



THE MASTER MARINER

NATIONAL NEWSLETTER OF THE COMPANY OF MASTER MARINERS OF AUSTRALIA



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From the Federal Master



This year's world maritime day was held in Fremantle and was once again a great success with over forty booths, free entertainment and boat rides across our wonderful harbour. The public were able to tour a tug and naval frigate as well as view a navy submarine. It was a great show of cooperation between the Royal Australian Navy and the Company of Master Mariners and the event was well received by the community and a fantastic day for all involved.

I recently attended the Australian Ship-owners Association Conference, SEA11 which was held in Sydney. Congratulations to ASA for their 25 years of association. Of particular interest at this conference was

the keynote speech by Transport Minister Albanese. His speech provided insight into the most significant shipping policy reforms since the days of Peter Morris. In summary what does it mean;

- Tax Reform producing an effective zero tax rate for Australian owned and operated vessels along with accelerated depreciation rates, rollover relief and royalty withholding tax exemptions. This group of tax reforms is designed to encourage Ship-owners to base their operations in Australia and modernise their fleets. In addition, there will be exemption for the ship-owner to contribute the tax portion of Australian seafarers employed for more than 91 days on internal voyages on qualifying vessels (I will talk more on this at a later date).

- An Australian International Ship Register will be implemented which must employ at least two Australian seafarers expected most likely to be the Master and Chief Engineer.

- New Licensing regime which will encourage general licenses only for Australian owned and operated vessels and temporary licenses with a specified number of voyages.

- Implementation of a Maritime workforce development plan which will instigate a workforce and a workforce skills and development plan. It should be noted that the above tax reforms may have some training requirement attached to their accessibility.

The above package which is expected

to be in force by July 2012 may provide the best possible opportunity for Australian ship-owners to build a viable Australian shipping service. While the package is indeed very exciting, it may not incorporate all the opportunities we as Mariners were hoping for. It would have been good to see tax exemptions for seafarers working on non-Australian vessels to allow for greater training and development opportunities. However what has been offered is very much a step forward.

The Minister urged for us as an industry to talk about this new shipping policy and I strongly endorse his position. It is necessary to make people in Australia aware of how important shipping is. We can dig up the resources but without Ports and ships it is worth nothing as it won't make it to the market. So please read the policy and consider the detail as it unravels and discuss it within your workplace or Master Mariner branches. It is an important opportunity that should not be ignored and I look forward to robust discussion on this topic over the coming months.

Another presentation on the growth of LNG in Australia highlighted further opportunity for Australian shipping so let us hope we are appropriately positioned for this unsubstantiated growth.

May I take this opportunity to pass on my best wishes to all of you. ■

Captain Allan Gray
Federal Master

COMPANY NEWS

The WA Branch Librarian

A seafaring career seemed a fairly remote possibility for John Abernethy, born in the Scottish Grampians in 1930.

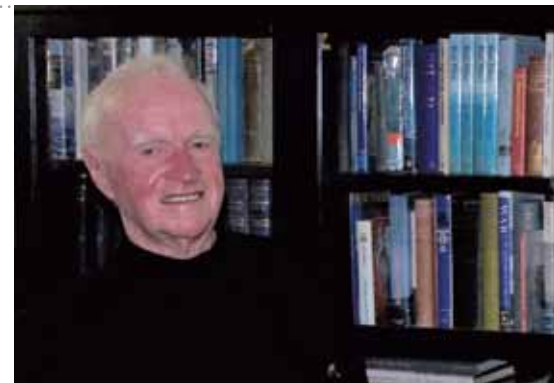
Throughout the Second World War, doing a milk run 365 days a year before school was detrimental towards education; exhausting in winter and led to falling asleep on warm afternoons in summer. However, it did engender an element of self-confidence, if not indestructibility. Parents, teachers and other authorities probably felt relief when this recalcitrant student absconded to sea.

From deck-boy on a fishing trawler out of the Faeroe Islands to Master on a wide variety of sea-going vessels, John has experienced a far greater range of shipping than most mariners. Initially, much of this was

influenced by Norwegian interests and his skills as a seaman have had the background of a very successful traditional maritime nation.

Due to his lifestyle in such varied roles of the fishing and shipping industries, plus several forays into the aeronautical ones, John has always had an interesting yarn to spin. Some of these border on the incredible/improbable but they are always interesting and thus he has had many articles published in the Log of the Western Gateway / Points West magazine.

Originally black-balled on his first attempt to join the Western Australian



Branch of the Company of Master Mariners of Australia, he was accepted as a full member in 1967. Probably, the initial set-back resulted from his position as President of the Merchant Service Guild, which obviously was unacceptable to some due to union interests being at odds with sections of the COMMA Constitution.

Since then, John has served on the Court of the WA Branch for many years as its Honorary Librarian. He is widely read and maintains interest in various other organisations involved in sea life today, thus is

in a good position to be in charge of the considerable number of books, magazines and publications belonging to COMMA.

These used to be stored in open shelves of bookcases in the upstairs area of the Mission to Seamen, before this was turned into commercial accommodation units. For many years since then, the library resources have been stored in make-shift shelving and large boxes in the Mission's basement. This meant that few of our members realised how substantial the library had become, especially with recent additions

bequeathed by several mariners' widows.

Undaunted by the task, John set about cataloguing the entire stock which took many hours of his time and produced a list which has been published. This allowed members to borrow a book(s) so long as they made an appointment with him to find it.

This was still not really satisfactory. It was not until a flood in the basement – luckily causing minimum damage that a catalyst was formed for the Court to buy proper glass-fronted bookcases which could

display the books. These are now just outside the Reading Room and locked, with one key being held by the Librarian and a second kept in the Padre's Office, thus allowing access to the Library when the former is unavailable.

Make John Abernethy's day; come in and choose a book from the shelves. He guards his publications well and keeps careful note of who has borrowed what so..... just be sure to return it after reading it!

We thank Capt Abernethy for his long standing commitment to CMMA ■



PORT NEWS



Thousands Celebrate Maritime Day

Thousands of people visited Victoria Quay at the Port of Fremantle in August to participate in the annual Celebrate Maritime Day.

The waterfront was a lively scene as people lined up to board Royal Australian Navy frigate HMAS Newcastle and a Svitzer tug, and toured the harbour on Challenger Institute of Technology's training boat.

Inside historic B Shed, people visited 41 information stalls related to the maritime and marine industries, watched a Sealanes-sponsored cook-off featuring 10 Navy chefs and Fremantle Ports Manager Port Operations Kevin Edward, who is a dab hand in the kitchen.

Performances from the South Fremantle Senior High School Band, the Royal Australian Navy Band and the Ocean Reef Primary School Marching Drum Corps Band were also popular with the crowds.

Federal Master of the Company of Master Mariners, Captain Allan Gray, who is Harbour Master at Fremantle Ports, said

the event was a positive step forward by the industry to raise its profile and highlight the many opportunities that existed in the sector.

"Showcasing WA's dynamic and diverse maritime industry provides the community with an insight into the important role the sector plays," he said. "Fremantle is the State's most diverse port with its container terminals, bulk import and export facilities, and its increasing popularity as a cruise liner destination."

Captain Gray said the event also highlighted the many industries that provided direct or indirect support to the shipping industry.

"Naval architects, coastal engineers, hydrographers, ship builders and repairers, navigation aid manufacturers, the Royal Australian Navy, engineering, marine surveying, maritime law and more all contribute to the viability of our shipping and port industry and to the economic success of WA and the nation.

"The value of the contribution all sec-

tors of the marine industry make, particularly in providing diverse employment opportunities for young people, cannot be overstated."

Captain Gray said the event's theme had been the International Maritime Organisation's 2011 World Maritime Day focus on piracy.

"While many children enjoyed dressing up like the Caribbean pirates of old, international piracy remains a significant concern for the shipping industry today and the event recognised the very serious side of modern piracy."

Fremantle's Celebrate Maritime Day was presented by the Company of Master Mariners of Australia with support from Fremantle Ports, the WA Department of Transport, Royal Australian Navy, Svitzer and Australian Maritime Systems. ■



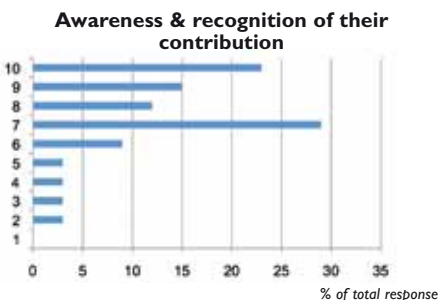
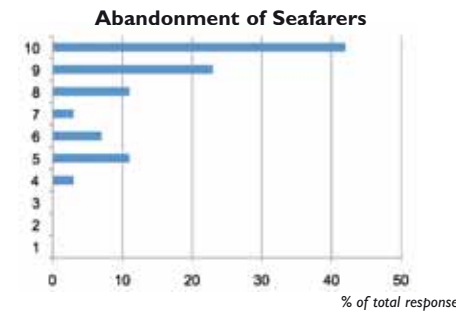
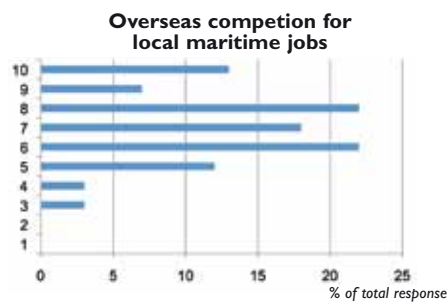
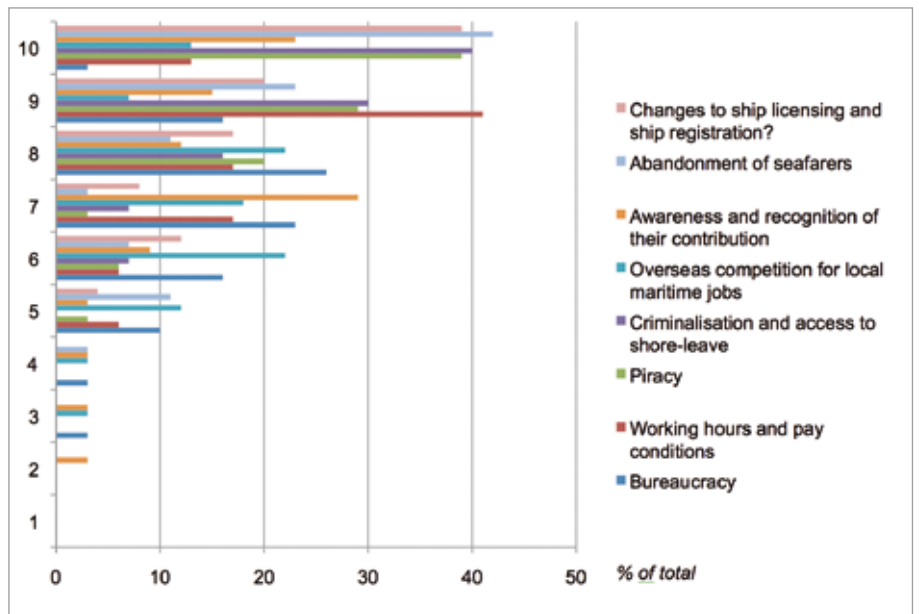
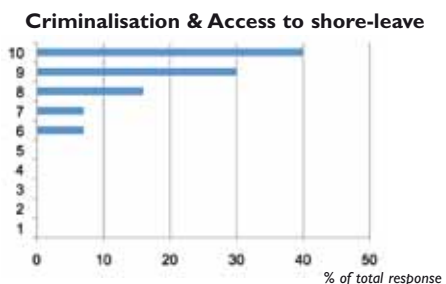
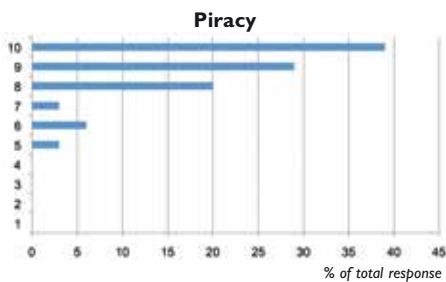
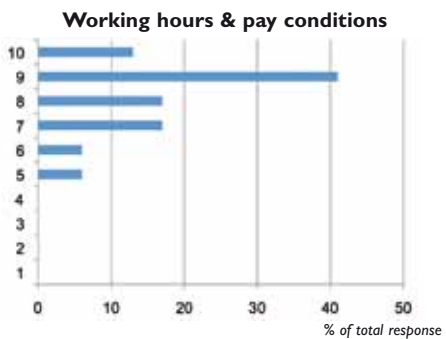
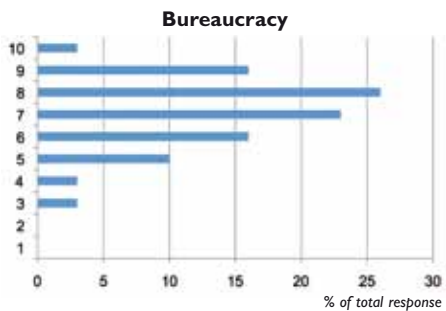
Summary of Responses Industry Questionnaire

Informa and the Company of Master Mariners of Australia introduced a new initiative at the Congress, designed to gauge the audience's thoughts on key industry issues.

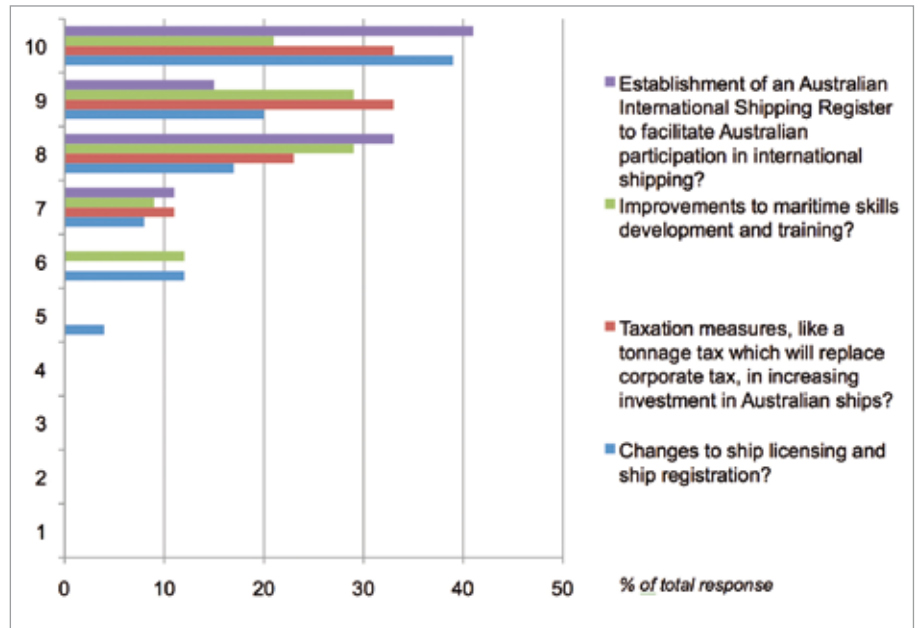
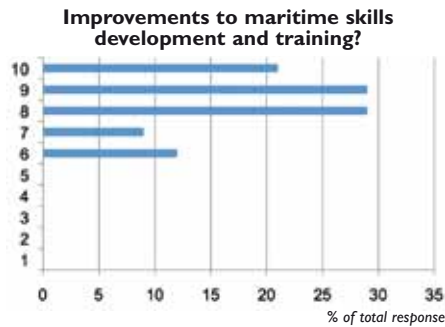
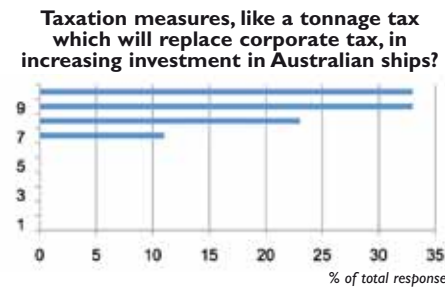
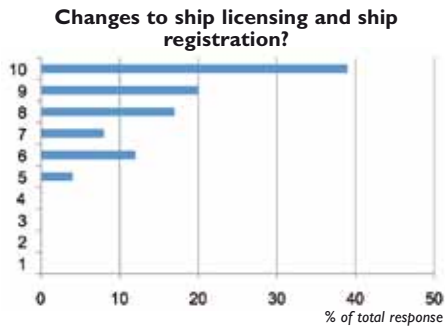
We asked attendees to honestly answer an industry questionnaire that focused on 3 issues: Seafarers; The Federal Government's national shipping reform and Piracy

We would like to thank everyone who participated. Below is a summary of responses.

1. The IMO designated 2010 as the "Year of the Seafarer". What do you believe are the major challenges facing seafarers at present? (Responses graded below from 1 – 10: 10 being the most important).

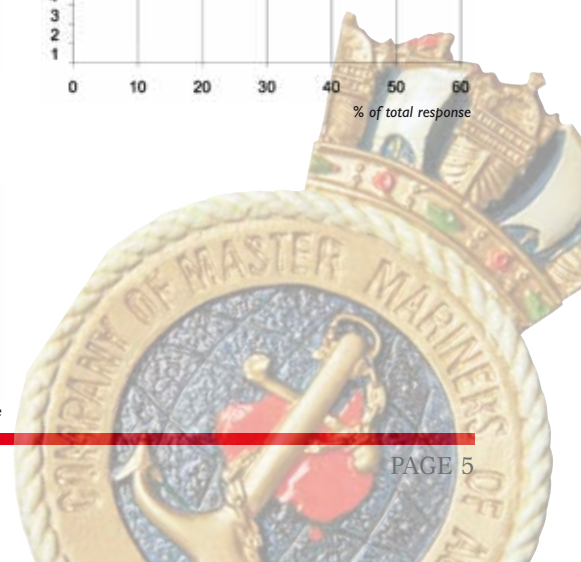
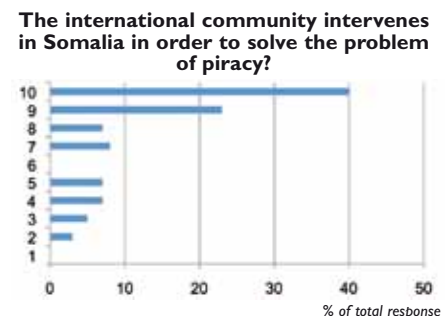
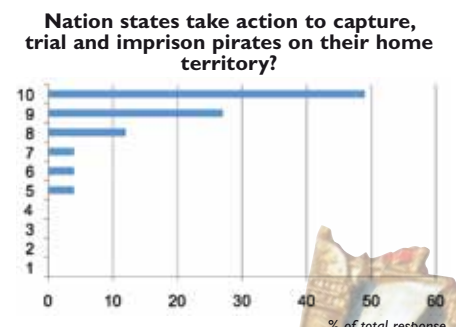
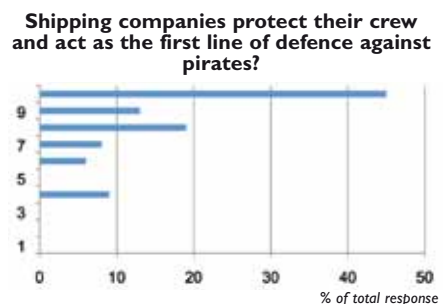
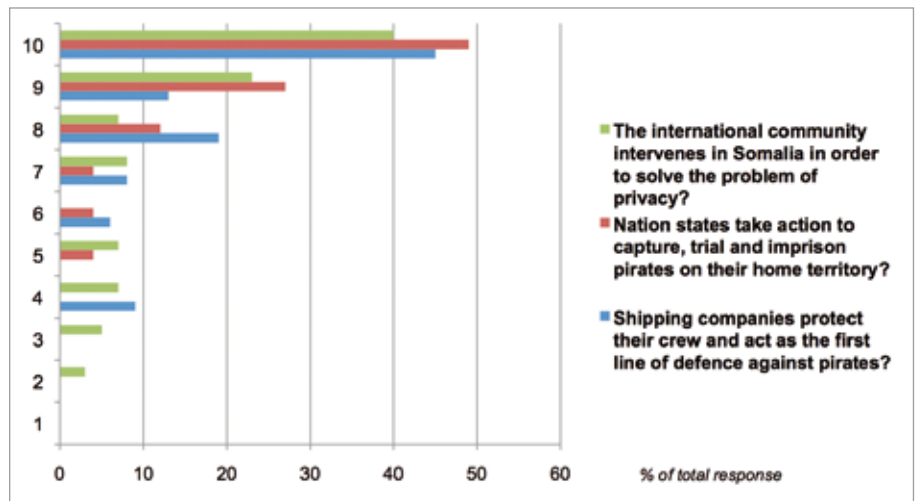


2. There has been much discussion about revitalising Australian-flagged shipping and Australian coastal trade. Last December, Federal Infrastructure and Transport Minister Anthony Albanese released the Federal Government’s discussion paper on national shipping policy reform. How important are the Federal Govt’s proposed ... (Responses graded below from 1 – 10: 10 being the most important).



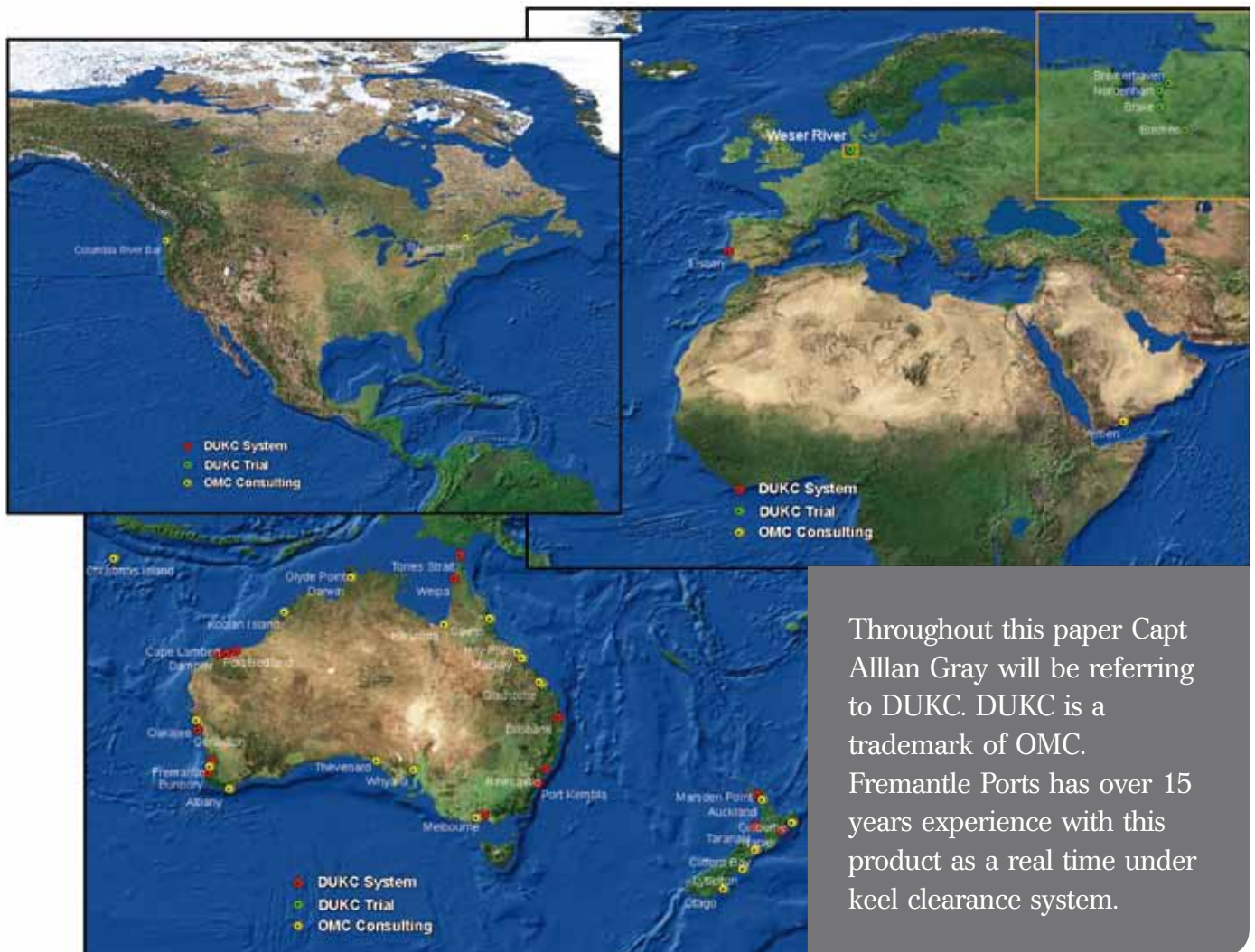
3. The theme for this year’s World Maritime Day is “Piracy: Orchestrating the response”. How important is it that... Here’s a question by question summary of responses:

NB: For more information please contact Tina Karas on +61 2 9080 4306 or tina.karas@informa.com.au



Real Time Underkeel Clearance Systems

A perspective for mariners



Throughout this paper Capt Allan Gray will be referring to DUKC. DUKC is a trademark of OMC. Fremantle Ports has over 15 years experience with this product as a real time under keel clearance system.

SCENARIO

Consider as Master of a laden tanker you have arrived at Fremantle Ports with a draft of 13.8m. You were advised by your chartering department that this was the maximum economical draft for this period. You note that the channel you must pass through is only 14.7m at LAT. The pilot boards in good spirit and presents you with a report with a lot of numbers and a pretty graph and calmly advises you “Captain we are good to go as we will have a minimum bottom clearance of 25cm for the transit.

WHAT DOES IT ALL MEAN?

In this paper Capt Gray will start with outlining the extent to which DUKC is being used in Fremantle. He will consider the static methodology versus the DUKC methodology and the resultant outputs and what they mean. He will also consider both the benefits and limitations for the Mariner

and what the industry must do.

Fremantle Ports has two principle areas of authority, the inner harbour (containers, cars and Break Bulk) and the Outer harbour (Bulk cargoes such as grain, alumina, mineral sands, fertilisers and petroleum).

Three (3) key channels exist:

- Deep Water Channel which was 15.2m but was recently dredged to 16.5m and 18m on the bend;
- Success and Parmelia Channel at 14.7m
- Stirling/Calista channel at 11.6m

Fremantle Ports operates DUKC in these three key areas. Recent experience with large tidal residuals required Fremantle Ports to reduce the trigger points for operation of DUKC to zero tide. Real time conditions are measured by three wave rider buoys, three wave poles (which measure wave and tide), two wind sensors, met station and current meter.

Given current static parameters, only two factors would be taken into account when determining under-keel clearance: the predicted tide and squat based on the speed envelope of the vessel.

How many vessels consider with squat the impact of shallow and deep water and bank effect? In many cases Safety Management Systems on board vessels stipulate UKCs required to be maintained by company vessels either by a single quantitative figure e.g. 1.0m or percentage of draft e.g. 10% of draft. It is most likely the case that these figures are prescribed by the Port in the port parameters. In many situations these figures have been based on past experience and generally apply equally to ALL vessels. They have been developed from either experience, gut instinct or good luck in that there has not been a grounding in the past.

Given the static parameters for Fremantle, the scenario 13.8m draft Tanker would be

faced with the following.

- Success and Parmelia channels static rule is 13% of Draft (Nov- Apr) 14% (May-Oct);
- Depth 14.7m;
- Transit time 30mins;
- 15.6m depth of water required for draft of 13.8m which would equate to a tide of 0.9m;
- Static Tidal Windows: Passage Commencement Windows;
- Window 1 Open Close : 25-Mar-2011 08:38 - 25-Mar-2011 17:17;
- Window 1 Open Close : 26-Mar-2011 09:23 - 26-Mar-2011 18:18.

However this calculation takes no account for the fact that on this day tides exceeded predictions in the order of 20-25cm. This factor alone may have given the Master a little more comfort for the transit but it should be noted that equably Fremantle experiences similar negative residuals which would have on paper closed out the vessel and the Master would not have been aware of it from his calculations.

The DUKC methodology takes into account the following;

- Surveyed depths taking into account survey tolerance and if necessary and allowance for Siltation;
- Actual tides recorded from tide gauges i.e. Astronomical tides plus or minus any tidal residual;

- Vessels draft;
- Squat given the vessels speed envelop and channel profile;
- Reduction in UKC due to Heel from wind, rolling or turns ;
- Pitch, yaw and roll.

The resultant is the residual under keel clearance (our 25cm).

Given the same tanker, it can be seen that on that day given the conditions the vessel would have achieved a window extended to 2030 and reopened at 0600 on the 26th. This would have extended the operational window by around 3 hours either end.

However, reducing the speed to 8.5 knots through Success and Parmelia channel would have provided the vessel a 24 hour window. In fact had the Master known, could he have loaded the vessel to a deeper draft?

Lets consider more the DUKC output and what it means:

The chart provided to the Pilot and Master is similar to the one shown below. In this case it is for a transit through Stirling channel. The bold lines are the limits and the lighter red and blue lines are the calculated results for the tranist.

For a safe transit two criteria must be satisfied;

Firstly that the Bottom Clearance (BC) i.e. the minimum clearance between the keel and the highest point of the sea

floor, allowing conservatively for all factors affecting UKC, must be greater than 25cm (PIANC guideline). and;

Secondly, the Maneuverability Margin (MM) i.e. the minimum clearance between the keel and the maneuverability-governing depth, allowing conservatively for all factors affecting UKC, is greater than 0.9m. Maneuverability Margin ensures that there is adequate flow of water over the rudder to maintain vessel steerage. The general PIANC accepted MM is 0.9m . However, our experience with certain vessel types and sizes such as the new generation container ships and 48m beam tankers has resulted in modifications to 1.0m and 1.1m respectively so as to ensure adequate water flow over the rudder to maintain maneuverability.

The chances of the actual BC or MM reaching the displayed values are remote. However when considering the overall risk mitigation strategy it is assumed that there is an equal probability of the event occurring.

So what's the challenge for the Master?

There is a real probability that given suitable weather conditions the Master could achieve increased loadings for his company. There is also the probability that he could be delayed.

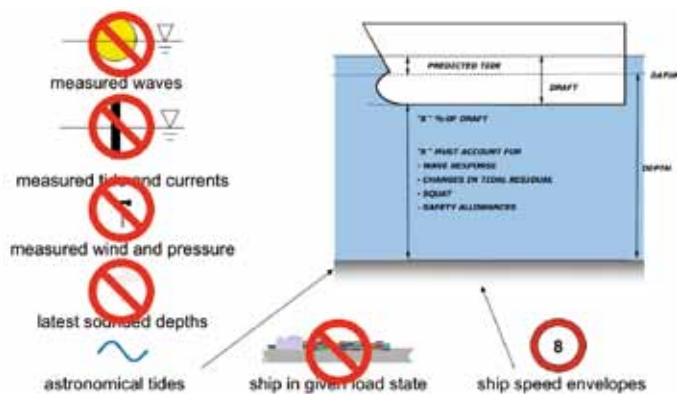
The Port often receives stability data which is transposed or is outside what would be considered the normal parameters so how confident or competent are the ship's crew at producing validated stability information? The Port has experienced an incident where one master falsely declared the arrival drafts as less than what they really were without understanding the ramifications of that action. Ensuring reliability and availability of sensors is critical to the operation. This is generally covered by back up sensors and modelling of wave transformation from alternate sensors.

Despite all this, the biggest challenge for the master is that he has no knowledge or training in real time under keel clearance systems. What should be done?

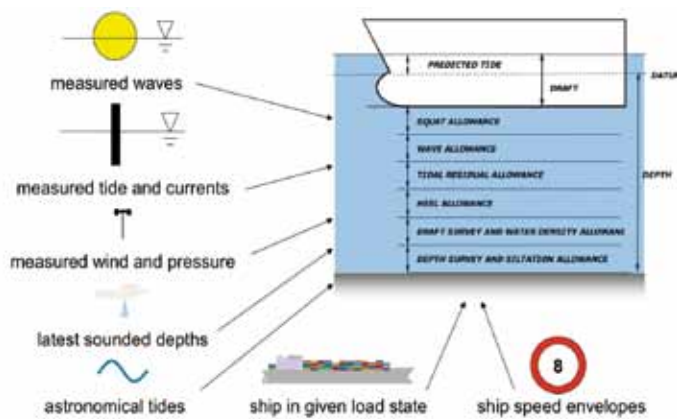
Ports utilize DUKC as a risk mitigation tool whilst customers in general benefit commercially from well planned loadings. The Master like the port needs to recognize that DUKC or other real time systems are available as a risk evaluation tool and in real terms provide a more defensible argument than the old static calculations. ■

Capt. Allan Gray
GM Port Operations / Harbourmaster,
Fremantle Ports & Federal Master
Company of Master Mariners Australia
For the complete presentation please visit
website

Static Methodology



DUKC Methodology



Important Changes to REEFVTS

The mandatory ship reporting system in the Great Barrier Reef and Torres Strait is being extended to the southern boundary of the Great Barrier Reef Marine Park from 1 July 2011 (see Figure 1). Ships will report through the Vessel Traffic Services system, REEFVTS.



Figure 1: Boundaries of the new REEFVTS Area

Within the extended area, REEFVTS will provide the same measures to enhance navigational safety and protect the marine environment as are currently provided between Torres Strait and High Peak (south of Mackay).

BACKGROUND

The International Maritime Organization (IMO) adopted Australia's proposal for a mandatory Ship Reporting System (REEFREP) in 1996 as a mechanism to enhance navigational safety, reduce the risk of shipping incidents and minimise any resulting ship-sourced pollution within the Great Barrier Reef and Torres Strait. REEFREP was one of the world's first mandatory ship reporting systems and came into force on 1 January 1997.

Since then Australia has progressively enhanced the delivery of services in the region through a suite of measures such as Automated Position Reporting via Inmarsat C, Automatic Identification System (AIS) and the use of decision-support tools.

These measures led to the introduction of REEFVTS in 2004, following IMO approval of Australia's submission proposing amendments to REEFREP.

REEFREP is an integral component of REEFVTS. Within the REEFVTS Area ships identify themselves and report their intended passage through the region. This information, together with sophisticated monitoring and communication systems, enables REEFVTS to monitor a ship's transit through the Great Barrier Reef and Torres Strait.

The introduction of REEFVTS is attributed to significantly reducing the number of groundings, from one per year between 1997 and 2003 to only one incident between the years 2004 and 2009. In addition, the provision of assistance to ships approaching shallow waters has successfully averted groundings on at least six occasions.

WHY EXTEND THE REEFVTS AREA?

The incident involving the bulk carrier Shen Neng 1 on Douglas Shoal in the Great Barrier Reef on 3 April 2010 highlighted the need to reassess measures for mitigating risks associated with shipping activity in the Great Barrier Reef.

Following the incident, AMSA released a report entitled "Improving Safe Navigation in the Great Barrier Reef (April 2010)". The report noted that Vessel Traffic Services (VTS) provide a cost effective mechanism and proven track record of mitigating the risk of groundings and recommended that REEFVTS coverage be extended to the southern boundary of the Great Barrier Reef Marine Park.

WHAT WAS REQUIRED TO EXTEND REEFVTS?

Extending the delivery of services provided by REEFVTS required:

- approval from the IMO to extend boundaries of the REEFREP mandatory ship reporting system; and
- expansion of the monitoring and communication systems to provide REEFVTS with comparable capabilities to monitor the extended area.

SUMMARY OF THE CHANGES

1. Amendments to Legislation
Marine Orders Part 56 is being amended to give legislative effect to the extension. The changes will come into effect on 1 July 2011.

2. New Ship Reporting Points

Historical ship traffic data was analysed to identify the standard shipping routes and common entry/exit points in the extended

area. The new reporting points and standard shipping routes are available at www.amsa.gov.au or www.msq.qld.gov.au

3. New Hydrographic Charts

Australian Hydrographic Charts AUS 4620 and AUS 4621 have been updated, and new charts AUS 4635 and AUS 490 have been compiled to show the extended REEFVTS Area.

4. Additional Infrastructure and Monitoring Sensors

Seven new AIS and five new VHF installations will provide additional ship monitoring and voice communications capabilities in the extended area. Most of the extended area will be covered by voice communications through VHF. Where VHF coverage is not possible due to the large area covered, the use of Inmarsat C messaging will enable effective communications.

5. Decision Support Tools

REEFVTS uses a suite of decision-support tools to monitor the transit of individual ships and assist the Vessel Traffic Services Operator to determine where interaction may be necessary to assist on-board decision-making. This could include situations where a ship may be standing into shallow water, deviating from a recommended route or is apparently not altering course at a critical waypoint. The use of these tools will be extended to the new area.

6. Revised User Guide

A revised REEFVTS User Guide will replace the current User Manual to reflect the extended REEFVTS Area. Copies may be requested by email: reefvts@amsa.gov.au or obtained on-line at www.amsa.gov.au or www.msq.qld.gov.au.

7. Revised VHF Communications

The VHF Channels in the existing REEFVTS Area have been reviewed and rationalised to VHF Channels 11 and 14. These alternate through the REEFVTS Area based on latitude (see table below). This change will be implemented to coincide with the extension of REEFVTS on 1 July 2011. ■

Latitude from:	Latitude to:	VHF Channel
9° 00' S	13° 30' S	14
13° 30' S	18° 00' S	11
18° 00' S	20° 00' S	14
20° 00' S	22° 00' S	11
22° 00' S	24° 30' S	14

Effective 1 July 2011 Further information on REEFVTS is available at www.amsa.gov.au or www.msq.qld.gov.au