15	Bendigo Bank deposit balance at 29/10/14	2,700.00
Income:	0.00	Interest added quarterly	<u>0.00</u>
Expenditure: Editor's expenses	<u>-179.48</u>	Bendigo Bank deposit balance at 19/11/14	<u>2,700.00</u>
Balance at 19/11/14	<u>330.67</u>		
		Bendigo Bank Term Deposit at 23/07/14	<u>6,809.91</u>
		Re-invested for 12 months from 02/02/14 @ 3.55%.	

Captain Hammond proposed that the Treasurer's report be accepted. Seconded by Capt Parsons and carried.

Membership:

Applications:

Applicant	Status sought	Branch
Dylan George SMITH	Ordinary	Western Australia
John Richard WATKINSON	Ordinary	Queensland
Kevin Ronald STONE	Ordinary	Western Australia
Eduardo ALCAREZ	Ordinary	Melbourne
Sebastian Darren LOCKE	Ordinary	Western Australia

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Upgrades:

Applicant	Status sought	Branch
John Richard KAVANAGH	Ordinary	Queensland
Shannon John NICHOLSON	Ordinary	Western Australia

Ratifications: Nil.Branch Members:

Category	Number		
	Financial	Unfinancial	Total
Members	8	0	8
Seagoing members (incl. tug crews & pilots)	3	0	3
Retired members	15	0	15
Associate member	<u>3</u>	<u>0</u>	<u>3</u>
Total paying members	29	0	29
Honorary members	<u>4</u>	<u>0</u>	<u>4</u>
Total Levied Members	<u>33</u>	<u>0</u>	33
Life Members			<u>2</u>
Total Branch Membership			<u>35</u>

8. Correspondence 18/10/14 to 14/11/14: A summary of the inwards and outwards correspondence was tabled, previously approved by the Branch Court.

9. Federal Matters:

a) Federal Court: The Branch Court endorsed the Branch Master's previous agreement to the Federal Court's covering of Capt Iain French's reasonable accommodation expenses if he attends the IFSMA AGA41 at Vina del Mar, Chile, on 16 and 17 April 2015, on the understanding that he would be paying transport costs himself.

The Federal Secretary had been advised by the Branch Master that, at the SA Branch meeting on 29 October 2014, members present unanimously passed the motion "that the SA Branch recommends to the Federal Court that a letter be sent to the Federal Government expressing our concern at the decline in the

b) 75th anniversary book: Nothing further to report.

10. Motions on Notice: Nil

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11. General Business:

- a) Articles for "Master Mariner". Always in demand
- b) Branch AGM 28/01/2015. The Secretary advised that no nominations had been received to date. AGM notice and nomination form have been included in the November Porthole
- c) End of Year function. The Branch Court has decided not to hold an End of Year function.
- d) Company plaques. The Queensland Branch is about to order COMMA plaques and has invited other Branches to include their own orders. After discussion, it was agreed that this Branch should order 5 plaques, provided the cost does not exceed \$300. It was suggested that, if the plaques were purchased, the *One and All* and the South Australian Maritime Museum should each be given one plaque. **Individual Member's orders, in writing, will be passed on to the Queensland Branch.**
- e) Any other business. Capt Buchanan suggested that membership applications be published in the Porthole instead of being read at the Branch meeting. There was a brief discussion on whether the requirement that applications be "READ" meant "out loud" or "reading the printed word". The Branch Master is to raise the matter at the next Federal Court meeting.

12. The next Branch meeting will be held at 1145 for 1200 on Wednesday, 28 January 2015, at the Largs Pier Hotel, Largs Bay. As this will also be the Branch AGM, there will be no guest speaker

13. Business meeting closed at 1235 hrs and adjourned for lunch.

The meeting resumed at 1330 hrs. Capt Dickson introduced the Guest Speaker, Alan Burgess, the Chairman of the "Friends of the One & All" Sailing Ship Inc.

One & All was built at North Haven in 1987 by volunteers as part of the State's Silver Jubilee programme and to encourage the shipwright skills. The ship is a brigantine design and based on similar vessels which traded around S.A. coastal ports a century ago. The ship has been operated by several bodies and in the absence of a commercial operator, has being administered by the "Friends" for the last 2 years, although they would love to see a suitable operator take over.

She was planned to be used as a youth training vessel, doing 5 to 7 day trips with a crew of young people between 17 and 25 years old. The intention was not to train seafarers but to create a situation where these youths learnt to work together as a team and take on a variety of tasks which were unfamiliar (keeping quarters tidy, not being the least). Some of these youths were "at risk" persons, others part of a school development programme and now over 5,000 have been part of this programme.

The ship is also open to the general public and used for day sails which are well patronised and help promote awareness of the ship's role in S.A.

Mr Burgess showed a video of the ship's operation.

At the conclusion of his presentation, Mr Burgess answered questions from members. Capt Buchanan proposed a vote of thanks which was carried by acclamation

The meeting then closed at 1430 hours

Branch Meeting at the Largs Pier Hotel, on 26 November 2014, at 1200.



Above (L to R): Captains Kemp, Carr, Holmes, Captain and Mrs Lydell, Captain and Mrs Hammond, Captain Dickson (back to camera), Mr Burgess, Captain and Mrs Parsons.



Above (L to R): Captain Buchanan, Mrs Phillips, Captain Westley, Mr Wynne, Mrs Steenvoorde, Mrs Dickson, Captain and Mrs Carter.



Above (L to R): Mrs Dickson, Mrs Faria-Pronk, Captain Pronk, Mrs Fraser, Captain Fraser.

New Cranes for the Adelaide Container Terminal.

During 2014 Flinders Ports announced that two new cranes had been ordered for delivery to the Adelaide Container Terminal. The cranes are now due to arrive at Adelaide on board the British flagged "NOMADIC MILDE" ; ETA, as at Friday 23rd January, is during the evening of Wednesday 28th January, with discharge of the crane components to commence on dayshift on Thursday at berth OHT7 and take 3 to 5 days, working daylight hours only. The vessel's last port of call is Durban.

NOMADIC MILDE (IMO 9463554)

is an Isle of Man registered General Cargo ship operated by Carisbrooke Shipping of Cowes, Isle of Wight. She is fitted with two Holds suitable for both containers and strengthened for heavy cargo.

The total hold capacity is about 16230 cubic metres (*just under 573,200 cubic feet*). The maximum container capacity is 771 TEU based on empty containers and with all Tween Deck hatch panels landed ashore. When not fitted in the Tween Deck, the panels may be retained on board stowed immediately forward of the accommodation block. The weather deck is fitted with MacGregor type folding hatch lids. (The mention of a hydraulic pumping station on the G.A. Plan may indicate these are hydraulic instead of wire pull)



Cargo handling gear consists of two 80 MT SWL, on 19 m, deck cranes mounted on the starboard side and combinable to 160 MT SWL.

The ship is powered by a 6 cylinder MAK diesel engine delivering 5400kW at 500rpm through a four bladed propeller; she is fitted with a 500Kw bow thruster.

The ship is fitted with a stern anchor.

H.F.O tanks are situated forward of No.1 hold, over the Emergency Fire Pump room and aft of the Bow Thruster Room and Fore Peak; and between No.1 and No.2 Holds, under the stowage positions for the opening hatch covers.

The ship is double-bottom throughout, and double hull forward of the engine room, including in way of the H.F.O. tanks.

Other details, as stated on the Carisbrooke Shipping website, are:

Delivery Date: 21/01/2011

Yard: Yangzijiang

Flag: Isle of Man

Class: GL

IMO Number: 9463554

General Cargo MPP SD/Tween Open-Hatch Box

Dwt: 12,914 on 8,056 m SS W

GT/NT 9,530 /4,398

Loa 138.06 m (453ft)

Beam 21.33 m (70ft)

Depth 11 m (36ft)

2 Holds/2 Hatches

Hold Sizes: Ho 1: 37.50 m x 17.50 m Ho 2: 50.25 m x 17.50 m

Hatch Sizes: Ha 1: 37.50 m x 17.50 m Ha 2: 50.25 m x 17.50 m

Speed and consumption basis good weather/non-adverse current conditions and optimum sea water temperature:
abt 14 knots on abt 20 mt ifo 380 cst ndas

Range about 11,000 n.miles

New Cranes for the Adelaide Container Terminal. *(continued)*

The ship has a complement of 17 persons. Accommodation is situated aft, arranged over four decks.

Poop Deck: Deck and Engine Offices, Galley (for'd midships); Officers Mess/Dayroom (Stbd) Crew Mess/Dayroom (port).

A Deck: Work Boat (davit launch) port side; Hospital (port aft); cabins for six Crew, all single with ensuite.

B Deck: Emergency Boat (drop launch); Meeting Room; suite for Chief Engineer (port for'd); cabins (all as Crew) for Second Engineer, Cook, two Cadets.

C Deck: Suites for Captain (port for'd), and Chief Officer (stbd for'd); cabins for Pilot/Owner, Second Officer, Supercargo.

Bridge: This has a 'wrap around' window on the port side in front of the Solas Conning Position, which is situated outboard of the helmsman's position. A second Conning Position is located inboard. A Chart area is situated in the aft stbd corner, and a Radio area to port. The outboard 2.5m of the bridge wings are exposed and the outboard 4m of the starboard bridge wing is set back about 2m to allow a stowage position for the jib end of the after crane.

View from the bridge is partially obstructed by both crane cabs, but not by the crane jibs when stowed for sea.

A more detailed G.A. Plan may be viewed on the Carisbrooke Shipping website.

Note: *All figures within brackets and in italics are as converted by the Editor.
The photograph of the NOMADIC MILDE is from the Carisbrooke Shipping website.
The photographs and diagrams of Liebherr cranes are from the Liebherr Cranes website.*

LIEBHERR CRANES

Both cranes have been manufactured by Liebherr cranes at their facility at Fossa in County Killarney, Ireland, where they have been assembled for testing; dismantled for shipment and reassembly at destination.

Ship to Shore Gantry Cranes Technical Data

It is believed both cranes are "Widespan" but data for "Post Panamax" is included.

Where appropriate data is given for Crane 1 as built and installed by Deer Park Engineering and operated by Trans-Ocean Terminals (TOT), when the Adelaide container terminal first opened in January 1977.

The Liebherr cranes will be the first cranes to be assembled on site since the erection of Crane 1 (Deer Park Engineering) and Crane 2 (Boral Johns Perry).

	Widespan Crane	Post Panamax Crane	Deer Park No.1
A: Gantry span	35 - 50 m		
B: Outreach	30 - 40 m	40 – 45 m	34.1 m
C: Backreach	15 - 30m		
D: Lift height	20 - 25 m	30 – 35 m	22.2 m
SWL	40/50 t single 65 t twin		46 t
Hoisting speed	50/125 m/min		40 m/min
Trolley speed	180 m/min		150 m/min
Travel speed	100-140 m/min		
Wheel load**	40-50 t per metre		
**Based on 8 wheels per corner at 1 m spacing			
In service wind speed	72 km/h (20 m/s) (38.85 knots)		30 knots

New Cranes for the Adelaide Container Terminal. *(continued)*

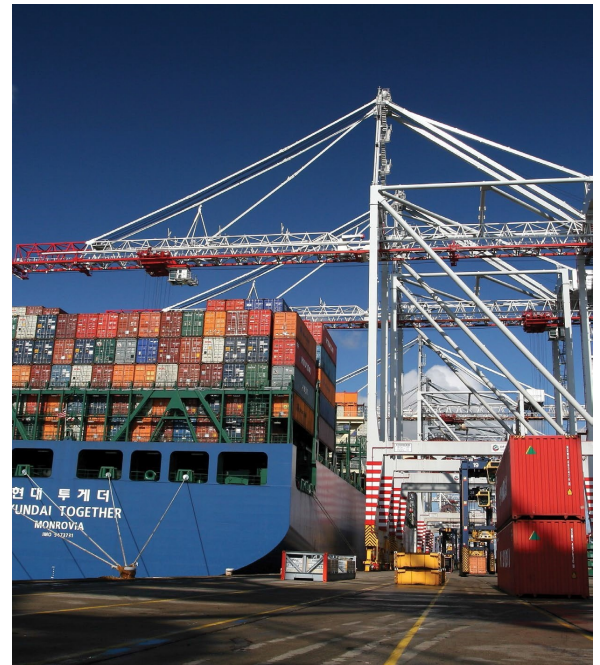
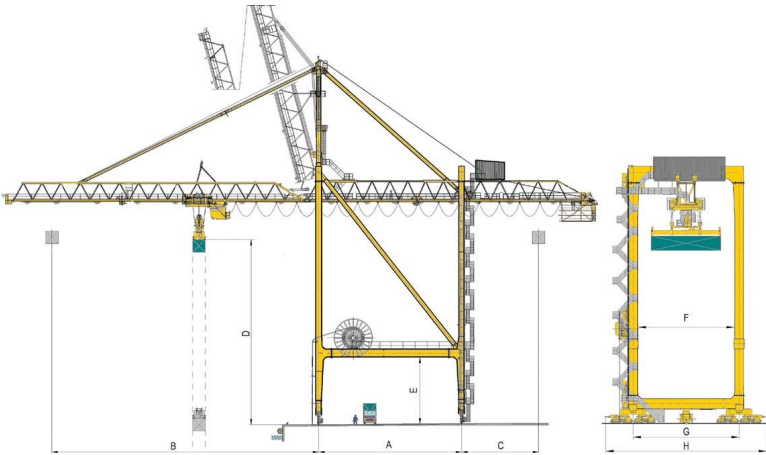
Liebherr Cranes also offer a Crane simulator for initial and on-going training of crane operators; "...increases port safety and productivity by providing a cost-effective and highly efficient crane operator training solution."

"Thanks to the virtual port environment, safety risks like damaging vessels, port equipment or accidents involving port personnel are eliminated. As simulator-based training is relatively inexpensive, trainees can spend more time in the virtual environment, learning instinctively how to react to unexpected situations and so improving port safety."

"Conventional on-crane training impacts on day-to-day port operation, until drivers are competent, uses fuel/power and produces wear and tear. Eco-friendly simulator training helps to minimize such costs. Furthermore, this advanced training method has the potential to significantly reduce costly accidents."

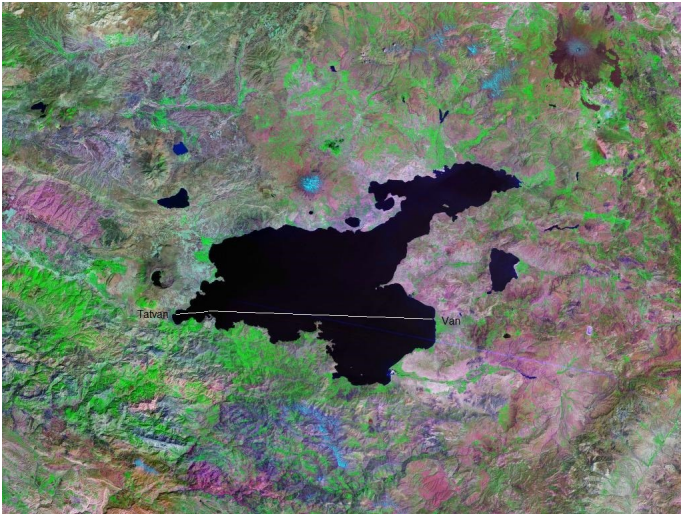
"A wide range of different functions is essential for the simulation of everyday and extraordinary situations crane operators face in the real world of port operations. Thanks to the flexible adjustment of the virtual environment, users can run through any container handling situation, anytime they want to."

The Liebherr Crane Simulator is available in three different configurations:
 Classroom: "Designed to be easily integrated into existing training centres."
 Cab-enclosed solution: "Installed in an original STS...cabin, this space-saving solution ensures that the operator becomes familiar with controlling the crane in a real-life environment."
 Containerised: "Housed in a fully furnished 40 ft container...".



Captain Bourne-Jones has kindly mailed me a link: <http://youtu.be/lv5QdpmcZPs> to a 6 minute time-lapse video of two similar cranes being assembled at DP World, Southampton. Although assembled at the terminal they had to be moved through the container park to the quay-side after assembly. Members with internet access may find it of interest.

The Train Ferry on the Trans-Asia Railway, or 'One from my Bucket List'.



The Trans-Asia Railway was first planned in the 1960's with the intention of linking Europe to East Asia. When completed it will comprise four corridors. Two of these, the northern corridor, more usually known as the Trans-Siberian Railway, and the ASEAN corridor running north from Singapore, are in operation.

Of the southern corridor only the link from Ankara to Teheran is operational, although once the Bosphorus Rail Tunnel is operational it will be technically possible to travel from England to the break-of-gauge at the Iran-Pakistan border.

When the line from Turkey to Iran, via Tatvan and Van, was built, it was deemed easier and cheaper to cross the lake by a ferry rather than built a line around the lake, through a mountainous terrain without a convenient pass. A study done in 1993 indicated that a line around the northern shore of the lake would be 237 km with 27 tunnels for a cumulative length of 12km, the longest tunnel being 2.1 km long.

Four train-ferries were carried overland to Lake Van and assembled at the lake shore. All were built at the Halic shipyard in Istanbul. On the western side, a pier was established at Tatvan. The eastern side pier is located in the city of Van, where the railway line resumes to the Iranian border. The distance between the two piers is 90km, and the lake crossing takes about 5 hours.

Eastbound, the trains leave Ankara late every Wednesday morning, arriving Teheran on Friday evening, sometimes early Saturday morning! The Westbound schedule is similar. About twenty-eight hours after leaving Ankara the Trans-Asia Express arrives at Tatvan on the western shore of Lake Van, the largest lake in Turkey. The lake is roughly 80km wide and 120 km long, and is located in a mountainous area in Eastern Turkey at an average altitude of 1690m.

Only the baggage coach travels on the rail ferry. Passengers must disembark from the Turkish train, cross the lake on the ferry, and then board an Iranian train, although still over two hundred kilometres inside Turkey, in order to continue to Teheran.

There used to be a service from Aleppo, Syria to the ferry at Tatvan, but this has ceased due to the civil war.

Vessel details are:

ORHAN ATLIMAN IMO 8891687 Built 1971
 GT 1918 Dwt 730
 81.8 x 14.5 x 3.3m (L x B x Draught)

2 diesels / propellers. 1,900 bhp
 Fitted with three tracks; total track length 156m. Loading/
 unloading is through the stern gate only; there is no bow
 door.

RAFET UNAL no details (Built after 1971)

Both above are train ferries, two below are car ferries

TATVAN IMO 7364467 Built 1975
 GT 1766 Dwt 662
 VAN IMO 7364479 Built 1976
 GT 1766 Dwt 983

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The Captain Cook Graving Dock

On a recent visit to her church's Op Shop, my wife was handed a book with the comment "Paul might like this."

'This' turned out to be an Foolscap size 90page book issued in December 1945 by the British General Electric Co. Pty. Ltd. Aust. (BGE) to celebrate the opening of the Captain Cook Graving Dock in Sydney, N.S.W. Filed among the pages was a business card of H. L. Barnard, BGE's Chief Engineer.

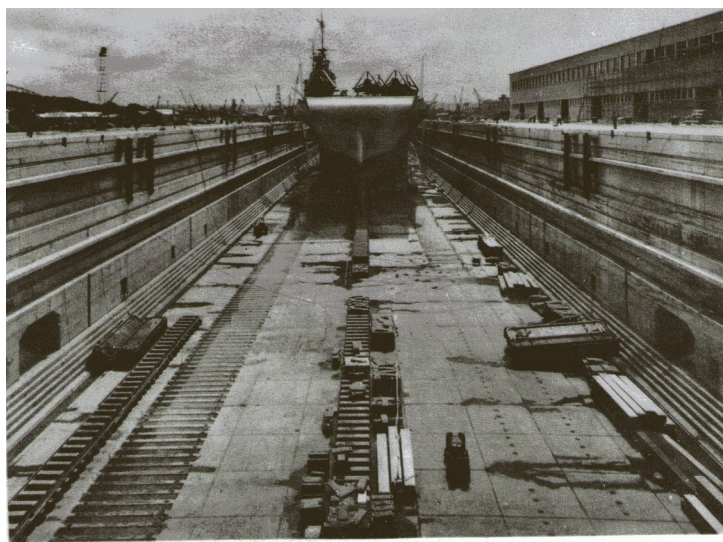
The book was "A record of GEC electrically driven Gwynnes pumping plant and other important engineering works carried out by the General Electric Company Ltd. England and British General Electric Co. Pty. Ltd. Aust. in collaboration with Gwynnes Pumps Ltd. England and other contractors."

Construction work on the Graving Dock was begun in December, 1940 and completed in March, 1945. The first ship to enter the graving dock was the aircraft carrier HMS Illustrious on March 2nd, 1945.

The dock, as built, "...is 1,177 feet (358.75 metres) from the outside of the north end to the centre line of the south end, and can be divided into two compartments. The inner one is 700 feet (213.36m) in length and can hold two heavy cruisers abreast; the outer, 380 feet (115.82m) long, can hold three destroyers abreast. This huge basin is 55 feet (16.76m) deep from cope to floor at the centre – nearly twice the normal draught of battleships of the 35,000-ton King George V class." "The depth of the dock at L.W.S.T is 41.5ft" (12.6m).

The main pumps comprised three each of 60 inch diameter suction, 54 inch diameter discharge, with a rate of 83,500 gallons per minute, this allowed the 57 million gallon (*just under 260 million litres*) capacity dock to be emptied in less than four hours. In 1945 that was twice as fast as Greater Sydney's average summer water consumption.

During WWII, Australian (HMAS Australia and Canberra, HMS Shropshire) and British heavy cruisers were 633ft (192.94m) LOA and about 68ft (20.83m) Beam. Australian destroyers (Q and Tribal classes) were just under 360ft (109.77m) and about 36ft (11.12m) beam. HMS Illustrious was 753ft (229.5m)LOA and 95ft (28.96m) beam.



H.M.S. "Illustrious" in the Captain Cook Graving Dock, March 2nd, 1945.

The RAN's new Landing Helicopter Dock, HMAS Adelaide, is 757ft (230.82m) LOA and 105ft (32m) beam; the RAN's Air Warfare Destroyers are 483ft (147.2m) and 61ft (18.6m) beam.

Above photo is from the book.

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