



News & Views

Newsletter of the Nautical Institute

- New Zealand Branch -

August 2005, Issue 98

CHAIRMAN'S REPORT

Gentlemen,

Although I may not be with you in person for tonight's AGM, I am certainly with you in spirit. I would like to welcome all the new members who have joined our ranks in the last year.

The last year has been a significant one for the New Zealand Branch as we have seen positive outcomes from the work that our new secretary has undertaken on our behalf. The electronic age has been embraced and the fact that I have been able to send this report so close to the date of the AGM is a testament to what we have achieved. At last year's meeting I hinted that I wanted to see us move forward and become more available as a branch to all of our members. I was concerned that there may be a perception among some of our New Zealand members that we were effectively an Auckland Branch which sent out newsletters around the country. Such feelings may still exist but what we have achieved over the last year has, I believe, gone some considerable way to overcome this. Later this year ENDEAVOUR will be visiting New Plymouth and Nelson and I am hopeful to be able to host some members who may live reasonably close to these ports.

We now sport our own website and I would like to publicly acknowledge the hard work of

Larry Robbins in not only coming up with the concept but also supporting us by hosting the site. I know that we are not alone in the world in accessing the information and the fact that Seaways sports a link for us shows how global we could be. Larry, your statistics from November last year were most enlightening and I look forward to hearing how we have fared in the mean time. I see the website as a major link with our out-port members and hope that further development will be able to bring greater cohesion to the Branch. (continue page 4)

BRANCH PROJECT

Together with your May 2005 issue of News & Views you received the lifeboat-lowering questionnaire where we asked for your reaction and input on the recently adopted amendments to regulations 19 & 20 of SOLAS Chapter III that abandons the requirement of carrying lifeboat crew in the boats while they are being lowered to the waterline. Our concerns are with the emergency preparedness of the crew. We feel that the IMO avoids dealing with core problems of unnecessarily complicated release gears, incomprehensible instructions and poor training, as identified in numerous accident reports. Instead they have chosen to circumvent the problem by reducing training requirements and thereby creating a very serious latent risk!

I would like to thank all those who have completed the questionnaire and/or have submitted reports. In total 13 questionnaires and 10 reports were returned, including those from two branches of the NZ Company of Master Mariners and from our colleagues in S.E. Australia. This represents well over 20% of our local branch members, well done! Continue page 5.

BRANCH NEWS

Minutes Annual General Meeting, 17 May 2005

The Annual General Meeting was opened at 19.05 in the Sanford room of the Maritime Museum. We were happy to welcome 9 members to the meeting, undoubtedly kept low due to the atrocious weather conditions in Auckland.

Excuses received from David Hedgeley (Chairman), Alex More (Vice Chair), Mark Longstaff, Margaret Pidgeon, Jim Varney, Larry Robbins, Tim Kershaw, Mark Rothwell, Matthew Dundas

2/ Presentation of Chairman's report, by Bob Hawkins in absence of Chair and vice chair. (see above) Moved Trevor Whelan, seconded George Smith

3/ Presentation of Financial report by Hon. Secretary. moved Nick Edwards, seconded – Trevor Whelan.

Paul Stanley suggested altering the donation to the Maritime Museum paid as goodwill gesture for the use of the meeting room, to a fixed payment of \$50 per meeting. Currently we gift \$2.50/person attending the meeting. This led to the question if we still donate NI-publications to the museum, which we do not. Committee will approach Director of the Museum, Larry Robbins, to discuss this matter.

4/ Election of Officers for Committee: Mike McDonnell resigned from the branch committee. **We recognise Mike's contribution to the local branch which he helped form as a founding committee-member in 1983.** He remained in the committee throughout our lifespan, representing the seagoing Masters, and speaking on several occasions at meetings. Recognition and thanks for his long standing work were also received from NI HQ in London. **Mike's position is still open and we invite volunteers to join the Committee.**

David Hedgley, current Chairman, announced that he will retire from his post as Chair and from Committee after the next AGM in 2006, due to his reassignment to a post in Wellington. **We invite further volunteers for Committee and nominations for Chairman to be taken-up after the 2006 AGM.**

It was decided that Committee membership will be opened to those members who can not physically attend meetings however will be able to communicate via email. The addition of non-Auckland members to Committee will make the branch more representative of all New Zealand members.

5/ Port Liaison Officers form an intrinsic part of our branch to keep us informed about the activities in the various ports around the country.

Our branch-website has links to all the NZ ports where we have PLO's posted, in addition all information provide by the PLO to the Secretary is considered for publication in our newsletter. Some of the PLO's are very active, reflected in the reports in the newsletter, while others are less active. **We have a few vacancies in our PLO network and are looking for volunteer-Port Liaison Officers who will be able to keep us posted of activities in Nelson and in Bluff.** In addition if you live and/or work in an area that is not currently covered (as per our website), and you would like to take on this interesting task, we would like to hear from you.

6/ The secretary updated the meeting on the latest developments in our lifeboat-lowering project. The questionnaire was mailed with the latest edition of News & Views, last week and to date only two completed forms have been returned. The deadline is set at 1 June, it is hoped that we can encourage as many members as possible to completed and return the questionnaire. We are also thankful for the assistance of the Company of Master Mariners who have distributed the questionnaire amongst their members and we are looking forward to their responses. Similarly we thank the SE Australia branch for distribution amongst their members and forwarding it to the other branches in Australia. One completed form (of the two) was from Captain Rynd, MNI-SE Australia. Trevor Whelan informed us that he has approached his company's technical manager to distribute the questionnaire over the full fleet. We recommend that members take similar actions whenever possible.

HQ London has taken an interest in the project and has suggested to work together with a West European branch and to take it worldwide with the questionnaire attached to Seaways. Committee will continue to progress the project in this direction.

The meeting was closed at 20.10 hrs and the floor given to Robert Weber, MNI, who delivered an exciting presentation on the development and advantages of the Moormaster automatic mooring system.

The Moormaster automatic mooring system

Robert has been involved with Mooring Systems Ltd (MSL), the company that designed and produces the Moormaster, since 1998. He is chiefly involved in marketing, this revolutionary automated mooring

system, with a focus on the European short-sea market and ports that are exposed to surge conditions around the world. For thousands of years traditional practice of mooring with ropes has remained unchanged. Even in today's rapid changing environment in bridge and machinery equipment, ships are moored using trusted ropes. Automating the mooring process represents an entire new field of maritime technology. It is a highly complex and multi disciplined area involving design of new products and in-depth analysis of environmental conditions and loads, hull forms, civil structural requirements and customer needs. The first commercial mooring system, the "Ironsailor", was a shipboard system installed on a brand new rail passenger ferry in 1998. The "Aratere" LOA- 150m at 12.000 GRT, is engaged in several sailings a day between Wellington and Picton. There was a desire to reduce numbers of crew onboard, while also shorten the time taken to bring the ship alongside the pier. This was accomplished with the internal installation of four vacuum pads rated at 20 tonnes each. The units are positioned in pairs with two units forward on the ship and two units aft. They are activated from the bridge wing, and extend out, through hull doors to attach to a steel plate on the dock at either end of the route. Since its installation the Aratere has performed over 10,000 automatic moorings under every possible environmental condition, without using traditional rope-back-up. The next generation of mooring system was the Moormaster, a shore-based system, that does not require specific installations on ships and can directly attach to the hull of most commercial and military vessels. These systems have been installed in Melbourne and Devonport/Tasmania, where they have achieved hundreds of safe and reliable moorings for vessels of Patrick Shipping. Using the vacuum pads as mooring attachment captures all the flexibility and characteristics of traditional mooring lines, but it has a measurable working load that is communicated to the deck officer in real-time for performance monitoring. Because the mooring units attach to the ship closer to the waterline and immediately counteract mooring forces, the system has a greater mooring efficiency than angled ropes. I.e. it does not allow motion to build up and

therefore keeps the vessel more calmly alongside. The design of the Moormaster follows tidal movements as well as draught changes by an automated stepping method. A similar stepping process enables the system to be used to shift the vessel alongside its berth. The largest system, the Moormaster 800, was designed to meet the needs of large ferries exposed to surge conditions in Dover/UK, where high wind conditions are also common. The unit ranges up and down the quay face and can cope with tidal variations of up to 10 meters and surging conditions causing vertical, fore and aft movement of up to 1 meter per second, equivalent to about 100 tonnes surge (sideways) power. Typically three or four units will be required for very large Ro/Ro vessels. Each of the units has a design capacity of 80 tonnes.

The advantages of the Moormaster over conventional mooring lines are found in improved safety, higher economy and safer environment:

- Risk of injury to shore and shipboard personnel eliminated
- No more risk of mooring ropes fouling propellers
- Continuous load monitoring and alarm functions
- Multiple redundancy of vacuum pads and inherent failsafe features
- Reduced manning onboard for ships on fixed routes.
- Independence from shore mooring gangs
- No more disruption of other duties or mandatory rest hours of ship's crew
- Elimination of rope, winch, hull paint and fender wear
- Faster attachment leading to better utilisation of berths and ships
- Reduced requirements for breakwaters
- Shorter pier structures and less mooring dolphins per ship
- Shorter stay in port leading to less fuel consumption and emissions due to lower speed requirement at sea.

Under development is the next generation, called Moorfender, designed to be retrofitted on container and bulk terminals. Mounted on the fender foundation it will 'hide' next to the fenders when not in use and extend outward when required.

Chairman's report (continue from page 1)

News and Views has also taken on a new look and I would like to acknowledge the hard work and dedication of Kees in this regard. He has kept up the tradition for which Nick set the standard, and has added an electronic dimension. I now receive my News and Views during a deployment rather than find them waiting for me, along with a hundred and one household chores, on my return home. I trust that those of you who are still seagoing find this service of similar value. As for the "hard copy" again we have to thank Kees' input and also acknowledge the NZ Maritime School for effectively "sponsoring" the production.

The last year has been a bit of a lean year as far as meetings have been concerned and I for one have been particularly absent, but I have had a pretty good excuse – for a change. We have had some interesting talks and I know that the depleted committee have been working hard to keep us abreast of current changes and trends in our profession. One of those issues which has been dear to the heart of every mariner at sea and that is of security. ISPS came into force last year, very much driven by the US and now we are all getting used to the restrictions we have not been used to in the past. Whether it makes ships and port facilities a safer place to be, time will tell. But it certainly makes them a more difficult place to be. I am Delighted that we were able to have some experts talk to us about these issues at November's meeting.

At our committee meeting in January we decided to look at the issues surround the safety of personnel surrounding lifeboat launching. A press release issued last week will have informed you how close this subject is to the hearts of both myself and Mark Longstaff. But if we are to be able to make a truly professional comment on the matter, from a New Zealand point of view, then we need to gather evidence to support our findings. This is why the questionnaire is so important and I would encourage you, your maritime colleagues or even acquaintances to have a say.

August Lecture series at the New Zealand National Maritime Museum

Tuesday evenings: 7:00 to 8:30 pm
Bookings phone: 373-0800 \$5.00 entry

Date	Lecture	Speaker
02/08	Cook's apprenticeship-his time in Newfoundland and how he came chosen for the Endeavour	John Hobson, Waikato University
09/08	Tiritiri Matangi – model of conservation	Anne Rimmer:
16/08	The Chelsea Sugar Works – shipping over 130 years with yarns aplenty	Capt. Jim Hansen
23/08	Good boats, Good light & fitting weather	Paul Gilbert Photographer
30/08	Replenishment: keeping the Navy at sea	Cmdr Hedgley:

I have been honoured to have been the chairman for the last year and am delighted to continue these duties, albeit from a remote, warm and sunny location but I am afraid that I shall be shifting to Wellington to take up duties in Naval Staff some time early next year. I realise that an absent Chairman is manageable but an absent committee member makes things difficult. So regrettably I am giving advance notice to tender my resignation from the Chairmanship and the committee from the AGM next year. No I didn't think there would be a rush to step forward but please do consider taking up some role with the branch as it helps make us what we are.

Enough preaching, and probably enough talking from Bob, who has kindly volunteered to speak on my behalf. I wish you all the best for the meeting and look forward to catching up in August or September.

Thank you

David Hedgley, FNI

BRANCH PROJECT cont.

The returned questionnaires came from Masters representing seven different Flag states. The first questions were there to come to an understanding of the availability and clarity of instructions for the operation of the on-load release gear and to come to some appreciation of the current level of training. It reflects on those in charge (manufacturers, owners, Classification Soc., Flag state, Port state etc) and how important they perceive the onboard training to be. 25% of the respondents stated that no clear instructions for the on-load release gear were posted in the SOLAS training manual in the messroom, while one Master commented on the poor use of the English language and suggested that these instructions should also be written in a language understandable to all crew. Less than half of the responses reported that clear, step-by-step instructions were posted in the lifeboat. In particular no instructions for the retrieval of the lifeboat were available, and only minimal instructions for the retrieval were provided in the manufacturer's manual, according to several comments. Only three vessels reported to have a training video for the on-load release gear and one (passengership) had a scaled model of the release gear for training purposes.

Only one respondent waited to reset the release gear until the lifeboat was back under the lower block, while most did this (correctly) before returning to the falls. One Master confirmed that he would check the settings again after the lifeboat was hoisted clear of the water – this was an additional comment from one vessel and we may assume that others would do this as well. About half of all crew have assigned functions in the lifeboat and most would have embarked the lifeboat from the embarkation deck, before the recent changes required them to lower the boats empty to the waterline, in some flag states.

The latter half of the questions tried to identify how well the amendments have been promulgated, and if any new dangers have been introduced as a direct result of this IMO action. Those Flag states that have introduced changes to their own regulations with immediate effect,

did instruct their ships, however other Flag states have not done so. Interestingly, New Zealand has not signed the amendments to SOLAS, yet has introduced very restrictive regulations! Climbing down the pilot ladder, while wearing a lifejacket and being tendered from the deck was quoted by more than 50% of the respondents as an added safety hazard, while one Master reported a near miss, where one side of the ladder failed during the exercise, fortunately no one was injured in this incident. The transfer from launch or fast rescue boat to lifeboat was quoted as well as an added danger by several vessels, as was the future-lack of training in fitting the bowsing tackles, and tricing pendants. Most respondents that had made changes to their drills stated that this added an additional 15 to 20 minutes to the drill, while on one vessel the additional requirements doubled the necessary time for the lifeboat drill.

In other comments most respondents agreed that the on-load release gear is due for an urgent review. It should be reliable, simplified and standardized with good quality material and irrespective of commercial pressures between competing companies. The instructions, both in the SOLAS training manual and in/near the lifeboat, should be clear, concise and cover both the launching and retrieval of the lifeboat. The instructions should be in a language understandable to all crew and in English. One Master stated that he always felt anxious during the launch and retrieval of the lifeboat and he had made similar changes already before the amendment was introduced. Two respondents were very happy with the amendment and had actively canvassed the government for these changes, stating that “an avoidable hazard was identified and prompt action had been taken”, they were prepared to take the risk of not training the crew properly until current deficiencies have been addressed.

One member reported that he received a commendation ten years ago from the Director of MSA for a successful rescue operation which had only been possible due to the efficient training his crew had received which are now no longer possible, he called the changes preposterous. Several other concerned Masters warned not to neglect proper training and that drills should simulate as closely as practicable the emergency

condition that crew are being trained to deal with. While every reasonable precaution should be taken to safeguard crew undertaking drills, this should not be taken to the extent that the very purpose of the drill is undermined.

Some safety issues that were repeatedly identified in recently published NZ-accident reports (Nicolai Maersk, Aratere and Taiko):

- Design of equipment that allows closure of operating levers while release mechanism is not properly engaged.
- Limited visibility from inside lifeboat of critical parts of release equipment.
- Lack of training.
- Difficulty of operating the cumbersome and complicated equipment.

See also the findings of the RNZN Court of Enquiry on the Endeavour lifeboat accident in this newsletter.

AROUND NEW ZEALAND

A raft of reports was released over the last quarter, several of which provided significant learning and are partly reproduced below.

HMNZS Endeavour lifeboat accident

An RNZN Court of Inquiry has completed an investigation into the circumstances surrounding an accident that occurred during a lifeboat drill on the replenishment tanker HMNZS Endeavour on 16 August 2004 in Sydney. Twenty-two sailors were in the port lifeboat when it released prematurely from the ship and landed upside down in the water; 13 were injured in the incident.

On that day Endeavour was conducting a lifeboat drill while alongside Fleet Base East in Sydney. A Court of Inquiry was assembled on 18 August, to determine the cause of the accident. The Court has now completed a comprehensive investigation into the circumstances surrounding the accident and has reported its findings. Maritime Component Commander, CDRE Jack

Steer, who convened the Court of Inquiry, has accepted the Court's findings and all sixteen of its recommendations will be implemented. No disciplinary action will be taken against any individual. It is the conclusion of the Court that the accident occurred due to a number of issues and is not attributable to a single cause.

A mechanical fault on the port lifeboat release mechanism, combined with personnel not following the correct procedure for launching the lifeboat, and the decision to proceed with launching without a correctly-fitted safety indicator guard are considered the primary factors leading to the accident. Insufficient training leading up to the accident was also a contributing factor but the Court found that no individuals were negligent in their duty. The three main factors were identified as:

- A faulty release mechanism
- The absence of a correctly-fitted safety indication guard
- Incorrect drills by the lifeboat crew

The Court noted that it was the combination of all three of the factors occurring together that caused the accident.

The time taken to complete the inquiry is indicative of the thoroughness and detail of the investigation, and of the challenges faced by the Court, which included the need to acquire a thorough understanding of the technical nature of the releasing mechanisms, and to take into account the traumatic nature of the accident and the effects that it had on witnesses. The RNZN is satisfied that the inquiry has been concluded in a timely manner, taking into account all the surrounding circumstances.

The inquiry's greatest concern was with the lifeboat release mechanism. A defect in the lifeboat release mechanism (that disconnects the ship's davit hooks from the lifeboat) identified prior to the accident had been corrected, but the maintenance process was not reviewed. Thus a further, more significant, design fault in the lifeboat release mechanism was not identified. Investigations after the accident revealed that the hydrostatic safety device failed to engage correctly once the lifeboats were lifted from the water by their davits. The fault is believed to be the result of either a design or manufacturing error,

and would have been in existence on both lifeboats since they entered service with the RNZN.

A second contributing factor was the failure to stop the launching when it became apparent that a safety guard on the release mechanism was not in place. The guard is designed to prevent the accidental operation of the released mechanism lever and to act as an indicator to show whether the lever is in the 'locked' or 'open' position. The guard was held in place by hand to determine the position of the lever but was misread as 'locked' due to parallax error.

During inspection of the release mechanism of the (undamaged) starboard lifeboat it appeared that the release mechanism lever, even with the safety guard fastened in its correct position, was close enough to the boundary between 'locked' and 'open' that both Endeavour's Executive Officer and a Lloyd's inspector initially thought the lever was in 'locked' position.

The Court also found that the manufacturer's signs inside the lifeboat detailing the release process were inadequate and did not clearly explain the correct release process.

Lack of formal training provided to lifeboat crew is significant and represented a safety concern.

The RNZN is taking the following specific actions to give effect to the Court's principal recommendations:

- Repositioning safety and operating signs and developing or purchasing new training equipment
- Improving procedures for use of the ship's lifeboats, including training procedures, lifeboat maintenance, and operation
- Reviewing policy and training for the operation and maintenance of all RNZN ship life saving equipment including the future Project Protector fleet

The Court noted that many of the ship's company performed exceptionally well on the day in rescuing the injured sailors. *NT100, June 2005*

Aratere near grounding, Tory Channel

Both MaritimeNZ and TAIC released their reports on the passenger freight ferry Aratere's near grounding upon entering Tory Channel on 29 September 2004. At about 17.20 the Aratere was entering Tory Channel from Cook Strait when it failed to make a programmed course alteration while in automatic steering. The navigation bridge team had to intervene and make a manual alteration of course to prevent the Aratere grounding at full speed on the north side of the channel. Safety issues identified included:

- The adequacy of bridge resource management (BRM)
- The adequacy of training in the use of all integrated bridge systems
- The adequacy of contingency planning for safety-critical situations on board
- The adequacy of procedures covering the dissemination of information from the IMO

The following are scripts from the reports that highlight common BRM issues:

The passage plan in use at the time of the incident appeared to be an attempt to comply with the Marlborough District Council navigation bylaws 2002 and MR 22,9 – Narrow Channels. These rules require the ship to be kept as near to the outer limit of the channel or fairway which lies on its starboard side as is safe and practicable. As only one vessel of 500 GRT or more was allowed in the Tory Channel entrance controlled navigation zone at one time, it would be more prudent for the Master to **keep the ship to the centre or deeper water part of the channel** within this area.

The passage plan included off-track limits set for each of the course legs. For entering Tory Channel, the limit was 10m, and during the turn 20m. The Mate did not mention to the Master the off-track distance until the ship was at least 35m and possibly 65m off track. Good BRM advocates keeping as close as possible to courses as laid down in the prepared passage plan and not exceeding the 'safe' off-track limits except under exceptional circumstances. That **no safe off-track limits** had been set, which the ship must not exceed without the bridge team intervening to bring the ship back on course and the regularity of the ship exceeding the advisory off-track limits was less than prudent passage planning. More prudent passage planning

would have set off-track limits at which intervention was required and off-track limits that must not be exceeded. Also the setting of a point at which the ship must commence its turn to ensure that all navigational dangers were passed at a minimum safe distance should be included.

The Mate did not comment on the off-track distance until it was considerably greater than specified in the passage plan, and the Master's comment that he had seen a far greater off-track distance indicated that there was **no shared common view of the passage plan** and the intended passage. The Master having said that he had seen 85m in the past may have lulled the mate into a false sense of security that the already excessive off-track distance was still within tolerance.

It is probable that the DB2000 system defaulted to autopilot mode at some time prior to the planned alter course position for commencing the major turn to port. Neither the Mate, with the con of the vessel, nor the master was aware of this mode transition. Being unaware of the mode transition to autopilot, both the Mate and the Master expected the ANTS system to automatically alter course at the correct point and were not expecting to have to intervene manually. This was an example of **mode error and a breakdown in human-machine interaction**.

It is possible that the Aratere's airdials became masked from a satellite, to such an extent the DGPS reverted to DR, or

It is possible that the difference in the relative speeds of the ground and water tracks, due to the current and tidal rips in the area caused the DB2000 to revert to autopilot mode, or

It is possible that at some point the sideways motion of the vessel away from the programmed track, exceeded the off-track jump limit of 12m in any one sampling period causing the DB2000 to revert to autopilot mode.

If any of these alarms coincided with another alarm, such as off-track limits being exceeded or approaching an alter course position on the DB2000, they would become stacked and the Mate or Master may have inadvertently accepted the system warning using **skill-based**

behavioural pattern as they were routinely expecting an alter course alarm.

It is probable that the ANTS system was functioning correctly throughout the voyage but had, for whatever reason, reverted to a different mode of steering which went unnoticed by the bridge navigating team.

Although the original crew had received **training** in the use of the Integrated Bridge System (IBS) prior to the commissioning of the ship, many of the crew had since been assigned to other ships, retired, left the company's employ or were on a different shift from the Master and Mate. The training the Master and Mate had received in the use of IBS and the ANTS track especially had been from their peers and was at least second hand, if not more, with the consequent lack of in-depth knowledge of the functioning of the system itself. The training, while not necessarily lacking in content, was carried out during a short familiarisation period where hands-on operation was more to the fore than knowledge of the system itself.

The manufacturer ran courses on its IBS and the IMO guidance circular (1061) recommended that the shipping company establish a **training programme for all officers with operational duties involving IBS**. The IMO guidance circular further recommended that the shipping company have personnel ashore capable of supervising, training and evaluating the company's operational procedures and use of IBS. At the time of the incident the company did not have a dedicated person ashore dealing with training of sea staff in the use of the IBS and had no formalised policy to carry out this training to the standard recommended.

The master's action in turning the ship to port was probably a '**gut reaction**' or an intuitive, skill-based decision of trying to distance the ship from the main perceived danger of running aground. He may also have had the hazardous thought of "I can do it". However, the position at which he reacted was about 200m past the position noted in the passage plan as being the latest position to commence turn with full helm to regain track.

As a result of **automation**, machines have become 'partners' on the bridge of a modern ship, and vigilant behaviour is an important element in this partnership. With the advent of automatic control

and computing systems for the acquisition, storage and processing of information, the human operator has been relieved of many routine but active controlling activities that were necessary in less sophisticated systems. The operator's role has evolved along more managerial lines in which much time is spent in the passive monitoring of dials, video screens and other sources of information for occasional critical stimuli that demand decision and action. Viewed in the context of an automation-oriented bridge, in which failure to detect critical signals can often be disastrous, vigilance assumes considerable significance. At the time of the incident the Mate had been on watch for about an hour and a quarter and it could be expected that his performance would have declined from when he assumed the con of the vessel due to vigilance decrement.

The **ergonomics of the bridge design** were that if the Master stood in his usual position in front of the starboard chair, the Mate standing approximately on the centreline had to reach over to use the controls. The controls of the various manual steering methods of the ship and those to change from autopilot to the ANTS system were obviously placed with one-man bridge operation in mind but were unable to be reached from the sitting position in either chair. For the officer who had the con of the vessel to be ready to operate the controls at a moment's notice during critical points of the voyage required him to be standing within easy reach of these controls.

A shore-based employee engaged the Master in conversation shortly after the Master arrived on the bridge. Although this conversation was of short duration, it may have **distracted** the Master at a time when his full attention was required for preparing to enter Tory Channel. The Master may have also become subconsciously preoccupied with the content of that conversation, which may have slowed his analytical decision making as a proportion of his cognitive processes may have already been in use with the preoccupation. The presence of the other officers and a family on the bridge as the Master arrived on the bridge may also have distracted the Master and/or the

Mate. They were ushered off the bridge as the Aratere entered Tory Channel, but the ship's position at which they left the bridge was closer to the Tory Channel entrance than was allowed under the company operational procedures.

As there was no formulated **contingency plan** for the scenario that unfolded in this occurrence, the Master and Mate were required to formulate a plan, evaluate whether it would be successful and then implement it in a very short period of time. This suddenly increased their workload and the need for a large proportion of their cognitive processes to be involved.

As the Mate's workload increased, he began to channel his attention into the conning display and the distance off track, which he was calling out to the Master. His attention excluded relevant information from external visual sources, the radar and other navigational devices or practices such as parallel indexing. Although the mate had not relinquished the con of the vessel he appeared to be waiting for the master to react as he channelled his attention into the conning display.

BRM training emphasises the need to recognise "**hazardous thoughts**" and replace them with opposite "safe thoughts". Three hazardous thoughts and their opposite safe thoughts as used in BRM concepts, were relevant to the Master and mate of the Aratere when they entered Tory Channel:

<u>Hazardous Thought</u>	<u>Safe Thought</u>
<ul style="list-style-type: none"> • I can do it • It won't happen to me • We've always done it this way 	<ul style="list-style-type: none"> • Why take chances • It could happen to me • It's about time we changed

Both the Master and the Mate held pilot exemptions for Queen Charlotte Sound including Tory Channel and had transited the Tory Channel entrance hundreds of times in a year. Both were at risk from **routinisation** of the passage. With routinisation, operators become more concerned about mechanics and accomplishments of tasks than their meaning. Thus an operator can underestimate the amount of risk that routine tasks can pose for the safety of the ship. Good BRM ensures that routine tasks are adequately supervised and that appropriate procedures are implemented to reduce routinisation.

Good BRM utilising **closed loop communications** would have them call and accept the alarm, reading it out and getting an affirmative reply so that the entire bridge team maintained situational awareness and a common view of the intended passage.

Neither the Master nor the Mate had ensured that **a helmsman was standing by to take over the manual steering immediately** as required by the Marlborough District Council navigation bylaws 2002 and MR 31A, amendment 1. However, it was not company practice to have a helmsman in the wheelhouse, rather to rely on the Master or duty navigation officer to steer when or if required. In this case, as with other emergency situations, there would not be sufficient time to summon the helmsman to have any meaningful effect. Effective BRM training would have alerted the navigation team to the hazardous thought of “we’ve always done it this way” and replaced it with the opposite safe thought of “it’s about time we changed”. However, expecting either the Master or duty navigating officer to act as helmsman in an emergency situation greatly increases their workload at a time when they may be preoccupied with other issues. This may also leave the other officer in isolation for decision making at a critical time.

Spirit of Resolution

The New Zealand general cargo vessel Spirit of Resolution (3850 gt, built 1997) grounded in the Wairoa Channel, on the west side of Auckland, on Friday, 21 July. The vessel, which is owned and operated by Lyttelton firm Pacifica Shipping, was inbound to Onehunga when she grounded near Taumatarea Point. The vessel was refloated on the high tide later in the afternoon and then continued under her own power to Onehunga.

New Interislander Vessel: Kaitaki

Toll Shipping today announced the charter of an additional vessel for the Interislander fleet that will accommodate up to 1600 passengers and 600 cars. It will arrive in August, in preparation for the peak summer season.



The 181.6 metre long vessel will be the largest vessel servicing Cook Strait, when it comes into service, and is to be named Kaitaki, translated in Maori as ‘Challenger’. The name was selected by Te Kupenga Mahi (the Company’s Maori network) in consultation with local Marlborough and Wellington iwi. *Media Release, 14 June 2005*

Change of ‘Holy’ Orders at the Mission

The Reverend Bill Law has retired as Anglican Port Chaplain at Auckland after 16 years at the helm. Padre Bill has been replaced temporarily by the Reverend John Marcon until a permanent part-time chaplain is appointed. John Marcon joins the Auckland chaplaincy team of Reverend Mervyn Aitken and Salvation Army Major David Millar in their work of welcoming visiting seafarers to the Port of Auckland. Padre Bill was a very popular Missioner to the Auckland waterfront who will be missed by all who knew him. Everybody wishes Bill a long and happy retirement. *Captain Chris Barradale, Chairman, Mission to Seafarers, Akl*



On 1 July 2005, the MSA was renamed **Maritime New Zealand**, following a review of the Government’s transport institutional infrastructure designed to ensure that it could deliver on the December 2002 New Zealand Transport Strategy. The new name – Maritime New Zealand – was introduced by Parliament in order to better reflect the widening of the organisation’s responsibilities to include maritime safety, security and marine environment protection.

The Manaia is the symbol that sits alongside our new name, Maritime New Zealand, and for those who are interested below is a brief background: The Manaia is an ancient mythical being with a

bird's head and a human form. It is said to be the messenger between the earthly world of mortals and the domain of the spirits. The Manaia is a holder of great spiritual energy and is a guardian/protector/caretaker over water, land and air.

Traditionally the Manaia is shown with a fierce head and three fingers that represent birth, life and death or the three baskets of knowledge; the kete-aronui which held all the knowledge that could help mankind; the kete-tuauri which held the knowledge of ritual, memory and prayer; and the kete-tuatea which contained knowledge of evil or makutu, which was harmful to mankind.

The Manaia has been chosen as a key element of the brand because it symbolises an important aspect of Maritime New Zealand's expanded role – guardian over water, land and air. The three fingers can also be interpreted as our three major areas of responsibility of safety, security and environmental protection.

The Manaia's ability to adapt and change dependant upon its environment, is also seen to reflect the new role, functions and objectives that Maritime New Zealand been tasked with, as well as those they will continue to undertake.

You are invited to comment on the draft 2006 NZ Marine Oil Spill Response Strategy. The NZ Marine Oil Spill Response Strategy sets the overarching framework for the nation's capability to respond to a marine oil spill of any size. It sets standards by which processes for contingency planning and responding to incidents must occur, to ensure the greatest efficiency and expediency. The strategy is based on formal risk assessment, which is undertaken at least every six years, followed by a comprehensive review process. The draft 2006 strategy can be downloaded from the MaritimeNZ website under:

http://www.maritimenz.govt.nz/consultation/other_consult.asp

The deadline for making comments on the draft strategy is 19th August 2005. Please mark all correspondence for the attention of Environmental Analysis.

For further information and details on this & other reports, please visit the MaritimeNZ website www.maritimenz.govt.nz

AROUND THE WORLD

Beware of marine mammals

Everyone loves a whale. "Marine biologists" has replaced "vet" as the preferred career of half the young people in the industrialised world, as this job, they believe apparently facilitates a close relationship with whales, dolphins and porpoises. It probably becomes a little less attractive when young people discover that it is mostly wading around in marshes, or standing in a cold, wet laboratory analysing water quality.

Whales, however, due to their powerful abilities to lobby politicians, ever eager to oblige the green vote, have been making their own waves.

Somehow, perhaps because of their ability to communicate with marine biologists, they have been able to convey the message that at certain times of the year, when they are congregating along their regular routes to where they like to mate, they are extremely annoyed by shipping, whose engines they dislike and whose echo sounders confuse their own acoustic communications in their ocean habitat.

In a way which the shipping industry can only admire, as it has been trying to interest politicians in its business for years, without much success, US regulators are now prescribing rules which will keep ships far away from the whales on their sub-sea peregrinations on both east and west coast of that country.

It is a bit hard on ships which will now be hours later in port, having to follow a circuitous route, and charterers, who often have difficulty in grasping marine priorities, may become somewhat confused. But the whales will be delighted that their campaign has proved successful. But one wonders what they will be encouraged to ask for next. Free krill?

BIMCO-bulletin, June 2005

Maritime School students get onboard with giant cruise vessel operator

Students from the New Zealand Maritime School in Auckland could one day be captaining some of the world's largest passenger ships, following a commitment from giant cruise vessel operator Princess Cruises to provide five scholarships a year to top students of the School. Director of the Maritime School, Tim Wilson, says the decision by Princess Cruises to provide scholarships and sea training recognises the quality of New Zealand-trained officers. The decision was made only after a thorough examination of the school's standards and policies. The announcement coincides with predictions of an acute international shortage of maritime expertise and calls for the industry and government to address the problems caused by a lack of new entrant training.

Princess Cruises will provide the sea-time component of the three year Diploma in Nautical Science and Second Mate Foreign Going qualifications, taught at the Maritime School since 1999. The qualification requires students to spend a third of the course at sea. The students flew to the corners of the world to join their ships in early July. Two embarked the Diamond Princess in Seattle and will sail with this ship back to New Zealand in January next year, when it will become the largest vessel ever to visit this country. While onboard, the students will do regular assignments as well as keeping a daily journal. The remainder of the three-year Diploma in Nautical Science programme involves intense study at the Maritime School, including a five week bridge watch-keeping course conducted on the Maritime School's bridge simulator. There are currently 22 students studying towards the Second Mate Foreign Going qualification at the New Zealand Maritime School. A further 21 students are currently at the School completing their Master Foreign Going qualifications.

NEXT MEETING

TUESDAY 16 August 2005

18.00 for 19.00

Venue

Volunteers Room
The New Zealand National Maritime Museum
Hobson Wharf

Project Protector

the shape of things to come for the RNZN

a presentation by

Commander Mike TOXOPEUS,

currently serving in the Capability branch of Naval Staff as the Director of Marine Engineering for the RNZN.

Cmdr Mike Toxopeus has been actively involved in the development of the vessels and has also played an important role in shaping the concept of use within the Navy.

Protector is an exciting project for the Navy as it sees us reclaiming some of our heritage from the past but it also sees us moving forward with cooperation with many other government agencies. The best thing for the people of NZ is that they will be far more likely to see their ships plying NZ waters.

Entry via "The Waterfront" where bar and refreshments are available.

The New Zealand Branch of the Nautical Institute wishes to acknowledge the assistance of the New Zealand Maritime School in printing this newsletter. For enquiries on all courses please call +64 9 379 4997, email maritime@manukau.ac.nz or visit the School at <http://www.nzmaritime.com>

