



*Port Kembla's New Tug Adsteam Marloo.*

## **PORT ASH MANNED SHIP-MODEL SIMULATOR**

Tel: 61 2 4987 0029 [www.portash.com.au](http://www.portash.com.au)



*Port Ash manned models are assisted by tugs operated by experienced tugmasters. Training is directed by onboard experienced pilots.*



# SAFE PASSAGE

*AMPA*

THE AUSTRALIAN MARINE PILOTS ASSOCIATION (AMPA)

SUMMER 2006



**THE AUSTRALIAN  
MARINE PILOTS  
ASSOCIATION (AMPA)**

Suite 2 Argyle Place  
14 Argyle Street  
Albion QLD 4010  
PO Box 576 Albion QLD 4010  
Tel: 61 (0)7 3862 2238  
Fax: 61 (0)7 3862 2240  
Website: [www.ampa.asn.au](http://www.ampa.asn.au)

**President:**  
Rory Main

**Deputy President  
& Treasurer:**  
Peter Liley

**Vice Presidents:**  
Welwyn Gamble  
Stuart Noble  
Mark Slater

**Secretary:**  
Chris Haley

**Editor:**  
Rob Choppin

**COVER PICTURE**

**Longest and Widest Vessel –  
MV AZUL INTEGRA to Load  
in Esperance - arrives again  
on the 7th Sep 2006**

The vessel is 299.95 metres length overall and 50.0 metres beam, 203,272 tonnes DWT and built in Japan in 2004. Loading 175 912 tonnes of Lump Iron Ore for discharge in Fukuyama, Japan, this is not a full load due to draft restrictions in Japan. Esperance Port's swinging basin is just over 450 metres making it a nice tight fit for this size vessel. This manoeuvre is done with two tugs - each with 65 tonne and 68 tonne bollard pull.

# President's Report

## Rory Main

### Proposal for a National (AMPA) Check Pilot System

AMPA is proposing the establishment of a national Check Pilot System to assist pilot organisations establish and maintain a Safety Management System to the highest standard and, if needed, provide confidential assistance and support to individual pilots.

#### 1. Background

In an implementation consultation paper on Maritime Legislation Reform in the Navigation Act and Shipping Registration Act the authors discuss a range of changes to the Acts which address the framework developed by Rae Taylor (June 2000 Review).

The reforms aim, among other items, to minimise the regulatory burden "through the removal of unnecessary regulation, legislative simplification and provision of performance based standards which provide flexibility for businesses to define their own strategies to meet safety, environment and trade outcomes".

*Performance outcomes, human factors and individual responsibility should be emphasised to the fullest extent possible.* This should encourage the development of a safety culture within the shipping industry and provide the most flexible regulatory structure possible for businesses to tailor practices to particular enterprise needs and to respond to technological changes and international trends in ship safety." (emphasis added).

In an executive summary of his report, Mr. Taylor states:

*1. The review has identified a range of safety and environmental hazards that arise in shipping operations. Given the high level of dependence of Australian trade on shipping services, and the size of its trading task, Australia has a relatively high level of exposure to safety and environmental risks. Competitive shipping services should and can be provided within an operating and regulatory framework that reduces the risks to safety and the environment.*

*13. The world shipping industry operates in one of the most open markets, with relatively few barriers to entry and exit. There is intense competition among international shipping companies in most market sectors, with strong downward pressures on rates.*

*14. While these competitive pressures benefit shippers through lower freight prices, they also encourage ship owners and operators to seek cost minimisation wherever possible. With most capital, insurance and fuel costs being relatively fixed, the greatest pressures to reduce costs occur in the operational areas of crewing and maintenance. As a result there has been a global trend in the industry towards use of second and open registers, which offer access to lower crew and ship registration costs, as well as advantageous taxation regimes. As well, there has been a noticeable ageing of the world fleet in some market sectors. Moreover, the continuing trend towards larger ships, which offer productivity benefits, also represents a greater potential risk to the marine environment of larger pollution incidents, as well as raising concerns about fatigue among smaller crews.*

*15. Accidents and incidents involving shipping have the potential to incur significant loss of life and property, and damage to the marine environment from pollution. Not only has the volume of shipping increased over the years, but also ships now are significantly bigger and carry a wider range of hazardous and noxious cargoes. The consequences and costs of incidents frequently fall on third parties or the general community, and are not adequately reflected in commercial arrangements between shipping companies and shippers.*

*16. International accident rate data and Australian incident investigation and Port State control reports reveal a continuing unacceptable level of defects in ships and errors of seamanship in the global shipping industry.*

The maritime industry is under significant commercial pressure to meet the demands of an international shipping industry, which is very focused on reducing costs through an economic rationalist approach. In this environment, the pilot is more concerned with maintaining reasonable standards of safety while handling ever larger ships manned with smaller crews whose level of training can be substandard. AMPA has recognised the need to address these issues through continuous professional development courses for pilots and has

# President's Report

*continued*

been working with Ravi Nijjer to provide Bridge Resource Management courses, Advanced Marine Pilot Training and Competency Audits. AMPA has also actively engaged pilotage organisations in discussion on developing a safety culture within Pilotage through fora such as the annual Workshops and the Asia – Pacific Conference earlier this year.

This paper will not address the reform or the proposed changes to the legislation. However, it is intended that this AMPA's Check Pilot proposal will operate within the proposed framework that is discussed in the reform paper.

AMPA's Check Pilot proposal is to train ten pilots from around Australia to provide an external audit function for pilotage organisations. The aims of the process are to assist Pilot Organisations identify latent failures which may exist in the organisations Safety Management System. The Check Pilot will not audit the technical skills of pilots. Instead the Check Pilot will focus on the implementation of the principles of Bridge Resource Management and the implementation of the organisations Safety Management System.

## 2. Pilotage Safety Management System (SMS)

Several pilotage organisations are implementing Safety Management Systems. The first function of an SMS is to develop processes that identify the "better" operational practices and to ensure that these are adopted by all members of the organisation.

Next, the organisation must develop a 'just' culture for generating meaningful reports. However, it is very difficult to encourage open and honest reporting in an industry which takes punitive action against individuals. The Global Aviation Information Network recognised this problem in a report that stated, "legal impediments such as civil litigation, regulatory sanctions, criminal proceedings and public disclosure that are major deterrents to improving aviation safety through enhanced safety information collection and sharing. Because of these impediments, reporters of safety information are reluctant to disclose anything other than what happened, fearing that any additional information, addressing why an accident, incident, or safety event

occurred may be used against them, their organisation or airline."

By its nature, the data generated by self reporting cannot be used to estimate the true nature of incidents and events. However, the reports provide an excellent source for identifying potential system vulnerabilities. It is only through appropriate incident analysis procedures that the organisation can identify the systemic failures and develop appropriate barriers.

Finally, the Organisation needs to audit the implementation of SMS principles and then feed back the results and the reports and audits to the pilots.

This process will encourage a "learning culture" through organisational learning systems. It must be demonstrated that the objective is to draw the line between acceptable and unacceptable behaviour and to generate systemic improvements that will prevent undesirable events from occurring in the future. Therefore the system must be seen as fair and just, both in plan and in practice. It cannot be used to hide events or appear to hide events which are seen to be blameworthy.

The proposed Check Pilot system is to develop a training program for 'auditors' who can provide a report to the organisation on whether pilots are implementing BRM and SMS as required by the organisation. The aim of the report is to identify systemic failures. The Check Pilots are to be seen as assisting pilots to identify latent failures which can be addressed and thereby improve the effectiveness of the SMS.

The Check Pilot system must be seen to support a 'learning culture' and this requires active participation of the pilots and the support of the management of the pilotage organisation.

## 3. External audits – function

There is significant data available which indicates that human error is a contributing factor in the majority of marine accidents. The US Coast Guard has initiated research and development studies in Human Factors and developed an approach to address some of the outcomes of the Human Factors R&D Program through a prevention through people program (PTP).

In a review of the program, it was

stated that the term 'human error' is misleading. The report recognised that "to err is human". However, we readily interpret 'human error' as meaning "that the cause of an error is most frequently a human being rather than the error-inducing characteristics in the system that result in people making errors. This tendency often leads to a 'blame the victim' mentality, which needs to be addressed."

The Check Pilot program will help identify individual and organisational factors which may be contributory to a latent failure in the SMS.

Therefore the principles guiding the Check Pilots will be to:

1. Honour the mariner
2. Take a quality approach
3. Seek non regulatory solutions
4. Share commitment
5. Manage Risk

The audit will be conducted by pilots who are trained in assessing BRM and interacting with peers in a supportive manner. This will engender cooperation and support for changing the culture of pilotage.

## 4. Training for Check Pilots

Pilots who volunteer to be Check Pilots will be required to be interviewed by Port Phillip Psychologists. This will help identify those persons who are most suited to the role. Once selected the pilots will attend a 5 day advanced BRM course, which will focus on the requirements of a Safety Management System. At this time we expect that Kit Filor will provide instruction in Accident Investigation to assist the Check Pilots in developing the skills necessary to identify the failures that may exist within the SMS.

The Check Pilots will also attend a four day peer support course in which they will be instructed in 'how to listen'. Generally pilots provide instruction to Captains and ship's crew. The Check Pilot role will require an additional skill which is quite alien to most pilots, to stop and listen to what is being said and ask questions before drawing conclusions.

## 5. Management of the Check Pilots

A register of current Check Pilots will be maintained by AMPA and will be provided to any organisation that requires the services of a Check Pilot. The pilotage organisation that requires the services of a Check Pilot

# President's Report

*continued*

will select an appropriate person for the task and correspond with the employer of the chosen Check Pilot directly.

AMPA will set the training requirements and recommend the Check Pilot fees. The employer of Check Pilots will be required to ensure their pilots attend the appropriate training programs and pay a subscription fee to AMPA for their pilots to be maintained on the register.

## 6. Conclusion

There is a significant change taking place in pilotage in Australia. AMPA is keen to support the implementation of appropriate Safety Management Systems in Pilotage by providing "Check Pilots" who can assist organisations identify improvements in their Safety Management Systems.

Ravi Nijjer and Steve Pelecanos have been working to provide appropriate continuous professional development for pilots. However, there is general

recognition that the training programs are only valuable when the pilots implement the systems in which they are trained.

The Check Pilot process will help Pilotage Organisations identify where the pilots are implementing appropriate BRM and SMS practices. In the end, the success of a Safety Management System lies in our ability to identify vulnerabilities and precursors to problems and then formulate and implement appropriate corrective actions.

# Editorial

I would like to extend my thanks and the member's thanks to Capt Martin North for his great articles on ship handling. I hope that he will return in the New Year with more but presently he is having a well earned rest from writing for Safe Passage. Martin would appreciate input from pilots who have interesting anchoring experiences to share. Issues of interest are:-

- Dredging Anchors
- Dredging Anchors in limited space
- Turning on anchor for berthing

- Turning on anchor for leaving anchorage
- Anchoring, current ahead
- Anchoring, current astern.

With regard to the Boomerang 1 ship in financial trouble the announcement I heard on ABC radio in recent weeks that B-doubles will be supplemented with B-trebles length at 90 feet are to appear on Queensland's roads. Sea is the most cost efficient mode of transport for heavy goods and in this era of Global Warming one would think more would be done to

encourage this form of transport rather than putting more fuel consuming, smoke producing and potentially far more dangerous trucks on the road?

Neil's pleas for articles has struck a chord and we have had reports from a number of ports round the country. Hopefully you will continue to send in articles and more will emulate those who sat down and produced something. Thankyou.

Hope that you enjoy this issue and Best Wishes to you and your families for Christmas and the New Year.

## Contents:

Future Recruitment & Training of Marine Pilots	5
Principles of Reverse Mentoring	7
International Maritime Organisation	8
Port Ash at top of class	11
Future Satellite Navigation Services	13
Torres Strait pilotage law makes waves	16
Loss of Pilots in Uruguay	16
Environmental Tobacco Smoke	17
Letter to the Editor	18
News from the Ports	19
Obituries	21



# The future recruitment and training of Marine Pilots in Australia

*A report by Steve Pelecanos on the work of the Industry Pilot Training Working Group.*

In March 2003 at an AMPA workshop in Brisbane, the shipping industry was invited to present its views on pilot recruitment. There was a perception in some sectors of the industry that the shrinking Australian-flag fleet would, at some time in the future, impact the pool of potential pilot recruits.

The perception has never been proven. It seems there are many Australians who still pursue a career at sea and many have found employment on foreign-flag ships. Nevertheless, the 2003 workshop agreed that it would support looking at options for expanding the resource pool of pilot recruits. A strong argument in favour of this was the awareness that good ship masters don't necessarily make good pilots. The opportunity to revisit the current recruitment and training practices, especially in light of the many recent changes that have been taking place in the shipping industry, was not going to be squandered.

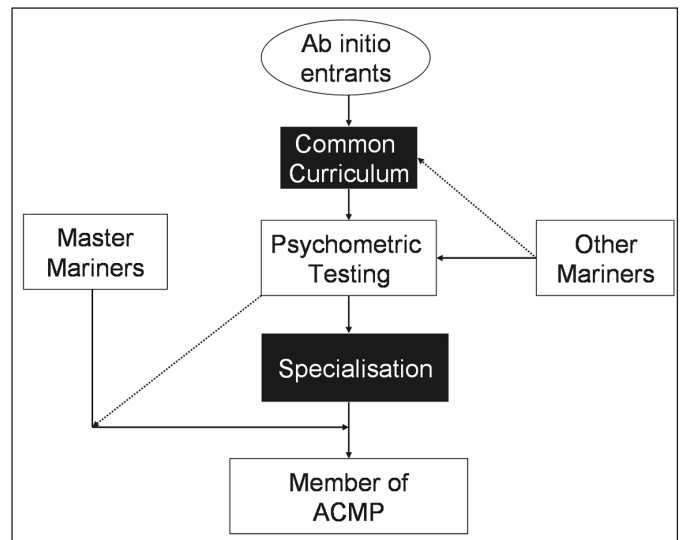
A working group was formed. It consisted of representatives from AMPA, ASA, AAPMA, AMC as well as Ravi Nijjer and John McCoy who was appointed as the independent Chairman. From the outset, it was agreed by all members of the group that the process was about expanding the recruitment pool and, where necessary, raising standards to align with the requirements of the changing bridge environment. It was agreed that the process was not about the eroding of professional standards to flood the market with pilots nor was it about producing individuals of poorer quality to promote an argument over the profession's worth. At the end of the day, responsible individuals in our industry could not be complicit in creating an environment that heightened the risk to the nation's waterways. The process was clearly aimed at improving, not diluting the current standards of pilotage in this country.

The working group produced a Draft Report that was circulated throughout industry, seeking feedback. The feedback was incorporated into the Final Report that was ratified by AMPA at its 2005 AGM. Following ratification, the working group was expanded to put into place the Report's recommendations and included representatives from, the AMOU, AMSA, SAL, Maritime Safety Queensland, Department of Planning and Infrastructure (WA) and Challenger TAFE.

The proposal is broadly based on the model used by Qantas to recruit and train its cockpit personnel. AMPA has been working closely with Qantas during the last ten years and has been able to gain valuable insights into training and operational philosophies and procedures. It is a healthy alliance which we intend to keep growing.

Central to this new recruitment and training program will be the creation of the Australian College of Marine Pilots (ACMP). This will not be a training college but rather a College in the collegiate sense, similar to the Royal College of Surgeons. Its governing Council will consist of pilots and others whose knowledge will add value and independence to the governance of the College. The College will set standards of professional conduct, training, use of equipment, fatigue management etc. All currently licensed pilots will automatically become Fellows of ACMP. All future applicants for pilot's positions will have to be Members of the College. Membership is achieved by successfully completing the approved training program. Once licensed as a pilot of a port, other than a port of lower complexity\*, the Member will become a Fellow of ACMP.

In essence, recruits will be drawn from three sources; Master Mariners, other mariners and ab initio entrants (Diagram 1). A Certificate of Competency as a Master Class 1 will be sufficient evidence of appropriate knowledge and experience to enable an applicant to apply for a position as a pilot trainee. A Master Mariner will need to undertake a Psychometric test before being granted Membership of the ACMP. Ab initio entrants are those with no previous maritime industry experience and will have to undertake the whole of the new training program. Other mariners (which includes RAN personnel), will need to apply to the ACMP for recognition of prior learning and, depending on their knowledge and experience, may be granted exemptions from certain parts of the whole training program.



**Diagram 1**

Ab initio entrants have the option of embarking either on a degree program (through the AMC) or a Vocational Graduate Diploma program (through Challenger TAFE in conjunction with Notre Dame University) ñ see Diagrams 2A and 2B. Diagram 3 shows the program the student has to follow on completion of the degree or year three of the Vocational training program and following successful completion of the psychometric testing.

# The future recruitment and training of Marine Pilots in Australia

continued

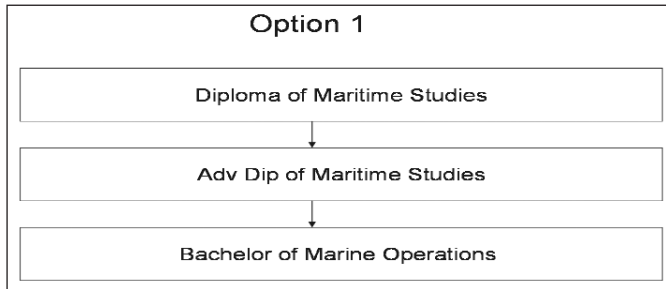


Diagram 2a

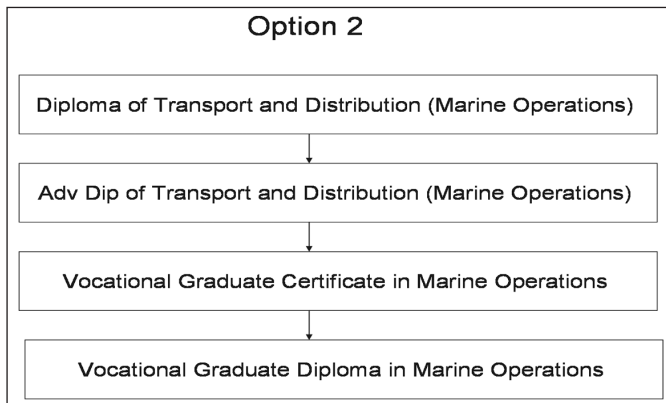


Diagram 2b

Students will have to undertake a program of competency based practical training at sea, in port as well as on simulators and manned models. The students will also need to complete the AMSA short courses required for Master Class 1 as well as a BRM program. There is no time frame attached to this part of the program. Students will need to satisfy the College that they have satisfactorily completed the tasks set in each of the practical training modules. It is estimated that this could take up to three or four years to complete.

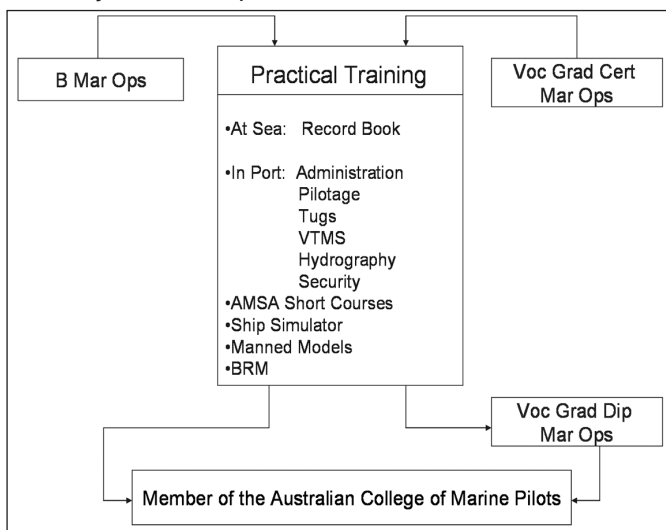


Diagram 3

It is understood that this newly proposed program will short circuit the Master Class 1 course by about 4 years but as the program is strongly focussed on pilotage, it is believed that the person, on being granted Membership of ACMP will be at least as well qualified as a person holding a Master Class 1 Certificate for the purposes of applying for a position as a pilot trainee.

It is fair to say that the program has substantial rigor attached to it, with a number of exit points along the way for students who don't make the grade. Those who get through the program will be adequately qualified as candidates for trainee pilot vacancies.

Interestingly, Qantas has found that maturity, or the lack of it, can be a problem for younger pilots and insists that they work for regional airlines on completion of their Qantas training to gain a deeper understanding of the job basics than they otherwise would and to expose them to a broader range of decision-making opportunities early in their career.

We, in the maritime industry, are also intimately aware of the depth of experience required to pilot large ships within narrow operating margins, not to mention the negative impact a fresh faced pilot arriving on the bridge can have on a ship's master. We are not about to release a group of pilots in their mid-twenties onto the bridge of large ships. Rather, the program will feed pilots to the country's outports where the opportunities for gaining good experience in handling small ships in varying tidal and weather conditions without the assistance of tugs, abound and the risk of causing major damage is reduced. It is envisaged that capital city ports will continue to draw their pilots from the outports.

It is important that the whole process is subjected to an appropriate audit regime so that it remains transparent and retains credibility with the general public. Diagram 4 shows that the ACMP will be audited by the licensing authorities to ensure that it's standards are being properly managed and applied. The ACMP will audit the training institutions to ensure that the appropriate standard of education, training and examination is being maintained.

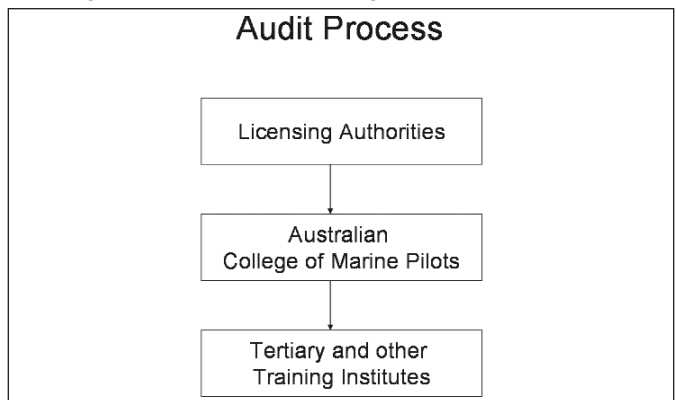


Diagram 4

The question of who pays for the training was one that engaged the minds of the working groups for some time. In the end, it was agreed that the training of marine pilots should not be any different to that of any other profession in this country and students will be able to access the various federal government funding schemes and grants that are available. It might also be the case that those organisations that employ pilots might wish to make a number of scholarships available to students.

As to the practical training phase of the program, members of the working group have indicated that berths will be made available on ships, pilot employers will facilitate the necessary observations trips, port authorities and safety authorities will facilitate access to those parts of their

# The future recruitment and training of Marine Pilots in Australia

*continued*

organisation where students need experience.

It is anticipated that by working together towards the same outcome, our industry will gain the benefits of a properly structured and managed training program ñ a program that pilots will play a prominent role in developing, maintaining And overseeing.

*\* A port of lower complexity is defined as a port that cannot accommodate ships with an LOA greater than 105m or a draft in excess of 4.5m, where no tugs are available for use and where there is no passing traffic within the port jurisdiction.*

## Can We Apply the Principles of Reverse-Mentoring to Make us Better Pilots?

*By Capt. Stuart Noble, Newcastle.*

As junior pilots, most of us learned our craft from our senior pilots, by observation and by guided training and instruction. For many, especially in larger pilotage operations, it was not a formalised mentoring program, whereby a one-on-one relationship was engendered. This lack of formalisation had the benefits of differentiating between those opinions and actions we concurred with, and those we did not. However we can probably all associate with the principles of mentoring.

The concept of reverse mentoring was formalised by the then CEO of General Electric Jack Welch in 1999. His particular observation was how senior staff lacked the technical knowledge of the junior staff. He ordered 500 senior staff to choose a junior staff member who was well versed in the Internet, and to learn what those junior staff knew. The goal was to broaden the spread of knowledge with the recognition that expertise is often not directly proportional to age.

In a 2001 study in the good ol' US of A, it was found that 41% of companies used reverse mentoring to spread technological expertise. For the corporation, the benefits are very cost effective dissemination of expertise - sure beats the costs associated with professional training of dubious targeting. The speed of development in our industry makes it potentially a wonderful opportunity for the implementation of reverse-mentoring programs. There are things for all of us to learn about technology, ISM, security, quality and to simply break us out of the lethargy of perception that we know all we need to.

As with all mentoring programs, the rewards are not only to the mentee.

Experience with mentoring programs has shown that mentors learn as much as they teach.

Junior personnel want a forum to voice opinions and to show off their skills.

But mentoring has its limitations. Mentees need to be open to new ideas. This could prove to be a problem in our conservative and hierarchic industry. Equally, mentors need to have a particular mindset, to have the confidence in their own skills to be prepared to share their knowledge and their mistakes, to be loyal and to have a focus on the greater good.

Being chosen as a mentor should have prestige attached - selection should be based on carefully developed criteria including job description - if it's worth doing, get the right people to do it. It should be measured and recognised at a corporate level and supported by the corporate strategy. Skills in mentoring should be developed to include key principals and obstacles, interpersonal skills and coaching skills. Feedback and evaluation loops should be put in place to determine the ongoing benefits of the mentoring relationship. There should be rewards attached including recognition of the contribution made.

Reverse mentoring has a place in the broadening of knowledge of our masters too, the executives who all too often lose track of what their real business is: the safe and efficient operation of a pilotage area.

***We should be looking to harness the expertise and skills of our new joinings - can we put our egos on hold long enough to garner the benefits?***

*References:*

*Butyn, S (2003) Mentoring Your Way to Improved Retention, Canadian HR Reporter, Jan 2003, Vol 16, pp 13-14*

*Chang, J and Hampton, A (2004) Backward Learning, Sales and Marketing Management Jan 2004, Vol 156; p24*

*Greengard, S (2002) Moving Forward with Reverse Mentoring, Workforce Mar 2002, Iss 3; p15*

*Smith, M (2000) Teaching the "Old Dogs" New Tricks: Reverse Mentoring, Canadian HR*

*Reporter, Jul 2000 Vol 13, pp 7-8*

*Solomon, M (2001) Coaching the Boss, Computerworld, Jan2001, Vol 35, p 42*

*Stone, F (2004) Leadership Coach, Executive Excellence Feb 2004, Vol 21; p5.*

Designed and Printed by  
SNAP PRINTING  
WOLLONGONG



Phone: 4228 8411



# The International Maritime Organisation

*Bv Paul Pelczar*

**The Australian Government, media and other 'interested fora' (including the 2004 Boulton Lecture) has raised the awareness of the introduction and implications of the International Ship and Port Facility Code (ISPF), however, less may be known about the institution that sponsors the ISPF. Initially drafted in November, 2003, the intent of this paper is to outline the objectives of the International Maritime Organisation, provide an overview of its history and to reveal its relevance to the world's maritime fraternity.**

Australia is responsible for one of the world's largest sea areas. Under the United Nation's Convention on the Law of the Sea (UNCLOS),<sup>1</sup> it has either sovereignty or sovereignty rights over 16.1 million square kilometres of ocean. The Nation is heavily reliant on the free and unrestricted movement of international trade with more than 70 per cent of exports and imports transported by sea in terms of value and well over 95 per cent by bulk. Australia depends upon her sea territory deposits for much of its domestic petroleum production and the fishing industry constitutes an important part of the national economic effort. Tourism is reliant on a number of unique elements of the world's marine environment; most notably the Great Barrier Reef.

Maritime incidents such as the *TAMPA* and *PONG SU* have increased the awareness of the Australian population that the surrounding seas and oceans are vulnerable to exploitation and more akin to a highway rather than a barrier. During the last few decades, rapid industrial development, coupled with the expansion of maritime trade, have placed the waters north of Australia under severe environmental stress. Accidents on the scale of *EXON VALDEZ*<sup>2</sup> would have dire consequences for Australia's primary industries, trade and tourism.

The International Maritime Organisation (IMO) is the specialised agency established by the United

Nations (UN) to deal with maritime affairs. Their main concern is to improve safety of life at sea and pollution prevention. In order to achieve its objectives, the IMO has adopted a number of conventions covering a wide



range of maritime issues.

*EXON VALDEZ in Prince William Sound, Alaska, with a smaller tanker being used to off load remaining oil. An accident on the scale of the EXON VALDEZ disaster on the Great Barrier Reef would spell the end of the reef and any tourist potential.*

## HISTORY

The establishment of an Organisation to deal with increasingly complex maritime issues was first raised in the late 19th century. It was not until the establishment of the UN, that such an Organisation became a reality. Australia was one of twelve states that were involved in the preparation of a permanent inter-governmental maritime agency in 1947.

The Inter-Governmental Maritime Consultative Organisation (IMCO) was established in 1958. Though several important international conventions had already been developed through the UN,<sup>3</sup> the IMCO's primary purpose was to develop international regulations to promote maritime safety more effectively. In 1982, the name was changed to the International Maritime Organisation.

## STRUCTURE

The IMO's headquarters are located in London, United Kingdom. The Organisation has 162 member states and consists of an Assembly, a Council and four main committees. The Assembly is the governing body. It consists of all member states and convenes every two years. In between these sessions, the Council, consisting of 40 member states, is elected by the Assembly and acts as the governing body. Australia is a member of the

Council, and except for a nine year gap from 1976 to 1984, has served continually since its inception.<sup>5</sup> The technical work is carried out by a number of committees.

Membership to the Organisation is open to all states and though encouraged, they do not have to be members of the United Nations. The budget of the Organisation is financed by contributions from member states, voluntary donations and sale of publications. The official languages are Chinese, Russian, Spanish, French and English, however, working documents are issued in the latter two only.

## SAFETY

The Maritime Safety Committee has the duty of considering any matter outside the scope of the IMO and concerns itself with issues dealing with navigation, ship construction and all matters affecting maritime safety including the effect of the human



element on casualties.

*PONG SU in Sydney Harbour. The ship originally belonged to the North Korean Government but was seized at sea in a joint effort by the RAN, Australian Federal Police, Customs and the NSW Police after it was thought she was delivering drugs to the Australian Mainland.*

The Safety of Life at Sea (SOLAS) Convention in its successive forms is generally regarded as the most important of all international treaties concerning the safety of merchant ships. The first version was adopted in 1914, prompted by the loss of *RMS TITANIC*. It established international standards for safety, preventing collisions, lifesaving equipment and included regulations on the use of radio<sup>6</sup>. Further improvements were made in 1929 and 1948.

The 1960 Convention was the first major task of the IMO after its creation. It reviewed the previous protocols and updated regulations

# The International Maritime Organisation

continued

resulting from the progress of technical developments in the shipping industry. One of the main objectives of the SOLAS Convention was to specify the minimum standards for the construction, equipment and operations of ships, compatible with their safety and placing responsibility of adherence on flag states.<sup>7</sup>

In response to increasing incidents of collisions at sea post-World War Two, the IMO improved regulations, regulating ship traffic at sea by introducing general standards for safe traffic separation schemes and establishing standard lighting and signals. In 1972, it approved a worldwide navigational warning service. This facilitated the timely dissemination of navigation area warnings<sup>8</sup> and notices to mariners,<sup>9</sup> notifying ships of areas that may pose a threat to safe navigation.

Another main cause of shipping accidents was overloading. The IMO built on earlier conventions that had dealt with unifying regulations of load lines,<sup>10</sup> by identifying the height of freeboard of seagoing ships.

In the early 1970s, the Assembly met with the objective of creating an international plan for the search and rescue of people in distress at sea. It recognised that establishing a reliable radio network, for transmitting distress calls and safety was of great importance. This resulted in the creation of the International Maritime Satellite Organisation in 1979.<sup>11</sup>

The carriage of passengers and safe operation of fishing vessels has been addressed routinely throughout the life of the IMO. The practices associated with the trafficking or transport of illegal migrants by sea violates the SOLAS Convention. One of the problems in dealing with the international regime of refugee protection is that it is clearly prescribed that a ship has a duty to rescue anyone in distress, including refugees, however, there is no clear international rule governing how they should be treated thereafter. While the IMO deliberates with the issues raised by such incidents as the *TAMPA*, it has encouraged member states to ratify the UN's protocol against the smuggling of migrants by land, sea and air.

Initially tabled in the 1974 SOLAS Convention, the measures preventing acts of terrorism threatening the security of personnel and the safety of ships were reviewed after the *ACHILLE LAURO*.<sup>12</sup> In recent years, as the increased terrorist threat now includes fears that ships could be used as a means of mass destruction, the IMO has proposed extensive amendments to the statutory instruments for the prevention and suppression of acts of terrorism against shipping.

The new maritime regulations known as the International Ship and Port Facility Code (ISPF) were promulgated in December, 2002. It applies to commercial shipping of 500 or greater gross tonnage<sup>13</sup> and is principally a risk management strategy with authorities implementing security procedures to meet the level of threat. The IMO is encouraging member states to adopt new regulations enhancing ship and port security and to prevent shipping from becoming a target for international terrorism.

Concomitant with the threat of terrorism has been the issue of piracy. With the trends of the last decade - targeting vessels in busy crowded ports or tying up the bridge crews leaving the ship not under command - the IMO has issued official warnings and urged governments to intensify their efforts against piracy. Reported acts are most prevalent in Southeast Asia<sup>14</sup> and due to the geography and prevailing economics of the region will continue to challenge the integrity of



international trade.

*Super Tankers like this are larger than the USN's biggest aircraft carriers, and less manoeuvrable. Having an Organisation like the IMO can help with navigation and safety at sea issues for these new leviathans.*

## ENVIRONMENT PROTECTION

The Marine Environment Protection Committee deals in the field of marine

pollution. In consultation with other UN organs, international organisations and expert bodies, it adopts or proposes amendments and regulations to prevent pollution from ships.

In 1973, a significant step was taken with the introduction of the Maritime Pollution Convention (MARPOL). It identified and standardized measures to prevent pollution of the seas by ships. This specifically addressed accidental and operational oil pollution as well as pollution by chemicals, goods in packaged form, sewage and garbage.

The International Maritime Dangerous Goods Code (IMDG) was established to provide a unified code of transportation of dangerous goods by sea and later, the storing and movement of them within ports and terminals.<sup>15</sup>

A legal committee was temporarily established in 1967, in response to problems that had arisen in connection with the wreckage of *TORREY CANYON*<sup>16</sup>. It was later made a permanent body. It deals with liability issues and maritime salvage such as rights of a coastal state to undertake measures to prevent pollution of its coast and, compensation issues for damage caused to a marine environment.

## TECHNICAL COOPERATION

A committee dealing specifically with rendering technical assistance to member states in adhering to conventions and improving standards was established in 1972. The increased complexity of skills required in the profession of seafarers has been supported by the IMO through a worldwide network of advisory services. These advisors provide assistance in matters of safety, training and legislation.<sup>17</sup>

## CONCLUSION

The IMO remains the principal custodian of a large number of technical conventions to which its member nation subscribe and which they implement by translating into their own national maritime law. Devoted to maritime safety and pollution prevention, the Organisation attempts to provide uniformly high standards on a range

# The International Maritime Organisation

*continued*

of maritime issues throughout the world. Its success depends heavily on nations to comply with these standards through competent domestic maritime administrations.

The IMO, particularly in recent years, has not only adopted new conventions but also made substantial and numerous amendments to the existing ones. These have been in response to the very rapid change in technology and the increased threat to safety at sea by piracy and terrorism.

Shipping is safer and the seas cleaner because of its existence.

## Notes

1. An international agreement regulating the use and exploitation of the world's oceans. UNCLOS of 1981 calls for limited and controlled mining of the seabed. In general, the twelve-mile limit for territorial waters, gives all nations' ships the 'right of innocent passage' through crucial straits; and sets up international anti-pollution regulations.
2. A very large crude carrying vessel built in 1986. In 1989 the 987-foot supertanker, carrying over 12 million barrels of oil, grounded on Bligh Reef in Prince William Sound, Alaska. The reef ripped open ten of the fifteen cargo compartments in the ship. In less than eight hours, so 215,000 barrels of crude had leaked. The spill, driven by heavy winds, contaminated over 3,190 miles of shoreline and drifted as far as 470 miles from the site of the wreck, making it the worst spill in American waters.
3. These included the International Convention for Safety of Life at Sea of 1948, the International Convention for the Prevention of Pollution of the Sea by Oil of 1954 and treaties dealing with load lines and the prevention of collisions at sea.
4. Except the function of making recommendations to governments on maritime safety and pollution which, is reserved for the Assembly by Article 15 of the Convention.
5. The Convention details that in electing the members of the Council, the Assembly shall observe that ten members shall be states with the largest interest in providing international shipping service, ten shall be other states with the largest interest in international seaborne trade and twenty shall be states who have a special interest in maritime transport or navigation and whose election to the Council will ensure the representation of all major geographic areas of the world. The 22nd Assembly elected Australia for 2002 and 2003 from 07 November 2002 under the latter criteria.
6. It also initially established the International Ice patrol and recommended the use of established sea routes on the North Atlantic.
7. Flag states are responsible for ensuring that ships under their flag comply with its requirements. A number of certificates are prescribed in the Convention as proof that this has been done. There is also provision to allow contracting governments to inspect ships of other contracting states if there are clear grounds for believing that the ship and its equipment do not substantially comply with the requirements of the Convention. By 1974, details were included to deal with the requirement of watertight compartments to enable a ship's hull to remain afloat after damage. In addition bilge pumping arrangements and stability requirements for both passenger and cargo ships were both included. There are other amendments that detail fire safety provisions for tankers and combination carriers, life saving appliances and radio telegraphy requirements.
8. Abbreviated to NAVAREA. Information detailing temporary hazards for safe navigation.
9. Abbreviated to NOTAM. Information detailing alterations to navigational charts.
10. Also known as Plimsoll lines, are marks on a vessel indicating the maximum depth to which the vessel is permitted to settle down into the water when loaded with cargo. Different lines correspond to different seasons and sea routes throughout the world. The International Load Line Convention was established in the 1930s.
11. Abbreviated to INMARSAT.
12. A well-known cruise ship. After leaving Alexandria, Egypt, in 1985, the ship was boarded and hijacked by four Arab terrorists. While holding the ship, her crew, and her passengers hostage, the terrorists murdered one American passenger, Leon Klinghoffer, and threw his body overboard. After three days, the terrorists surrendered and the liner was returned to her owners.
13. Including high-speed craft and mobile off shore units.
14. Statistics recorded by the IMO and International Maritime Bureau in 2004 identify Indonesian waters to experience the largest amount of attacks.
15. All dangerous goods are classified as one of nine classes. They are explosives, gases, easily inflammable liquids, inflammable solid material, oxidised substances, poisonous substances, radioactive matter, corrosive matter and other dangerous goods.
16. A Liberian flagged tanker that ran aground off the southwest coast of England in March, 1967, spilling more than 17 340 barrels of oil into the English Channel and polluting the shores of Cornwall, Channel Islands and Brittany. The vessel was enroute from the Persian Gulf to Wales when it grounded, causing the world's first major oil spill. Attempts by the RAF to bomb the wreck and set the huge oil slick on fire proved only moderately successful. The tanker broke up and sank nine days later.
17. This includes training for those involved in search and rescue.

*This article was reprinted with the kind permission of the Editor of The Navy. (Navy League of Australia).*



*The logo of the United Nations International Maritime Organisation.*

# Port Ash at top of class in pilot training

***One old dog learnt a few tricks and now teaches others, reports SAM COLLYER, Sydney.***

CAPTAIN Cliff Beazley is not an entrepreneur... Never has been, never will be.

It is why Port Ash, the marine pilot training centre 30 minutes drive north of Newcastle, does not generate much attention.

Capt Beazley sees himself as just an old sea dog who learnt a new trick; adapting decades of pilotage wisdom to a love of tinkering with remote control models.

What was always an interesting idea turned out to become the Oxford of shiphandling, rather than the Disneyland.

After 30 years of shiphandling, 27 of them as a pilot in Newcastle, Capt Beazley returned ashore to discover an apparent lack of sufficient training for pilots. His idea, to build Australia's only landlocked port, always had merit – particularly after it initially caused many local MPs to salivate at the potentially lucrative tourist dollars that it could generate.

But that was never the intention.

Capt Beazley recognised the need to keep the politicians happy, but managed to convince them that his idea would in fact save more government money than it would generate.

Five years after the opening of Port Ash, what some consider to be one of the world's premier marine pilot training centres, Capt Beazley still recognises his apparent failure to make more money from the venture he started.

But that was never the idea, he said. "If I were more of an entrepreneur, it would be have been four times bigger and have all the bells and whistles," he said.

"You could see a Titanic going past with four funnels and 50 paying passengers on board."

"But that's not my aim – I want to promote the excellence and understanding of ship-handling." And promote shiphandling excellence he does.

Port Ash – with a fleet that includes the scaled-down 225-metre, 70,000 dwt panamax Mentor and 180 metre, 40,000 dwt handymax Triton – is not



only attracting pilots from Australian ports, but also international pilots looking to sharpen their skills. There was a time when Australian pilots would travel overseas to hone their craft, but the tide is flowing the other way with overseas ports keen to boost the skills of their pilots in Australia.

Port authorities and corporations pay up to \$10,000 for a five-day course at Port Ash, with the aim of providing hands-on training for men and women whose every move is scrutinised and whose mistakes can be costly.

Small handling errors can be costly, and insurance companies can be unforgiving when new premium rates are offered.

Capt Beazley said the course was more often than not money well spent. "One very minor incident (in a real port) could cost \$100,000," he said. "It would cost a tenth of that to send someone here for a week."

Even for a visitor, there is obvious tension in the air when the 5 tonne, scaled-down ship has her engines fired up and begins to pull away from the berth.

There is a clear sense of realism for those demonstrating the prowess of shiphandling, even if for a visiting journalist.

So much so that an international marine pilot, in command of what he clearly believed was a large panamax vessel, and not a 5 tonne replica, felt incredibly ashamed to have bumped back into the berth after embarking.

That his mistake was the product of having stopped the manoeuvre, in order to keep said journalist from getting wet in the rain, was irrelevant for him.

The vessels at Port Ash respond in the same way a full sized version would, and so does the crew.

Capt Beazley said the major downside in using computer simulators, as some do, to practice handling 80,000 dwt vessels was that pilots lost sense of the significance of their task.

"The advantage here is that you have the wind in your face and the ship is doing what ships do when they're subject to wind and waves and the push of tug boats," he said.

The idea of using scaled down models is nothing new. Other similar training centres exist for marine pilots, including Esso's centre in France which first introduced model ships.

But Capt Beazley said no other centre that he knew of was using scaled-down tugs – making Port Ash the only training centre with the "authentic" experience that includes everything that a pilot can expect to deal with in a full-sized harbour.

Pilots needed to learn how to work with others, like tug masters and their onboard crew, to navigate the channels and berth safely.

Capt Beazley insists, at this point, that the man-management and mental aspect of pilotage is just as important as developing the practical skills.

It is at that point that Capt Beazley exits the wheelhouse and lets a man like Ravi Nijjer take control.

Captain Nijjer, director of Marine Consultancy Group, has been coordinating bridge resource management (BRM) courses and advanced marine pilots courses for the past 11 years.

# Port Ash at top of class in pilot training

## Continued

In that time, more than 1,500 people from 66 organisations have completed the BRM and almost 500 have completed the advanced course.

Capt Nijjer said the training was similar to the support being given to airline pilots, focusing on managing the inevitable errors so that minor mistakes do not become major incidents.

"On an average Qantas flight, there are 2.6 errors made," he said.

"That's thousands of errors each week on the flight deck, but where are the planes falling out of the sky?"

"It's because they've got very good systems to manage errors.

"Research in human factors tell us that even the best person on a bad day can make a terrible mistake so what you need is a more system-based approach."

The practical and theorybased pilotage courses are designed to complement one another.

Both Capt Beazley and Capt Nijjer stress that the courses have come about through the hard work and long-running support of the industry bodies.

But Capt Nijjer said that this was not always the case. "Quite a bit has changed – it's less pilot centred than it used to be," he said.

"It's very important to give the regulators the credit here because they're supporting the change towards a more human factor and safety management approach.

The Australian Marine Pilots Association (AMPA) and the Australian Transport Safety Bureau (ATSB) were leading the push towards a systems approach to errors – where accidents and nearmisses are examined in the context of the system in which they occurred and not immediately put down to being completely the responsibility of pilots.

"They used to find someone to blame but it changed from an individual failure to a system failure, which provided us with the direction," he said.

Maritime Safety Queensland had also been a crucial supporter of the training, with other states also now beginning to move towards a similar approach.

Anecdotal evidence suggests the two courses are proving highly

beneficial to minimising mistakes and spreading responsibility.

Several incidents, including that of the general cargo ship *Mellum* two years ago, have been blamed on misinformation and poor communication.

The ATSB found this month (November 10) that *Mellum* had run aground at Thevenard in South Australia in September 2004 because of "deficient" communication between the master and the pilot.

It is precisely this kind of minor error that the training at Port Ash and Capt Nijjer's courses in systems-based aim to weed out.

Capt Nijjer said that some of the best shiphandlers did not always make good pilots.

"You can be the best shiphandler in the world but if you're a complete introvert, how are you going to work on the bridge with a ship's crew, the master, coordinate the tugs and other things?" he said.

Capt Beazley said it was too early to tell if shiphandling errors were lower now than they were before Port Ash at top of class in pilot training opened, but anecdotal evidence suggests that the two courses have had a significant impact.

"I'm told that's already happened in the Australian Navy, and it's coincident in the time they've been training here," he said.

"There's no way of proving that the training you did ever prevented an accident [but] I haven't heard of anyone who has been through here that has had an accident that has been attributable to him.

"But it's a bit too early to tell.

"It's up to pilots to finetune themselves – what we do is give them a better understanding of what they're doing.

"There are skills which they can learn here and there are attitudes on the job which are outside of all of our control.

"If you take the two courses together, it's debatable whether you can get any better training."

Capt Nijjer said it was simplistic to blame one person for many of the port incidents each year.

"People don't accept that one person makes a mistake and you end up with a catastrophic accident," he said.

"It's a very brutal system if it all depends on one person.

"Some professionals like this because they want the whole system to depend on them, but with what we know, it's not acceptable now."

Capt Beazley conceded that he was not finished with his plans for Port Ash – he had considered introducing manned tugs.

The tugs used at the centre at the moment were too small for anyone to sit on to operate, to do away with the present remote-control.

Manned tugs would mean larger tugs, which would require the ships to increase in size too, he said.

"It is a long-term dream of mine to see something like that," he said.

"I've bounced this off Adsteam and their attitude is that, 'If we want to train someone on a tug, then we'll get a tug and go out and train.'"

"There are lots of corners that need exploring, and that's one of them."

*This article is copyright T&F Informa and is reproduced with permission. Reproduction, retrieval, copying or transmission of this article is not permitted without the publisher's prior consent. T&F Informa does not guarantee the accuracy of the information contained in this article nor does it accept responsibility for errors or omissions or their consequences.*



# Anger as master faces 10 years for quayside accident

By Katrin Berkenkopf in Cologne

Friday October 27 2006

A GERMAN master jailed in the US and awaiting sentence of up to 10 years after a quayside worker was killed in an accident has become the focus of growing industry anger over the criminalisation of seafarers. Wolfgang Schröder was guiding the 1,150 teu Zim Mexico III on March 2 this year out of the port of Mobile, Alabama, when the bow thruster failed. The vessel, which is owned by Hamburg's Rickmers Reederei and was chartered out to Zim at the time, hit a gantry crane onshore, causing it to collapse on an electrician who later died.

The master was arrested when the ship called at Houston. Capt Schröder was charged with criminal misconduct and denied release on bail. In October he was found guilty by a Alabama jury. The sentence, which could be up to 10 years, is expected to be given by February at the latest. "We are shocked and furious," said Jürgen Stolle of the Hamburg association of masters and officers. "Such cases are causing considerable anxiety, in particular among the young generation, which is unnerved." Although the issue of criminalisation was not restricted to the US, the situation there was particular due to its special jurisdiction, he said.

In the latest case, the prosecutor said the master should have paid more attention to the fact that the bowthruster had already failed on two previous occasions. A pilot, who

was on board at the time of the accident, told the court that he was not told about these earlier problems. Capt Stolle pointed out that "maintenance and repair are first of all a responsibility of owners, rather than of masters".

Members of the Council of American Master Mariners warned in an internet forum that the case was "a dangerous precedent to have on the law books". "It could adversely affect our own people whenever an accident occurs due to a mechanical failure." Although it would not comment on the order of events, Rickmers Reederei said that "as to the question of guilt, we have a different opinion to the majority of the jury in Alabama".

A spokesman said the company had offered all the support it could to the master. He said financial issues have been settled. Relatives of the dead worker agreed to compensation payments. "With regard to financial losses for the port, the usual P&I procedures have taken place." Earlier demands by the port authority that the ship be arrested and sold in order to receive damages have thus not materialised.

*This article is copyright T&F Informa and is reproduced with permission. Reproduction, retrieval, copying or transmission of this article is not permitted without the publisher's prior consent. T&F Informa does not guarantee the accuracy of the information contained in this article nor does it accept responsibility for errors or omissions or their consequences.*

## Future Satellite Navigation Services

*This article is based on a report by Jay W. Spalding of the U.S. Coast Guard Research and Development Center in March 2006 for the full report see <http://www.stormingmedia.us/72/7280/A728054.html>*

### Introduction

Satellite navigation dates back as one of the first space applications. To fully understand the current state and how it is changing, we need to review how we got here and the influences causing change into the future. A detailed discussion of satellite navigation accuracy, integrity and availability will provide a better perspective and understanding of better performance. After 10 years of studies and planning we are seeing new technologies in orbit. The first "modernized" GPS satellite with two frequencies for civil use was set to operational status on December 16, 2005. The first European Union Galileo test satellite was launched December 28, 2005.

The GPS that is used today was designed in the late 1970's as a military system during the Cold War. The system was designed to be independent of ground control for weeks and even months at a time to minimise reliance on the ground control segment. In normal operations, the GPS control uploads new data to a GPS satellite once a day. Each upload contains sufficient data to support the satellite's broadcast for weeks. As a military system this makes GPS very robust. The satellites are placed high enough in orbit to be virtually untouchable and an interruption from the several ground stations can be tolerated for an extended time. This strategy was driven by the military "doomsday"

requirements of the time.

When the system was designed, there were no requirements to support safety of life applications such as maritime or air transportation. GPS relies entirely on predicted data based on performance from past days and weeks. When a fault occurs in a GPS broadcast there is no infrastructure for immediate intervention to prevent misleading navigation information. The technology and decisions made lead directly to the development of "Augmentations" as they came to be known.

Differential GPS (DGPS), as implemented addresses the shortfalls in the original design with regard to safety of life applications. For the last two decades, the basic signal in space has not significantly changed. The system has been formally shared with the civil sector since President Reagan's directive that guaranteed that C/A code GPS signals would be available at no charge to the world after the downing of Korean Flight 007 in 1983. This tragedy might have been prevented if its crew had access to better navigational tools. That directive helped open up the commercial market. In fact, it was soon realised that this signal, available for civil use, was so accurate it threatened US national security and errors were intentionally added (Selective Availability).

*Continued Page 14*

# Future Satellite

*Continued from Page 13.*

This degraded performance helped build a thriving DGPS industry that effectively corrected the intentional errors that were in place from 1989 through to May 2000. When Selective Availability was turned to zero, users suddenly realised consistent sub 10-meter accuracy from non-differential civil equipment. Ten years of gradual improvements in receiver technology and in the operation and control of the GPS satellites has pushed stand alone performance levels close to DGPS accuracy.

## Current state

Satellite navigation is regarded as a modern marvel. It has enabled myriads of applications that never occurred to the developers of GPS. GPS has spawned a multi-billion dollar industry driven by location technology that is still immature. The use of GPS for surveying is a great example of the industry taking advantage of such a capability. The tremendous advantage over traditional survey methods has lead to GPS being a part of every major construction project. GPS has become a ubiquitous technology in cars, boats, and phones. The communications industry relies heavily on GPS for timing of its networks. Transportation has completely embraced GPS to support navigation and tracking applications in all modes. For maritime use, GPS is the enabling technology for electronic charting and automatic identification systems.

## Current Augmentations for Maritime Navigation

### Maritime DGPS

Maritime DGPS currently can deliver accuracy within a few meters and notify users of integrity problems in a few seconds. Maritime DGPS is the approved system to meet the well-documented requirements for maritime navigation. In the late 1990's the market for Maritime DGPS was vibrant and growing. When Selective Availability was turned to zero in 2000, sales of the maritime beacon receivers for DGPS plummeted. For the maritime navigation user, the value added by a separate DGPS correction receiver evolved from being an accuracy and integrity enhancement to being mostly an integrity enhancement. For many users the enhanced accuracy from about 7 meters average stand-alone performance to 1-2 meters

differential performance is not worth the extra cost. The integrity issue however remains.

## Transitions

In 1995 two key studies by the National Research Council set the course for technical and governance improvements to GPS. These marked the official beginning of sharing the system with the civil sector in terms of design and control. The recommendations of these studies have taken years to implement and the system thinking has transitioned to consider all users versus the focus on military use in the past. The civil sector has had significant input to address system shortfalls for civil use. GPS is now going through a modernisation program with new signals and capabilities being added to new satellites. GPS III, the next generation of satellites and control system, has been studied and planned for the last three years. The first of these satellites will not be launched until at least 2012. The role of GPS augmentations will evolve or will be eliminated depending on the final outcome of GPS modernisation.

## Future State

Radionavigation is a technology area tremendously influenced by computing power. Advances in processing have led to new algorithms for navigation and communications. The desire and need for improved performance is growing faster than the ability of space systems to deliver. Innovative use along with long system lead times will always yield the situation where the fielded space system lags behind the current applications on the ground. Accuracy requirements are closely related to the rate of technology development. Once a new capability exists, applications are quickly developed to take advantage of the capability for both improved performance and reduced cost. Additional satellite signals at other frequencies will create new opportunities to exploit the system. Receiver development that leverages improved processing will yield new capabilities with the same signals.

## 2010: Satellite navigation in 5 years

By 2010, navigation accuracy and integrity may have been improved to a

level that allows most maritime navigation operations without augmentation. New GPS signals will be available with improved accuracy while multiple frequencies will provide alternatives to counter interference. Galileo will be in an initial phase of implementation. New satellite signals will expand the availability of service to urban areas and difficult geography and environments such as dense forests and indoors. Car navigation systems will be common.

## 2020: Satellite navigation in 15 years

By 2020 Satellite navigation will be a mature routine utility. The capability will consist of personal devices with hundreds of gigabytes of location-oriented information available in real-time. The concept of being lost will be a thing of the past. Anything of interest from shipments to your dog to your children can and will be tracked. Everything will be geo-referenced and accessible in proximity searches. The concept of addresses, street names and turn-by-turn directions could be considered quaint. A significant generation of adults will have lived their whole lives with GPS. Personal navigation/communication devices will link people to their world with a wealth of geo and time-coded information. Personal navigation will be multimodal with no transition from walking to transport by car, boat or plane. Navigation buoys and street signs will seem superfluous as colossal wastes of money to satisfy an older generation. Users will put their trust in an extremely robust reliable constellation of over 50 satellites with the power to navigate inside buildings and in difficult urban settings.

## Future Augmentations

Given the design of GPS, real-time system integrity had to be accomplished by separate systems. Well known requirements for this integrity "channel" now exist and perhaps the capability would be most appropriately included within new system designs. There is no free lunch however; a more robust monitoring and earth-to-satellite communication system would be required. Both Galileo and GPS III have plans for these services.

## Galileo safety of life service

The Galileo safety of life service will be

# Future Satellite

*Continued from Page 13.*

the first satellite navigation signal with real-time integrity built into the basic service. This real-time integrity monitoring is envisioned as a regional system, essentially a ground-based augmentation. The Galileo documentation suggests that these regional enhancements will be funded by partnerships in the region.

## GPS III

Plans and proposals for GPS III include real-time integrity. Contracts will be let this year for the space segment and control segment. This potential capability is certainly more than 10 years away. Notional Performance into the Future.

## Accuracy, Integrity and Availability

Accuracy has traditionally been considered the primary measure of a navigation system. Today, GPS provides outstanding accuracy for most maritime operations. Officially at 13 Meters 95 percent, standalone performance is usually within 10 meters. However, once a system has established accuracy that meets users' needs, other attributes come under scrutiny to judge a system's performance. Availability and integrity are measures that become paramount in executing operations with the accuracy the system provides. Relying on the signal and trusting its performance are critical for navigation applications where a vessel is committed to a course of action for a period of time.

These types of applications are generally referred to as safety of life applications. In maritime use, the severity of consequence has led to the development of systems that moderate risks to a reasonable level while preserving capability. However, as shipboard systems become more integrated, the potential to mislead the user increases as manual steps are eliminated. It becomes critically important that the entire system, including shipboard components, be able to indicate when there are problems.

Stand-alone GPS as a component in integrated navigation is particularly weak in this regard. GPS satellites can fail, mislead users and it can take hours for the problem to be addressed. This integrity issue is the primary justification for the various

augmentations of GPS. Detecting and acting on detected errors is a very challenging aspect to building navigation systems. The statistical algorithms and methods are meant to catch all errors and eliminate the possibility that the user is misled. Absolute certainty is not possible but very low levels of uncertainty can be achieved.

The appropriate level is largely determined by the application e.g. aviation one in a thousand. Much depends on the consequence of an error, e.g. "controlled flight into terrain" or vessel grounding on a sandbar. In the engineering of these systems, accuracy, integrity and availability form a triangle that is somewhat mutually exclusive. For a given application, a balance must be struck between accuracy, integrity (protection limits, probabilities and time to alarm) and time available (percentage).

## RAIM

Receiver Autonomous Integrity Monitoring (RAIM) is a statistical technique that uses extra information to determine the integrity of the position fix. This extra information is usually additional GPS satellites beyond the four satellites required for a three-dimensional fix. For a maritime user height information can be used as well. With strong satellite geometry, a fifth satellite adds the ability to detect that there is a problem with one of the satellites and a sixth satellite adds the ability to isolate the fault to an individual satellite.

Users in mid latitudes often have over eight satellites. With the current 28 satellite GPS constellation, the RAIM approach is very useful. However, there are times when the user does not have a sufficient number of satellites for the RAIM to be effective. RAIM is a valuable tool for the standalone user. For positioning applications where work can be scheduled or postponed for a short while such as overseas AtoN positioning operations, RAIM can provide the integrity needed to confirm the quality of a buoy setting operation using stand-alone GPS. For navigation operations that require a high availability, RAIM needs an incredibly robust and accurate satellite constellation in order to ensure adequate coverage and a low enough threshold for stand-alone applications.

As given in the notional chart, a stand-alone GPS user could probably use RAIM today to provide adequate integrity at about the 30-meter level for maritime operations.

## GPS Governance

Over the last 10 years the technical improvements to GPS have been fairly well developed. Industry groups have formed committees, the government has let study contracts and the best technical choices have been determined. Unfortunately, this has been the easy part. The management and funding of GPS has been a recurring problem. The US President issued new policy in 2004 to address some of the issues with the formation of the National Space-Based Positioning, Navigation, and Timing (PNT) Executive Committee. Several satellites in the existing GPS constellations are well beyond their design life and have used up the redundancies in their systems to stay on the air. A single fault in these satellites will take them out of service. Replenishment of satellites has been continually delayed.

The GPS control segment has been long overdue for upgrades and improvements. On paper the situation is dire, the satellites are on their last legs and resources for control and operations are barely adequate. The system continues to perform admirably, a testament to its design and the operators who keep it "flying." GPS has evolved into an important utility that should be adequately funded. Despite the continuing budget battle, progress is being made and new capabilities will be in orbit as more satellites are launched. Timelines are uncertain and always move to the right.

## Conclusion

As satellite navigation becomes more robust, and users rely more on electronic navigation organisations can begin to plan for gradual service reductions of standard navigation equipment. Basic understanding of satellite navigation technologies is a key element in exploiting location-based systems for operational advantage.

*More information about GPS can be found at*  
<http://en.wikipedia.org/wiki/GPS>



# Torres Strait pilotage law makes waves

**Tuesday October 31 2006**

Compulsory pilotage in the Torres Strait came into effect in Australian and Papua New Guinean law on October 6, much to the chagrin of International Maritime Organisation member states who feared for free passage elsewhere. The upshot of IMO Resolution MEPC.133(53) is that failure to carry a pilot on all tankers and ships longer than 70 m tankers transiting Torres Strait and the Great North East Channel will leave owners, operators and masters liable for penalties up to A\$275,000 (\$211,000).

There are exceptions. Sovereign immune vessels including naval and other government-owned ships are exempt, as are ships involved in sea rescue, heavy weather or other unavoidable cause. And it is possible to apply to the Australian Maritime Safety Authority for an exemption. Also, Australia has promised there will be no hot pursuit on the high seas of ships choosing not to take a pilot. But that will make attempting to visit the country later a little fraught.

Still, there are problems and opportunities and one enterprising pilotage company has its eyes set firmly on the latter. Australian Reef Pilots chairman Don McLay says the company had been preparing for the regulatory change for more than three years. Given that AMSA has placed under review rules governing the distance between seabed and keel on the route, the firm is promoting its under keel clearance system. "I think it's fair to say the eyes of the world are on Australia as we implement this compulsory pilotage regulation as there are many other ecological, vulnerable and treacherous passages worldwide where other authorities may move to replicate these laws," Australian Reef Pilots chairman Don McLay says. "This is something we have also been preparing for; in fact over the past three years we invested significant time and money with our sister company, Voyage Management Systems, to develop new, world-first technology to address the issue of

under keel clearance."

The company believes its KeelClear Safety Systems format will give ships transiting Torres Strait not only safer passage but also the ability to transit at deeper drafts. It is similar to Australian academic Terry O'Brien's patented DUKC (dynamic under keel clearance) technology which has seen successful service at Dampier, Geraldton, Weipa, Taranaki, Felixstowe and New York.

ARP's system, developed over three years in conjunction with Western Australia's Curtin University, has now successfully completed a three month operational trial in Torres Strait and the company will look to market it internationally. "We were determined to be ready with our KeelClear technology at the same time as the compulsory pilotage rules were brought into effect as we felt it made sense to also offer a solution to the draught issue," Mr McLay says. "Safety regulators are aware of the shortcomings of the current 12.2 m static draught limit which in some conditions is inadequate and the move to compulsory pilotage, along with our ability to offer customers this new technology, will allow greater flexibility with additional safety."

KeelClear works by calculating the required speed of the ship to give adequate clearance between the seabed and the ship. Voyage Management Systems project manager Captain Wallace Cray believes that while the Torres Strait has always been a bottleneck for shipping, KeelClear will allow deep draught ships a safer passage. "AMSA has recognised the limitations of the static draft regime with larger and faster vessels and has moved to review it," Capt Cray says.

*This article is copyright T&F Informa and is reproduced with permission. Reproduction, retrieval, copying or transmission of this article is not permitted without the publisher's prior consent. T&F Informa does not guarantee the accuracy of the information contained in this article nor does it accept responsibility for errors or omissions or their consequences.*

## Loss Of Pilots in Uruguay

*Courtesy IMPA Website.*

Three Marine Pilots were lost on the 21st August during a storm off the Uruguayan coast when their Launch sank. The Launch "Ederra III" was 750m off Punta Brara when it started to take water by the stern. Four Pilots and two crewmen were recovered from the River Plate by a Navy Patrol Boat.

Three Marine Pilots were lost on the 21st August during a storm off the Uruguayan coast when their Launch sank.

The Launch "Ederra III" was 750m off Punta Brara when it started to take water by the stern. Four Pilots and two crewmen were recovered from the River Plate by a Navy Patrol Boat.

Two of the dead Pilots were found 18 km away from the sinking the following day and a third died in hospital from severe hypothermia.

The wreck is to be raised to establish the cause of the accident.

The President of IMPA, Executive and Secretary General and Associations from all around the world have expressed their condolences to their colleagues in Uruguay.

# Environmental Tobacco Smoke

*Capt Craig Duthie, Newcastle.*

Environmental Tobacco Smoke (ETS) is well documented as a contributor to lung cancer, heart disease and adult on-set asthma. Having worked in a smoke free environment prior to accepting a position with Newcastle Port Corporation in 2000 it was disappointing to find myself exposed to ETS in my role as Marine Pilot.

Federal and State Governments acknowledge the risk of exposure to ETS in various pieces of legislation. In New South Wales the Occupational Health and Safety Act 2000 states that 8 Duties of employers

## **(1) Employees**

An employer must ensure the health, safety and welfare at work of all the employees of the employer. That duty extends (without limitation) to the following:

(a) ensuring that any premises controlled by the employer where the employees work (and the means of access to or exit from the premises) are safe and without risks to health.

The Newcastle Port Corporation Non-Smoking Policy states that it "has an obligation under the Occupational Health and Safety Act 2000 to ensure the health, safety and welfare at work of all of our employees and any others in our place of work".

The Act specifically refers to premises controlled by the employer whilst the Corporations policy loosely refers to our place of work. There is sufficient case law determining that the accommodation and bridge of a vessel are places of work for us. Is it controlled by our employer? clearly no. How much influence does the Corporation have on the bridge of a foreign vessel to impose its policy? a great deal. Do we have the right not to pilot a vessel from a bridge filled with ETS? We have the right to a smoke free work place...

Whilst the Legislative issues may be unclear at this stage what is clear is

the common law duty of care owed to individuals. Based on the tort of negligence, individuals who may suffer harm as a result of the acts or omissions of other individuals, companies or corporations are owed a common law duty of care.

In November 1986 the Federal Attorney- General tabled the following advice in the House of Representatives:

*An employer has a common law duty to take all reasonable steps to protect its employees' health and safety, including the provision and maintenance of safe workplaces.*

*The Attorney- General's Department advised... that injury from passive smoking is reasonably foreseeable and that consequently such an injury could give rise to an action for damages at common law.*

In support of the group and in recognition of the above facts in September 2005 the Corporation authored a letter to visiting ships Masters requesting that the Pilot be provided with a smoke free work environment. Through the agents this letter is forwarded to arriving vessels with other paperwork as a request only. This provides the Corporation with workplace history in case of future litigation, does not impinge on the Master Pilot relationship at initial interface and allows the allocated pilot to assess the safety of the workplace. The January 2006 edition of the Newcastle Port Corporation Information Handbook further supports the position stating:

*It is a State Government requirement for the Newcastle Port Corporation to provide a "Safe Workplace" for its Marine Pilots.*

*Smoking creates an obvious risk to the health of our pilots*

*We Seek your co-operation in providing a "SMOKE FREE ZONE" on your navigating bridge, for the duration of the pilotage.*

*Thankyou for your understanding and co-operation.*

It is pleasing to note that in January 2006 Maritime Safety Queensland also requested the provision of a smoke free zone whilst all pilotage services are being provided.

Statistically of the 250 Australian Marine Pilots, during our lifetime,

- 80 of us will contract a form of cancer,
- 20 will contract lung cancer,
- **of the 20 contracting lung cancer 5 individuals may never have smoked.**
- ETS will cause a doubling of the rate of heart disease
- ETS raises our overall death risk by 15%

**All employees are entitled to a safe, smoke free workplace, not only Marine Pilots but AMSA surveyors, draft surveyors, ships agents, terminal superintendents, stevedores and providores. Their employers have a duty of care to ensure they do all they can to provide it.**



# Letter to the Editor

Good day Gentlemen.

Firstly, as Secretary/Treasurer of the NZMPA, thank you for the copy of your latest newsletter. It is always well worth receiving and offers (at least to the Pilots in Wellington) interesting reading and lots of both professional and interesting comment.

On a personal level I was interested in the article by Captain Alex Amos on Pilot Ladder Safety. Your problems are equally our problems - we face the same floating unsecured accommodation ladders, high freeboard climbs and, of course, the ubiquitous 90+ stairs to the bridge. One item touched on briefly by the writer, however, was on page 18 (third column) where reference was made to "... will only work if both the pilot ladder (and manropes) and the accommodation ladder/platform rests firmly against the ship's side..." I just wish to comment on the (and manropes) bit.

Each port is different in its requirements. Some pilots require manropes for boarding, some for leaving and some, I guess, don't want them anywhere near them.† Here in Wellington we require them for both boarding and leaving the vessel. For boarding they represent a secondary method of staying out of the water should the ladder fail - although I must admit never to having had to use them in such a manner. Even if I did I am not really sure how long I could hang onto one rope - the last time I did that in earnest was climbing ropes in the gym at school to escape marauding pirates! In many respects, therefore, the use of manropes in boarding represents more of a psychological crutch rather than a useful aid.

Leaving is different however. High seas and swells, and violently pitching pilot launches, represent ever present hazards to a safe disembarkation. The need to get safely down the ladder whilst maintaining a safe distance above the often violently vertically moving launch landing area is a matter of great experience and timing, and one that does sometimes fail in its outcome. Once again pilots seem to be different - even in the same port. Some prefer to edge down the ladder step by step until the launch raises its deck to feet level - at which point they step off, whilst other use the manropes to get down the ladder and

then swing off at a suitable instant of time onto the clear area of the pilot launch deck. I am of the latter persuasion - preferring the controlled air flying rather than offer the opportunity for my feet and legs to become trapped between ladder and a rising launch deck edge.

The movement down the ladder using the manropes can only be done safely and effectively if the pivot point of the lines themselves is as close above the pilot as possible. This offers the pilot the maximum control of both his/her lateral and outward movement.† On "normal" ships - that is ships with "normal" or low freeboards, the manropes are generally secured at the top of the ladder and this pivot point is generally acceptable for positional control on the ladder. However, with higher freeboards, the pivot point is generally too high to allow any safe positional control on the ladder - something that becomes all too obvious when the vessel is rolling - or if the bottom of the ladder is caught by a passing wave crest. This problem occurs regardless of whether or not the pilot ladder is being used with an accommodation ladder.

- The SOLAS Regulations "*Pilot Transfer Arrangements*" seem to control only the positioning of the accommodation ladder. As noted by the author, it refers to a need for the ladder "*to rest firmly against the side*" - in lawyer-speak not always resting because to do that it would have to always be always properly secured. Ships differ in their approach to this regulation. Some secure the ladder properly to a lug inset into the ship's side whilst other let it swing freely with ship movement. Recently, on a Chinese tanker in high swells in the channel entrance in Wellington, a Chinese seafarer on a tanker was lost off the end of the accommodation ladder whilst preparing it for pilot disembarkation. Securing can be done - it often just isn't. Manropes are more problematical. They are designated as to size and availability but not to their securing or positioning.

My approach to this lack of regulatory guidance is to make specific requirements of my own. Where high freeboard vessels are using the combination approach, I make a

specific request for the manropes to be lashed to the pilot ladder (as well as being secured at the deck level) at a point about 1 to 2 metres above the foot of the accommodation ladder. Alternatively, I request that each manrope be brought behind and through the pilot ladder rungs at a similar point - the object being to lower the pivot point of the manropes to as lower a level as is practicable. Some ships secure their manropes in this position as a matter of process - most, however, do not. In circumstances where they do not and I think it is appropriate to do so, I will spend a little time on the accommodation platform re-positioning the manropes through the ladder myself before using them. That way I know that I am offering myself the best opportunity to make a safe disembarkation.

In conclusion, it is my view that it is appropriate now to review the SOLAS Pilot Ladder Regulations with respect to vessels that have large freeboards. I believe there is a demonstrable benefit to pilots operating such vessels for requiring manropes to be secured at a point below deck-level. I do not believe that it is the fact that crews are lazy; I do believe however that because they do not have to do the disembarkation themselves, nor is there a pilot regulation guiding them, it just does not generally cross their minds. Perhaps now is a good time for change?

Kindest regards

**William Corbett**  
**New Zealand**

Letters to the Editor  
always welcome.



# News from the Ports

## Port of Bunbury - WA News

Bunbury welcomed a new Pilot Boat "Tuart" in March 2006. She was built by Norman Wright and Sons, and has proven to be very good in rough head and following sea and swell conditions. She was named via a competition involving the local schools. Tuart was chosen because this was the name of one of the first tugs to be used in the Port of Bunbury, as well as a tree grown in the southwestern region of WA.

Worsely Alumina opened their new berth (Berth 6) also in March 2006. Previously Alcoa and Worsely shipped out 9 million tones of alumina off the same berth (Berth 4). This now allows both companies to expand their refineries for export through Bunbury.

Both Towage and Maintenance Dredging Tenders are about to be advertised.

The Port of Bunbury should export / import approximately 13 million tonnes for the financial year 06/07. With approximately 750 ship movements for the year, this will keep Captain Laurie Wilson and myself very busy. Fremantle Pilots currently are contracted by the Bunbury Port Authority to provide pilotage services to contend with annual leave and fatigue issues.

**Capt. Helen Cole**  
**Harbour Master**  
**Bunbury**

## Melbourne News

Retirements during the year have been Mike Carolin and Mauro Cobal with Graeme Keys to follow next month and Mike Gaunt early next year.

New pilots now licensed are David Lawrie from TT line and Bradley Seal from the ANL Bass Trader.

In training is Mark Keane from Stolt and Gavin Barry from Farstadt is due to start before the end of the year.

The deepening of the south channel, the headsand the river Yarra is currently on hold for more environmental monitoring and no decision will be made until after the election, possibly not until September 2007.

Marked transit zones have now been

established on either side of the port Melbourne channel in an attempt to try and keep the recreational boats from interfering with commercial shipping. So far this has only had limited success and will not improve without increased patrols and public education of the dangers posed to them by large vessels.

Melbourne is to get two new tugs in the Adsteam fleet in March 07. They will be of a Damen design with a 70 tonne bollard pull. The present pair Keera and Gabo will be redeployed interstate.

Geelong is expected to get another z-peller transferred from interstate to join Tusker, meanwhile Macedon and Edina will be disposed of.

**Richard Toone**

## Dampier News

Pilotage at Woodside in Dampier has been undergoing a growth/ rebuilding phase, as have many other operations around the coast. Of a total 15 full time pilots there are now 13 Karratha based pilots who cover the LNG, LPG and Condensate operations at Withnell Bay acting as Pilot and Loading Master as well as providing a pilot service to the Dampier Port Authority on the general wharf and also the bulk liquids facility which is presently dedicated to the export of Ammonia from the Burrup Fertiliser plant.

The Karratha based pilots also act as Pilot/Loading Master on the 3 FPSO's; Karratha Spirit, Cossack Pioneer and Northern Endeavour. The FPSO jobs are generally of a couple of days duration depending on weather but the Northern Endeavour takes a man out of the system for up to 10 days due to the constraints of travel out to the facility. The other 2 pilots making up the 15 are attached to the FPSO Nganhurra at Enfield alternating to provide full time coverage.

The best part of 10 of the pilots have been recruited in the last 2-3 years with a few starting in the last 12 months and there are only really a few of what could be termed journey men in Eric Barron, Dave Best, Wynne Jones (Perth based Marine Manager - Non piloting). The Port Operations Super' John Jenkin (Perth based - still piloting) is ex the LNG ships and has

been with the port operations for about 4 years.

Three of the more recent recruits were experienced Pilots out of NZ ports and John Meade who has been with Woodside for a couple of years was also a pilot in NZ in a previous life at Littleton. The others are Findlay Davison ex Auckland, Tim King ex Napier and the writer, Chris Kaye most latterly ex Port Otago. The term Kiwi Mafia has been kicked around a bit.

Withnell Bay is by far the biggest part of the pilotage operation for Woodside Pilots and presently there are 2 berths. The LNG berth and the LPG/Condensate berth. There is a second LNG berth presently under construction and a possible third with it's own dedicated channel to be constructed to handle the product flow from the Pluto LNG field which is being fast tracked as a sole venture by Woodside.

Other pilotage operations in the Port of Dampier are Marine Services WA Pty Ltd (DMS) whose pilots handle the Pilbara Iron Ore ships, bulkies to the Salt Terminal and product tankers to the Pilbara Iron Ore site. I must profess considerable ignorance as to the finer workings of the DMS operation but suffice to say there are generally 4 or 5 very large bulkies alongside loading ore with several at anchor and I understand the Salt operation exports something like 3 million tonnes annually. I understand the ore exports are up around the 90 million tonnes per annum but don't quote me on that.

The third pilotage operation at Dampier is at Mermaid Supply Base handling rig tenders and 4 or 5 coasters per annum.

There is a considerable exempt traffic volume with a plethora of rig tenders and support vessels transiting the Port on a daily basis. Total ship calls for the 2005/6-year were 3,026 vessel arrivals which one can assume would equate to about 6 or 7 thousand movements per annum including shifts. All in all Dampier is a very busy port and the buzz word is growth with many new ventures and discoveries in the pipeline with the popular press using terms such as "bigger than existing reserves" when reporting on new discoveries which seem to be almost of a weekly nature.

One thing that should be foremost in

# News from the Ports

## Continued

the mind of any pilotage operator with all the forecast expansion is the need for a secure supply of Marine Pilots (and other maritime professionals) to support these operations into the future and this is a challenge the industry must meet. It is relevant as I lament the fact that I will not be able to make next year's 5 yearly Union Steam Ship Company (NZ Ltd) Cadet's reunion due to work commitments here at Woodside that when experienced pilot recruits were required at Woodside 3 of those recruits; King, Davison and Kaye were in fact Union Company Cadets of a similar vintage. Clearly the training strategies of established shipping lines circa 1980's and before have provided skilled personnel for many pilotage operations over the years. We no longer have the luxury of such a stream of talent being developed today.

## Sydney News

Sydney Pilot Service has appointed a number of new pilots recently who are now undergoing training to replace retirements scheduled for 2007, who include John Lunn, Barry Keeble, Alex Amos, Phil Andrew and John Biffin.

New pilots appointed are Dale Thompson, Lindsay Cavanagh, Aaron Witcome, Stephen Major and Tony Hanson and are at various stages of the 2.5 year training program that takes them to an unlimited licence in both Sydney Harbour and Port Botany.

Training for Sydney Pilots now includes Man Model training at Port Ash and later at Port Revel and the competency audit course at Star Cruises in Malaysia. John Lunn retires as pilot manager in December and the manager's position will be filled by Neil Farmer and Colin Kesteven who will share the role in a 32 week cycle. One of the priority tasks for the new management in 2007 will be the development of a Safety Management System and we expect to use the excellent Brisbane model as a framework.

Sydney Ports appointed Robin Heath as the new Harbour Master in early 2006, Robin comes to us from the port of Halifax in Canada. The commercial wharves in Darling Harbour are scheduled to be shut down in 2007

with number 3 darling harbour already closed to commercial operations.

Some shipping will be transferred to Newcastle and Port Kembla while the expansion of Brotherson Dock in Port Botany, when completed, will absorb the increase in container traffic. Adsteam have announced that they will be introducing two new Damen 2810 tugs into Sydney ports in 2007, Warrawee and Warang will have a 60 tonne capacity.

**Capt. Neil Farmer**

## Port Ash News

The Centre recently celebrated its fifth birthday, the occasion being celebrated with a cup of tea all round. The years have passed very quickly and those associated with the Centre agree that we have probably learned more than our trainees!

The origin of the Centre was to cater for Australian pilots. Most providers now send their new pilots for the full 5-day VETAB accredited Course in General Ship Handling (CGSH). Annual attendance average is about 40 pilots, exempt masters and FPSO masters with 16 courses booked already for 2007 – this reflects increasing use by the RAN and US pilot providers.

In addition to delivering the 5-day CGSH, individual RAN ships' bridge teams are now attending workshops in order to "bring the seamanship books to life". Typically the team is CO, XO, NO plus small groups of OOW's. Without consciously being aware of it we are probably evolving the manned-model ship handling unit for an ab-initio pilot scheme when it comes to pass.

Activity is increasing markedly and a new ship, due early in 2007, will double our capacity enabling us to take two or four persons per course week.

The new ship is an adaptation of the two Toll-owned Bass Strait Ro-Ro ships and will differ markedly from our existing "Handymax" and "Panamax" single screw ships. "Ship 3" will be 7m. long with twin propellers (fixed pitch) and a bow thrust unit. It will be fitted with three rudders capable of quick change to single or twin rudder configuration and will provide training for ro-ro's, large ferries,

some cruise and container ships and a variety of naval vessels including the RAN's Anzac Class frigates.

It will accommodate up to five crew with conn position possible throughout the full length of the ship. There will be provision for tug operators fore and aft as necessary. The existing Ship Computer System will be adapted for twin-screw display.

Superstructure units will vary according to conn position and windage requirements – altogether it should prove to be an interesting and versatile ship-model.

Wishing you all a very Merry Christmas and a Happy and Prosperous 2007.

## Random Notes from Port Kembla

- Recruiting is now underway for two new pilots for Port Kembla, one to replace Steve James who has departed for fresh fields and one to replace Bob Myles due to retire in July/August 2008. There has been a good response to the positions and several quality candidates have applied. It appears that New Zealand may be a fertile area, for the short term at least, for pilot recruitment; however there are also several good candidates from the Australian coast as well.
- The tug "Adsteam Marloo has recently commenced working in the port; she is a 5,000hp Z Tech design tug with full fire fighting capability. Designed by Robert Allen in conjunction with the Port of Singapore Authority and incorporates the best of the tractor and reverse tractor technologies. Like everything else nowadays she was built in China. The pilots and tugmasters are co-operating to get the best from this fine new vessel.
- Work proceeds apace on the new cargo sheds and RoRo berth at Multi Purpose Berth 3 with many visits from assorted political figures visiting the port to share in photo opportunities.

**Capt. Bob Myles**

# Obituries

---

## Captain Martin Price

---

Captain Martin Price passed away suddenly on the 7 September 2006. This event was a shock to Martin's family, friends and work colleagues. It is still difficult to accept that Martin will not just walk around the corner and sit down and have a chat as he frequently did. He was a family man and dedicated to his profession.

After some time at serving at sea, Martin commenced his employment on shore as a young man with the Harbors Board in 1977 at the age of 29. He started his Marine Pilot career in Assistant Harbourmaster and Relieving Pilot in Whyalla and then proceeded to work in Port Lincoln (a place close to his heart) as Harbourmaster and Pilot. Martin often commented about how he loved returning to Port Lincoln.

Martin went to Adelaide in 1983 as a Harbor and River Pilot and soon saw an opportunity to get more involved in the management of pilotage. He took a keen interest in the Assistant Harbourmaster role in Adelaide as he had a knack for understanding the logistical issues involved in management of the shipping operations.

In recent years Martin took a leadership role with marine pilots in Flinders Ports and Ports Corp. He took new pilots under his wing and helped them to establish themselves in their roles. He also carried out the role of Check Pilot in recent years. Martin led others with his attitude and actions demonstrating that safety of employees was above any other priority in a world where the pressures of the shipping industry are higher than ever.

Martin was engaged, committed and very hardworking. He read widely and was well informed in many areas from world affairs to advanced safety systems and the latest ideas on management. He had a general interest in all things. What made Martin very special was his fair-mindedness, and his personal and professional integrity. He had a very 'inclusive' nature.

Martin's dedication to his job was shown also in the form of his long standing involvement with the Australian Maritime Officers Union. He took an interest as a young man in improving conditions of work for maritime officers and continued with this goal for the rest of his life. He worked hard to represent members of his profession not just in South Australia but also around Australia where he had many fellow colleagues who had benefited from his guidance. Martin held the role of Honorary Secretary for South Australia and was a member of the National Executive Council for over twenty years. Martin made an important contribution to Australian and international marine pilotage. He was a vice president of the international Marine Pilots Association for a number of years.

He will be sadly missed by the persons who knew him both in Australia and overseas."

*Alessandra Daley*

## Captain William B. Bower

---

William Bernard BOWER was born on the 24th of November, 1935 in the mid-western town of Wellington, NSW, the second child and only son of Harold & Bernice Bower. Bill's father was the foreman on the local BHP gold dredge, which for the nautically minded, was a large floating cutter-suction dredge, able to take it's own pond with it as it followed the gold.

It wasn't this quasi nautical machine however which gave Bill the notion of going to sea, rather it was the pictures and articles of the Company's fleet which appeared in the BHP Review magazines, received by his father.

Bill received his education at the local Wellington school & it was whilst at High School that he was coached in the game of Rugby Union by the Rev Walsham, who used to tell his charges-"don't get too carried away with a win, as every win just brings you closer to your next defeat." It was a philosophy which Bill carried into later life as he was engaged in his many Industrial & other struggles.

Bill served the usual 4 year Marine Apprenticeship with BHP, which was interrupted in those days by National Service, which for all Marine Apprentices meant a spell in the Royal Australian Navy as a midshipman. During this period Bill represented the Navy in their Rugby Union team, the highlight of which was playing a curtain raiser at a Melbourne AFL grand final.

Bill obtained his Second Mate's certificate in Sydney at the conclusion of his apprenticeship & returned to the BHP fleet as a junior Officer on the 12th of August, 1957. He was promoted to Second Mate on 23 March, 1959, to Chief Officer on 30 October, 1962 & to Master on 10 January, 1967 & served in many of the Company's vessels, including the 35,000 ton "Iron Clipper", before joining the MSB as a Marine Pilot in his home port of Newcastle in 1974.

Bill commenced as a Pilot in Newcastle as the port was about to undergo a 5 year deepening programme taking the depth from 11 to 15.2 metres at datum; Panamax sized ships were considered so large at that time that they could only enter the Port in daylight & at slack water. During Bill's 21 years at Newcastle he witnessed & was part of the many changes which took place to bring the Port to the one we know today, accommodating vessels up to 300 metres in length, exporting millions of tons of cargo every week. During his service with the Port Authority as well as piloting, Bill served several stints as Assistant Harbour Master and for many years acted as the Pilot's spokesperson on Industrial matters. He was always interested in politics, Labor politics that is, and was always active in Union matters.

# Orbituraries

---

## *Continued*

It was due to his involvement in the Merchant Service Guild that regular monthly meetings were held in Newcastle and eventually a local branch was established there.

Bill retained many of the Aussie bush values he was brought up with, he always called a spade a spade, his handshake was his word & his word was his bond. He was a valued friend but could be a formidable enemy, with very little ground in between & would fight very strongly for what he believed in. Bill was what was known in the old school as a good bloke; after threatening to knock your block off, he would give you the shirt off his back, lend you a quid & buy you a beer.

He had a great sense of humour and quite often a point of view that seemed to come from left field. His sense of humour didn't always amuse higher authorities though & he caused some raised eyebrows when he told the BHP Marine Superintendent, Phil Brady on one occasion that "all us blackfellows have to stick together you know" or when hauled over the coals in the MSB for not wearing his tie on duty he told the Harbourmaster that he had tried piloting with a tie & without a tie & that he couldn't really see any detrimental difference. When piloting, his unique radio language, which invariably contained many colourful & descriptive expressions & phrases, would have landed him in serious trouble with today's politically correct and often used to render him almost speechless on a ship where any female was present on the bridge.

Bill retired from the Newcastle Port Corporation in November 1995 as a Senior Check Pilot & after retirement he took up lawn bowls & like all things he did, he played it with a passion, nearly every day of the week. At home he dearly loved any sport on TV & his vegie garden. Also after retirement he travelled back to Wellington to re-establish connections with old school colleagues still living in the town. He was also awarded the prestigious Merchant Navy Medal for long & distinguished duty to the Merchant Service.

Bill passed away peacefully at his home with his family on Sunday, 19th of November, 2006 & his funeral, which was held on Thursday 23rd of November at St Stephens, Adamstown, was well attended by persons from every section of the Maritime Industry.

Bill is survived by his wife of almost 50 years Doreen, his only sister Gloria, his two children Kim & Michael & his two grandchildren Brooke & Chad. He will be sadly missed by all.

***Ian Wright***

## **Vale Captain Andrew Campbell Hurry**

Andy's career began in 1959 when he went to England to enroll as a cadet at the University of Southampton School of Navigation at Warsash. After passing out as a senior cadet captain he joined P&O as a cadet in 1960. He served on various vessels including "Bendigo" and "Oriana" before sitting his second mates in UK. Andy then joined the "Ballarat" in early 1964 as fourth mate. He resigned from P&O in late 1964 and joined E&A Line as third mate serving on the general cargo ships and passenger ships "Aramac", "Cathay" and "Chitral" where he met his wife who was an entertainment officer. Following the demise of E&A in 1975 Andy transferred to the container division as chief officer and subsequently gained his command. He joined the Torres Strait Pilot Service in 1981.

Andy was one of the first members of the original AMPA, a great shipmate, a skilled navigator and a highly respected pilot. He will be sadly missed. My sincerest condolences to his wife and family.

***Richard Toone***

# AMPA Executive

**President:** Rory Main

**Vice Presidents:** Welwyn Gamble, Stuart Noble, Mark Slater

**Secretary:** Chris Haley

**Deputy President**

**& Treasurer:** Peter Liley

## AMPA COUNCIL

Area	Name	Location	H. Phone	H. Fax	Mobile	Email
Nth Qld	Peter Dann	Mackay	0749549479	-	0479791041	pilotpte@mackay.net.au
Nth Qld	Elizabeth Datson	Cairns	0740335653	0740337875	0417731769	lizdat@austarnet.com.au
GBR	Welwyn Gamble	WBR	0733561311	-	0412226822	gamnaut@bigpond.com
GBR	Andrew Traill	Aust Reef Pilots	0249270234	-	0427784966	snailtrail@bigpond.com
Brisbane	Peter Liley	Brisbane	0754510456	0754510194	0407655926	pliley@brisbanepilots.com.au
NSW	Jim Dargaville	Sydney	-	-	0418259003	jdargaville@smartchat.net.au
Vic/Tas	Richard Toone	Melbourne	0398196063	-	0412341010	rtpilot@optusnet.com.au
Vic/Tas	Martin North	Hobart	0362430253	0362436116	0418331930	martin.north@hpc.com.au
SA/NT	Simon Moran	Darwin	0889817378	-	0401117058	simon.moran@nt.gov.au
WA	Rory Main	Fremantle	0893413555	-	0419910456	rmain@fremantlepilots.com.au
WA	Mark Slater	Dampier	0891830884	-	0414233255	markslater@aapt.net.au
WA	Ted Lysons	Port Hedland	0891731442	-	0418938331	tysons@westnet.com.au

Unit	Head	H.Phone	H.Fax	Mobile	Email
AMSA	Alex Amos Peter Liley	0299733020 0754510456	0299733310 0754510194	0418259575 0407655926	alexamos@bigpond.net.au pliley@brisbanepilots.com.au
IMPA /Training	Steve Pelecanos	0733410923	0733410923	0403347757	spelecanos@brisbanepilots.com.au
Environmental	Chris Haley	0242712238	0242712680	0400358250	cwh@cyberelectric.net.au
Fatigue	Martin White	0295248470	0295248472	0418259673	marsan@comcen.com.au
Transfer Equipment	Bob Hall	-	-	0419901455	bob_hall@optusnet.com.au
SAFE PASSAGE	Rob Choppin	0242264610	-	0414960792	rchoppin@bigpond.net.au

*If any of the above information is incorrect or if details change please forward amended information to the editor.*

## Advertising in Safe Passage

Safe Passage offers a unique advertising opportunity for suppliers of goods and services to the pilotage and Marine industry. Safe Passage reaches a targeted selection of the industry and more than 300 copies are distributed to pilots, pilot companies both private and government, port Authorities and associated industry groups. Copies are now also being distributed to pilotage groups overseas. There can be significant benefits advertising industry related activities in this magazine. Listed below are the advertising rates for 2006.

### AMPA ADVERTISING RATES – 2006

Full Page Ad in Safe passage (Black and White)	\$300.00
Full Page Ad in Safe passage (Colour, back page)	\$500.00
Half Page Ad in Safe passage (Black and White)	\$200.00
Half Page Ad in Safe passage (Colour, back page)	\$350.00
Advertising Articles (per page)	\$250.00
To insert pre-printed A4 sheets into Magazine (Up to 300 copies)	\$200.00

**AMPA can offer only limited space for advertising and some conditions apply.**

*For more information about advertising in Safe Passage please contact:  
The Editor (Rob Choppin) rchoppin@bigpond.net.au*

### DISCLAIMER

Articles contained in this magazine are the views and opinions of their author, and unless otherwise stated, are not the views and opinions of AMPA, their employer or any other organisation referred to in that article. AMPA cannot be held responsible for any apparent incorrect or misleading information and any inferences, implied or otherwise, made from the content of any article in Safe Passage.