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EDITORIAL COMMENT

TRANSPORT; IT'S REALLY THE OLDEST PROFESSION!

One can be reasonably certain that the first transport method discovered and used by early humans, other than manually carrying, was water transport which probably preceded the wheel by many thousands of years. Probably the very first building projects involved the training of water streams to increase depth and flow. Even the discovery of the wheel did not restrain the use of water as a transport medium, especially over long distances. This utilisation of water as an implement has continued down through the history of civilisation and evidence of a marine technology is to be found in the records and artefacts from all eras of civilisation.

Thus as we study the history of transport we are made constantly aware that shipping in all its forms has remained concurrent with the many types of land transport developed over the years. Even today ships remain the only viable and economic method of conveyance across oceans, inland waterways or around coasts where the topography makes land transport either impracticable or less economic.

Thus as the industrial revolution developed and roads became inadequate canals were built to carry the large bulk consignments of raw materials to the new factories and carry away the finished products. Later these were superseded by railways but seagoing ships retained their dominance for many years in those areas that the rails could not reach. As railways developed, they, in their turn, gradually superseded many of the coastal shipping routes but generally it was a rational development and coastal shipping remained an economic and necessary transport mode independent of, but often auxiliary to rail.

Most countries recognised the economic value of their coastal routes and took early legislative steps to protect them from foreign competition. (*Cabotage*) Only in the last fifty years have both rail and coastal shipping been seriously undermined by publicly funded and subsidised road transport but the wheel is once again turning full cycle as a better understanding of the real costs of transport is impacting on planners. This realisation has already begun a process of dynamic resurgence of rail in many countries world wide, with a lesser but still worthwhile impact on coastal shipping.

In light of the above remarks let us reflect for a time on the past and present importance of shipping to New Zealand. To do this it is necessary to understand that public perception and therefore the image profile of any transport mode is directly reflected in the number of passengers that travel by it. This is easily demonstrated by studying the social attitudes to the various modes and the culture that grew up around them when they were the only means available for public travel. Perhaps this is best done by noting the many poems, songs and stories still prevalent from the horse and coach days, the railway age and of course the passenger ship age. None of these art forms could have achieved any prominence were they not accepted by the contemporary traveling public at large. So it continues today as we are deluged with media hype and songs extolling the freedom and excitement of air travel. Passenger vehicles tend to become the shop window of the transport industry and where a transport mode provides no passenger services, or they are little used, the public perception of the mode becomes clouded and the belief is initiated that the mode is out-dated and of course this belief is encouraged by its other-mode competitors.

New Zealand's future well-being is still dependent on shipping. Each day vessels servicing our overseas markets arrive or depart. These ships come in all sizes, giant 150,000 tonne tankers, 60,000 tonne container ships and the many smaller specialist ships ranging down to a few thousand tonnes. Until the aeroplane can compete with loadings such as these, overseas shipping will have no other mode competitors.

This is not true of our coastal shipping, which covers all its own costs, while governmental policies favour road and air with taxpayer subsidies. There are indications, however, that environmental and safety considerations are driving change. Commitment to safety has long pervaded all maritime operations and shipping was amongst the very first industries to adopt widely implemented international safety standards and is recognised as one of the safest, most economic and most environmentally benign forms of commercial transport. *****

TO MASTERS ORDERS

THE FUTURE

Captain A D C Payne

This is the second edition of *'On Deck'* during my tenure as Master of the New Zealand Company of Master Mariners. I have now been part of this organisation for almost twenty years. It seems to me that this is an opportune time to take stock of where, as a group, we are and, where we wish to go.

The first question must be "What is our purpose?" I have always considered the company to be a group of professional master mariners, with considerable *collective* experience and wisdom which is available to anyone who needs it. It has been a longstanding concern of mine that all this knowledge and experience is apparently ignored by those who *could* benefit from it most, in both the legal and regulatory fields. The social side of our existence is, as I have stated before, a partial compensation to our wives and partners for the years that they spent supporting us and being the mainstay of our families. Unfortunately the social side is the only side our detractors appear to see.

The second question: **"What can we do to fulfil that purpose?"** This is a much more difficult question to answer and will probably garner differing answers, depending on whom one asks. Gaining the attention of bureaucrats who have their own, in my opinion, limited views on what is important is not easy. The hallmark of a bureaucrat seems to be that they develop a mind-set early in life and are then placed in positions completely beyond their understanding by politicians. With the best will in the world politicians are motivated by self-interest, which they convince themselves is good for everybody, especially as they are rubbing shoulders with bureaucrats and being generally indoctrinated by them.

The trick would seem to be to find a bureaucrat or politician that can be convinced that merchant shipping, and those working in that business, are of prime interest to the country and its welfare. This is not an easy task. Successive governments, here and abroad, have managed to side-line shipping and, worldwide, they have become an easy mark for those wanting to make their political mark in the modern 'nimby' world. Unfortunately most of our membership is retired, and having spent much of our careers dealing with the above mentioned bureaucrats and politicians wish to enjoy our retirement, not prolong the agony. However, do we care for our fellow sufferers who are still working? If we do then it behoves us to try to get some sense into the halls of bureaucracy, to try to see that the rules and regulations are practical and make sense. We need to be able to support our colleagues against those who are looking for a scapegoat or bring our experience into play in support of investigations in maritime matters.

Getting the attention of these people, as I have said, is not easy. Ideally we need to move in the same circles, have the 'gift of the gab' and be persistent. The persistence must be there or we would not have survived all that nature has thrown at us over the years. The 'gift of the gab' depends on too many things and cannot be quantified. Moving in the same circles would not be easy as these people, as far as I can discover, move in their own world and seem to be insulated from 'the lower orders'. Perhaps we need to bring them into **OUR WORLD**. Have them as guests at our meetings and functions and make sure they are included in professional discussions, so that they learn by osmosis, if you like.

For a while I dealt with cargo damage claims. This brought me into contact with a number of people in the legal fraternity, as well as underwriters. At first I felt I was being looked down upon, however, as with most of us, I needed to make them realise that this was serious business to me. I made sure that I understood the legal position and language of

matters being dealt with and was ready to argue on that basis. Having been a ship's master I knew the meaning of responsibility and approached every claim on that basis. Occasionally I ran into trouble over conflicts with large commercial clients, but was fortunate with the support of my employers. The point is that I gained respect for not just rolling over, but using their own language to back my arguments and educated them about my profession in the process. Only once was I ever threatened with court proceedings, and that never eventuated.

The third question: "How do we keep ourselves afloat?" We are in a similar position to many professional groups in struggling for membership. As with many industries ours is 'full on' and people on leave are mentally exhausted. Thus, it is difficult to convince them that this is a worthwhile way to spend, even a few hours of, their valuable family time with ex masters. Our side-lining is not helping. If we were seen as having an effect in the industry and backing our still employed colleagues it might be different.

We can make naval commanding officers members but they have their own organisations and a different culture that does not always accede with our own. Auckland Branch is actively involved with the Maritime School and is financing a scholarship. They are also pursuing a scheme whereby those undertaking their first qualification studies can join the branch as associate members and on qualifying for command can upgrade to full membership of the Branch.

The purpose of this editorial is to emphasise that it behoves all of us to make some effort to let other people know that The New Zealand Company of Master Mariners exists and that we have this largely untapped wealth of knowledge and experience. If only the powers-that-be would wise up to that fact they might not continually make idiots of themselves with their thoroughly impractical and senseless regulatory decisions.

Captain A D C Payne
Master

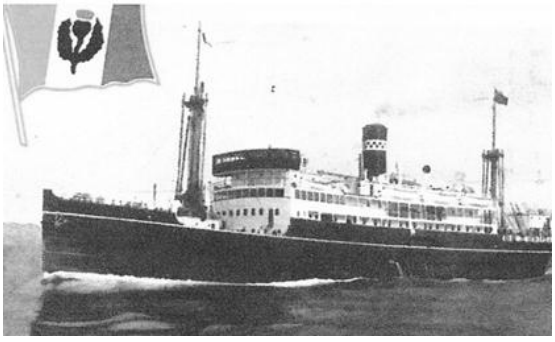
LETTERS

STRANDING OF THE M.V. MALABAR

(The writer advises he has also sent an amended version of this letter to *Sea Breezes*.**)**

Having a distant association with someone who once served in the Bums Phillip liner *Malabar* I found the feature about her in the June's 2010 *'Sea Breezes'* magazine particularly interesting. The author does not, however, dwell on how she came to be wrecked and so here are a few details. Malabar is now a Sydney suburb.

The direct cause of the Malabar's stranding was the incorrect response to a helm order and for an explanation of this we must look at how the man at the wheel received his orders during the early decades of the last century. In may sound incredible to modem seafarers but up until the year 1933 helm orders in English were given in the sense opposite to the direction in which one wished to turn. If you wanted to turn to port then you gave the order 'Starboard the Wheel' (or helm) and vice versa. This pig headedness stemmed from the days of small, tiller steered, sailing vessels, since the tiller was pushed in the opposite direction to the way one wished to go.



Burns Phillips mv *Malabar* 1925-1931
4512 grt. Photo *Sea Breezes*

The motor vessel *Malabar* was under the command of an elderly relieving master and was steaming up the New South Wales coast a few miles South of Sydney Heads. The ship had a Malay crew whose language was

unfamiliar to the Captain. Due to any anticipated language difficulties the duty officers customarily kept a close eye on the helmsman when orders were being given to him in English. At the time of the fateful order the captain and the helmsman were alone on the bridge. The other personnel having been sent below to get washed and dressed for arrival in port.

On encountering restricted visibility and wishing to take the ship further off the land the Master ordered "Port five degrees" which order simply determines how fast the turn is made. Unfortunately, the Malay helmsman not only turned the wheel to port instead of to starboard, but he kept the five degrees of helm applied as per Naval fashion whereas in the Merchant Service it is normal practice that a new course to be steered is given. In this case 'five degrees' by compass.

The Captain, who was intently peering into the fog failed to see that the helmsman had put the wheel the wrong way, nor did he notice that the ship was slowly turning to port and not to starboard. At the time of hitting the rocks the ship had swung about 35 degrees off her former course, she was apparently doing around 13 knots when she struck. Too hard to ever get off again. Apart from the loss of a fine ship the main human casualty was the cancellation of her Master's Certificate.

Clive Spencer

NO PREJUDICE AGAINST FOLK WITH NO TIME AT SEA

Ryan Skinner's blog suggesting that there is prejudice in the maritime industry against people without sea time is something I have never come across myself. He assumes that seafaring people, whether at sea or now in shore-based careers, are dismissive of those that have no sea experience. Admittedly there is a club mentality among those that have been at sea, but there are no secret handshakes or clandestine meetings, nor any expectation of the sort of favours one sees among old boy's school alumni. Seafarers are a beleaguered lot, but are often proud of the fact they have been to sea. Many are victimised when at work, typecast when not, and like everyone else, they seek to compare work experiences. So the fact there is a sort of right of passage or little bit of a clique among current or ex-seafarers is only to be expected. After all, the expression "we are all in the same boat" was not made up for nothing. It is this and nothing more. But seafaring is a career most choose for themselves and it is why they don't whinge about it too much.

Seafarers certainly do not have low expectations of non-seafarers in the way some people have about seafarers.

We welcome the range of jobs that are to be found in this multifaceted industry of ours, and I believe the examples cited by Mr Skinner represent the exception rather than the rule. How many people offer their respect to a job they don't understand — and most people do not understand the IT guy any better than they understand the ship's engineer. My only wish is that some of the people that influence seafarer's lives could see the impact of their decisions.

There is the naval architect I would like to invite to spend a week living on one of the St John's-built product tankers I worked on 20 years ago. I also wish a certain operations manager could see how a coastal tanker was forced through a storm to meet a scheduled tide, only to then rush away for the next cargo — the master finally demanded a 12 hour anchorage to give us time to sleep

I agree with Mr Skinner's thinking about innovation and nearly all recent innovation for the shipping industry has come from non-seafaring folk, although there are exceptions — just ask Wallenius Lines about its incentive scheme for staff. Innovation can be to the benefit of the industry as a whole, but one must ensure the kit is fit for purpose, and that the ship's crew can use new equipment, as well as repair and maintain it.

'Barratry'

COOEE, AHOY AND ALL THAT

I well remember growing up in small town New Zealand in the 1930's when native bush was widespread, common and fringed most settlements. Much of the bush was still thick and much used for recreation in those days before the plethora of electronic entertainments that exist now. Thick bush needed some care to traverse. To keep in touch with others of your party or to enable others to locate you or vice versa the Cooee call was almost universally used. It was high pitched and starting with a drawn out coooo- -

- followed by a more high pitched and ascending scale eeeeeeeee. The call carried considerably further than any other vocal utterance be it shout, scream, bellow or yell and was used and understood by most people. Although the call was in common use in other countries, notably Australia where it is still in use but also in Africa and some Asian forests, it now seems to have fallen into disuse in New Zealand and is seldom heard in the bush these days. One wonders that mountain and bush rescue teams are not instructed in such distance resounding calls.

Of course lacking the superfluity of electronic entertainments available today the bush is no longer an attractive alternative to the sofa or PC desk and in any case where it is easy of access the bush has been so modified in the last 50 years as to lose much of its former appeal.

This then brings us to that mis-used term SHIP AHOY a favourite of writers and sea story tellers who probably never went to sea anyway. Although not recognised as such we have here once again what is really a sea-going Cooee. Those of us who sailed the briny before the age of Single Side Band, VHF and loudhailers depended to some extent on flags, morse and even sometimes semaphore. If at anchor or needing to attract the attention of a nearby ship whose officers may have been busy with cargo or other things and a bit too far for shouting we used the high pitched AhhhHoooyyyy call and it usually worked. So to all those so-called experts in the traditions of the sea we have to remind you that a manly hail of deep voiced Ahoy will avail very little even over a moderate distance. High pitched cooee's and ahooyy's are not only most effective but as ancient as the human practice of bushcraft and seacraft.

That's all I wanted to say and now I've said it.

'Billy Boyd'

BRIDGE MANAGEMENT

You may remember a TAIC report in respect to a minor collision between *Anatoki* and a much larger vessel that was preparing to drop the pilot off outside Tauranga Harbour. The report more or less found that the collision may not have occurred had *Anatoki* been equipped with AIS, even though it was equipped with functioning radar. I was very critical of such a finding and Captain Tony Legge was in agreement with my criticism. My derogatory comments about the TAIC report are in very good company with the findings of the Admiralty Court judgement that has been extracted from a Lloyd's Report received earlier this year. Justice Teare's judgement has found that some good old fashioned seamanship should have been applied and ears should have been used as well as good use of radar.

Ronald Palmer

(See article *Reliance on AIS, page 52)*

BEAUFORT SCALE AND WEATHER FORECASTS

Why has New Zealand dropped the use of the Beaufort scale numbers in marine weather forecasts? Most of us will remember learning and recognise this scale which links wind speed to sea state and which also gives the limits when gale and storm warnings are issued.

New Zealand Met. Service forecasts wind in 5 knot bands. A "force 7" is forecast as "winds 25 to 30, gusting to 35 knots with rough seas". It would also require a gale warning When the wind speed is over 34 knots. Many more words to listen to, comprehend or copy down. Another new term frequently used is a "wind advisory". I do not know what this means or what the limits are.

All this is probably connected to global warming or La Nina

'Blogroll'

Bob McDavitt replies**:**

Metservice wind forecasts for mariners are issued in 5 knot increments. This gives a finer scale that the Beaufort scale.

A strong wind advisory is the new term for what was called a strong wind warning as used in Auckland recreational areas. The change was made so that the word 'warning' is now reserved for winds that need heeding. A strong wind advisory advises of strong winds. There was an article on this in ProSkipper magazine and a news item in Boating NZ in Dec 2010. For more info read http://blog.metservice.com/2010/12/wind-warnings-for-recreational-marine-areas/
cheers

(Both copied from NZCMM site)

CHART CORRECTIONS

Although paper charts are probably in their dying stages, the method of correction is still a requirement for all commercial certificates and some coast guard courses**.**

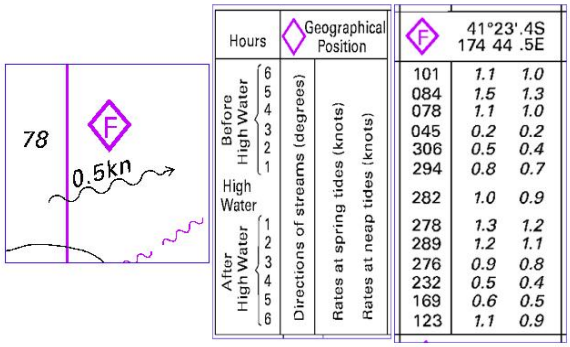
It was always the custom that preliminary notices gave preliminary information about planned changes to charts or publications and temporary notices gave information that was of a temporary nature. Preliminary and temporary notice numbers are annotated on the chart in pencil. Permanent notices give details of permanent changes and issued at the time when it takes effect. It is recorded on the chart in ink.

A perusal of the current extensive list of temporary notices (one is 10 years old) and preliminary notices shows that many preliminary notices contain permanent changes to lights and depths with the notation 'charting action will take place in due course'. 'Due course' in some cases runs into years when a permanent notice is issued accompanied by a number of "tracings" which show how the correction is to be made. I believe this is a form of dummying down of our profession. A recent simple change of light characteristics took five pages in the Notices to Mariners which was issued nearly three months after the light was changed. The people at LINZ seem unaware that all persons who correct charts on board ships are trained to do so and the cost of producing these fortnightly editions could be reduced considerably.

CHART SYMBOLS

The old method of showing the direction and rate of the flood and ebb tide by two arrows, usually pointing in opposite directions, was a simple and easy way to describe an imprecise action. Used together with the wavy arrow of an ocean current it was sufficient to pre-plan a passage, but never were both types of arrows placed alongside each other. On many recent editions of New Zealand charts, the tidal stream arrows have been replaced by tidal information diamonds which are used in conjunction with a corresponding table to show the direction and rate for each hour of the day. I did not use the term predicted as the direction has an accuracy of 1 degree and rate an accuracy of 0.1 knots. This information may have some use in a classroom situation but is of little practical use to a navigator. However it is further complicated when a current stream wavy arrow is placed alongside the diamond. Does the tidal diamond predictions incorporate the ocean current predictions or is the ocean current prediction applied in addition to the tidal diamond prediction? I asked LINZ this question six months ago but have not received a reply yet. Perhaps it is too hard?

For example in the clip below taken from Chart 463 Approaches to Wellington, in what direction and rate would the water flow 4 hours before high water? Is it 078^0 at 1.6 knots, or 078^0 at 1.1 knots.



NAUTICAL ALMANAC

Some useful information such as weather, harbour contacts and radio information, that was once contained in the Nautical Almanac, is now left out. This year the date of Easter is out by 3 weeks with a note saying that it is a movable festival (which we all know) and quoting some parts of the Holidays Act which is completely irrelevant to a navigator.

I believe LINZ and Maritime New Zealand (who should monitor maritime activities carried out by other Government agencies) are letting mariners down and that the service we are getting has declined substantially in the past 10 years.

John Brown

ON DECK

Congratulations to your editor and all those who worked to produce such a quality and readable journal. We have received your PDF.

I understand the September copy is the first one that you hope to be a regular bi-annual issue.

I have fond memories of your beautiful country and the hospitality so freely given to lonely seaman.

Good reading and I look forward to receiving them on line in future.

Ion Kursten, Stockholm

MORE CANTERBURY HAPPENINGS

Geoff Swallow

The six months since the last advice of Christchurch Branch Happenings have been dominated by two events. The 7.1 magnitude earthquake of 4th September shook up, and continues to shake up Canterbury and it's residents, and later in October we nearly lost our Warden, Richard Knight, with a burst aorta.

Whilst it appears that none of our members suffered any major damage to their homes as a result of the earthquake, the first "casualty" to the branch was the cancellation of a luncheon planned for the Friday after the quake due to the fresh water issues at the venue, that were just one of the problems that affected most of the population after the shake. Our speaker was to have been Rod Grout, former CEO of Pacifica Shipping, who always has had interesting things to speak about on the shipping industry. He has agreed to address us hopefully sometime this year.

The day before the earthquake was the newly-decreed "Merchant Navy Day", and a dozen or so of our members joined with the Merchant Navy Association and other maritime groups at the Lyttelton Club to mark this occasion. The service was conducted by the seafarers' chaplain Neil Struthers, and included an address by Norma Crutchley, wife of Earl Crutchley who has done so much to get the role of the Merchant Navy in WW2 recognised by the RSA's. Earl is not in good health and was unable to attend. The 'last post' was given by a Salvation Army bugler, and the afternoon ended fittingly with tea and tab-nabs, and a couple of ales. The Canterbury Branch of the Merchant Navy Association is going to mark this occasion annually, and we will give it our full support.

Regrettably, the secretary was away overseas when we received our invitation to participate in the Annual Seafarers Service at Christchurch Cathedral, so our branch was not represented this year.

We held our Christmas lunch again at the Waitakiri Golf club in early December. This is an excellent venue, overlooking the golf course and took full advantage of the fine early summer we have enjoyed this year. The caterer again did us proud, and an excellent turnout of members and wives, plus some of our engineer colleagues, celebrated the approaching Christmas season in fine style.

Sadly, we learnt in late October that our Warden Richard Knight was in a very serious situation in hospital. He collapsed at home one Saturday evening whilst his wife was out, with serious chest pains but was lucky to be able to dial an ambulance himself on his mobile phone. He had a burst aorta, which resulted in most of his blood being pumped into his body, starving vital organs of the blood they need to survive. He underwent long and delicate heart surgery, and was sedated for some weeks, on dialysis, and in intensive care for much of the time.

We were pleased to learn that through the excellent work of the hospital, Richard was able to return home for Christmas. Although still an outpatient at the hospital, he is able to move about slowly on his own. Obviously, a long slow return but at least he is on the return road.

David Wilson has taken on the role of acting Warden until the AGM, and we have, at last appointed a deputy warden for the branch in the person of Alan Cooke.

Lyttelton Port was also a casualty of the earthquake and sustained significant damage to some of the infrastructure. However, the Port was operational again within hours of the quake after LPC's engineering and maintenance staff were able to access damaged areas and restore power and other services.

There has been no noticeable interruption of port operations in any of the major operational areas, and it has been reported that the volumes in the Container Terminal compared with the same 5 months last year are actually up by 15%.

There is however significant damage to the infrastructure within the port area, and it would appear that the Port Company and their insurers plan to take advantage of this need for repair and replacement to upgrade some of the existing facilities that are in some need of upgrade. This could include the development of a new cruise ship berth as an extension to the western end of Cashin Quay. As with other ports, the cruise ship calls at Lyttelton have increased markedly, and the larger vessels tend to be somewhat of a disruption to the container terminal activities, as there are few alternative berth options at present. A new berth would also add capacity to the container and general cargo berths in the cruise ship off-season.

Sadly one of the most visible signs of the earthquake damage is the subsidence of the reclaimed land at the western end of Cashin Quay and Z berth, which many of you may remember as the Union Company Ro-Ro berth. Z berth and the Independent Fisheries Cool store facility on that berth are both no longer functional, and the berth is now used simply as a layup berth.

Understandably, any merger talks with Port Otago have been halted whilst the focus for LPC Management and Board is on recovery and rebuild. *****

Earthquake Damage to the Eastern Mole Light, Lyttelton.
Photo: Bryan Shankland

HUGE MORE DAMAGE OCCURRED ON 22nd FEBRUARY

Since Geoff. submitted this account of the 7.1 magnitude earthquake that shook the Christchurch- Lyttelton area on September 4th 2010 a constant series of after-shocks have continued to rock the region. These culminated in a severe and very shallow quake of Richter 6.3 on February 22 that devastated the Christchurch CBD and caused much more severe damage over the wider city and in Lyttelton. Some 10,000 homes are badly damaged and many left uninhabitable. Much of the city is derelict due to liquefaction and much of the eastern suburbs may not be suitable for rebuilding in future. Lyttelton suffered more damage to the marine infrastructure and within the town. At the time of this issue going to press it was thought that some 166 souls may have been killed in the city but this figure had not been confirmed. **The Company offers condolences to the people of Canterbury and to the many friends, shipmates and workmates we have gathered in Christchurch and Lyttelton port over the years**.

See photos and articles pps. 64, 72 - 73

CABOTAGE

Definition: Trade transit of a vessel along the coast (coastal trading), from one port to another within the territorial limits of a single nation.

Trade by ship conducted exclusively from port to port of a single nation is usually regulated by the national law of the host nation and thus of import to maritime law.
The term appears to have been of Spanish origin and was designed to regulate those legal disputes that occur whilst a ship was engaged in cabotage (coastal trading, more particularly to insist on the jurisdiction of host-nation law or, in some cases, to require that ships engaged in cabotage defer to host-nation vessels or registration.

The term coastal trade or coastal trading is now preferred to the term cabotage.

Australia, for example, has several statutes that deal with cabotage such as the Coastal Waters (State Powers) Act (1980) which defines the coastal waters of Australia as follows: "Coastal waters of the State means, in relation to each State (a) the part or parts of the territorial sea of Australia that is or are within the adjacent area in respect of the State....

Section 198 of the Marine Transport Act 1994 of New Zealand is explicit: "No ship shall carry coastal cargo, unless the ship is (a) a New Zealand ship; or (b) a foreign ship on demise charter to a New Zealand-based operator who employs or engages a crew to work on board the ship under an employment agreement or contract for services governed by New Zealand law...."

Similarly, this extract from the Canadian Coasting Trade Act: "... no foreign ship or non-duty paid ship shall, except under and in accordance with a licence, engage in the coasting trade."

There are exceptions to these cabotage statutes such as where domestically-registered ships are not up to the job at hand and must then obtain a cabotage or coast trade license.

Unlike other countries who continue to preserve the practice of coastal cabotage it was removed from New Zealand statute, by the then government in 1995.

Surely it is time to re-visit this decision in light of the new awareness of environmental and energy imperatives. *****

FUTURE IN SHIP DESIGN

Dr. M

This new ship could run on old tennis shoes and baby diapers if biomass energy research reaches its anticipated potential.

We've seen multiple designs of late for ferries, cargo and container ships, and yachts focused on lower fuel consumption. What is driving these new designs? Economics…pure and simple.

The Emma Maersk running at her rated 80 Mw, her main engines burn 14 tons of residual fuel each hour. Annually, that's 97,400 tons of fuel. Her auxiliaries, delivering their full 30 Mw, burn an additional 6.6 tons/hour, for a total fuel burn of 20.6 tons/hour. Given 290 steaming days/year (80% capacity factor, which is conservative), this yields a total annual usage of 143,400 tons or about $64.5 million in annual fuel costs.

Burning 20.6 tons/hour = 6724 gals/hour. At 31 kts, this equals .0046 nautical miles/gallon. At 6076 ft/nautical mile, that's 28 feet/gallon of fuel burned.

As Dave Culp commented *"You gotta haul a lot of containers full of $7 tee shirts to make this profitable."*

The latest from Det Norske Veritas (DNV) is Quantum, a new concept design for container ships to be realized in the next 3-5 years. DNV's calculations suggest that "the total cost of the system including capital expenditure, operating expenditure and fuel cost will decrease by 14 per cent and the total CO2 emissions will be reduced by 35 per cent." The key to the design is a dual fuel liquid natural gas and diesel system.

A 140 lb person walking at 3 mi/h requires approximately 80 kcal (330 kJ) of food energy per mile.

Given that 1 gallon of gasoline contains about 114,000 BTU (120 MJ) of energy, this converts to roughly 360 MPG**. *****

SARGASSO SEA THE ATLANTIC GARBAGE TIP

The Sargasso Sea is an elongated region in the middle of the North Atlantic Ocean, surrounded by ocean currents. On the west it is bounded by the Gulf Stream, in the north, by the North Atlantic Current; in the east, by the Canary Current; and on the south, by the North Atlantic Equatorial Current. This system of currents forms the North Atlantic Subtropical Gyre. The Sargasso stretches roughly 700 statute miles wide and 2,000 statute miles long (1,100 km wide and 3,200 km long). Bermuda is near the western fringes of the sea. The Sargasso Sea is the only "sea" without shores and consists of Floating sargassum mats and debris.

In 1971, while sampling for aquatic plants in the Sargasso Sea, Edward Carpenter observed plastic marine debris. In a systematic fashion he conducted 11 surface trawls, which averaged 3,500 pieces of plastic per square kilometre and weighed 290 grams. In 1974, John Colton replicated Carpenter's study, but increase the number of trawls and range of sampling, conducting 305 trawls from Cape Cod to the Caribbean. Though the number and weight of plastic per square kilometre varied widely, Colton confirmed that plastic marine debris could be found throughout the North Western Atlantic Ocean. There has not been another study of plastic marine debris in this area in over three and a half decades.

The 5 Gyres project, a partnership of Algalita Marine Research Foundation (AMRF) and Livable Legacy, in association with Pangaea Exploration, and in cooperation with the University of California at Irvine and the University of North Carolina at Wilmington has travelled to the Sargasso Sea in order to understand the impact of plastic marine debris there, compare two different gyres, and establish baseline data for future monitoring.
Reports from Shipmasters traversing the area suggest little improvement in 2011.

The objectives of their North Atlantic Gyre (Sargasso Sea) research are:
•Revisit sites collected by Carpenter and Colton 35 years ago in order to identify any changes in the content of plastic marine debris.
•Marine debris surface sampling
•Sediment studies in the Sargasso Sea
•Fish ingestion studies
•Process all data and prepare manuscript for publication. *****

ARE EXISTING NAVAL POLICIES ENCOURAGING MARITIME PIRACY, RATHER THAN PREVENTING IT

This article appeared in Lloyd's Lists in December, 2010 and probably in other publications since, however, its importance to the maritime community is such that your editor is reprinting it again so its message will be reinforced and remembered

The International Maritime Organization's Year of the Seafarer seems more like a Disney fantasy than a political initiative. This year the IMO has done little that has effectively addressed the single biggest threat to seafarers: piracy.

Less understandable is why naval policies are often perceived to encourage piracy, instead of preventing it. For instance, if navies get lucky enough to catch any pirates, they are often let go, fearing they might win citizenship in a court system that defends barbarism. That kind of thinking makes it better to be a pirate than a seafarer in the Year of the Seafarer. Certainly seafarers are subject to greater penalties than pirates — at least in the European Union.

Consider the case of Apostolos Mangouras, master of the *Prestige*, who was prosecuted with greater vigour than any pirate has ever been in the last 50 years. In Capt. Mangoura's case he was detained for three months and then released on a "provisional" bail of €3m ($4m). That is more ransom than pirates get for about the same amount of time as keeping hostages.

Admittedly this is an extreme analogy. But extreme only in that Capt. Mangouras was not threatened with death by the Spanish. However, he was deprived of his rights and he was detained by force, all in the same manner as pirates — so it is an analogous situation. While neither IMO nor the United Nation's Human Rights Commission nor any other nation, did little to help him, they are also doing little to help the seafarers held by pirates.

Now the EU's and Nato navies advise they will not even try to help a ship that has been boarded by pirates and advocate simply non-resistance. It is a regrettable state of affairs that ship-owners are moving to rectify by self-action.

Can anyone blame the owners? Instead of support, governments warn owners that arming their ships may be illegal and if they take unilateral lethal action they may be subject to criminal arrest. Whatever happened to the right of self-defence?

If marine accidents occurred at the rate of pirate attacks the world community would be in an uproar. The EU and US would rush, with their navies to arrest more seafarers like Captain Mangouras. Yet instead we are advised that the piracy problem occurs over an area of ocean that is too big for the world's navies to cover. They remain free even though navies know who the pirates are, where they live, as well as the cars they drive, the banks where they deposit their money, and even their mobile phone numbers.

As a result, the burden falls to owners to provide crews with the means to protect themselves. It is a daunting task that is especially frustrating for masters as they are cautioned that if they respond lethally they may be held as criminals.

But daunting or not, owners are taking action. Ships are now routinely routed further out to sea when transiting the coast of Somalia. That adds a lot of distance to a Cape-routed ship. First it was 150 miles further out, then 600 miles. Now tankers rounding Africa typically are going as far east as 75° E longitude to avoid pirates. The latest attacks mean that they will be even east of that. Isn't it time to do something when ships have to go to India before they can go around the Cape of Good Hope? This kind of deviation will add at least 11 days to a round trip from the Middle East Gulf to the US Gulf at a cost of over $1m dollars per voyage.

But how far out can owners go? With each high-profile, high-ransom hijacking, the pirates move further out. There is literally no further to run. The US response to that is to make payment of ransoms illegal and further subject owners to economic peril for aiding terrorists In the meantime who saves the captured crews?.

Still, ship-owners cannot afford to sit idly by. Some of the actions being taken to prevent

pirate boarding's are self-evident and logical. Others are more drastic in nature. The more logical ones are: Keeping a flow of water over the side of a ship at all times will definitely inhibit boarders. This is typically done by directing the ship's fire fighting water cannons over the side to create a water curtain. There is also a system to spray large quantities of water through nozzles, along the ship's side. In addition to the water curtaining devices, the erection of razor wire barricades outside the rail are also being used often in conjunction with drum bumpers (akin to 55 gallon drums lashed together outboard of the rail). These are intended to make it harder for pirates to attach boarding ladders to the vessel's fish plate and climb up. Possibly the most drastic measures is the fitting of pipes from the ship's manifold extending a few metres overboard to flood attacking pirates with crude oil.

Another ingenious idea is to fit a citadel deep inside a ship's engine room, usually in the steering gear room, where the crew can wait out a pirate attack until they leave. Few pirates are likely to enter a pitch black engine room for fear of finding armed (and really angry) crew there.

Perhaps the best solution to piracy is the most drastic; the use of armed guards or fast escort vessels. The armed guards can only respond with lethal force when pirates attack. Armed guards also mean the ship's crew is involved with the defence of the ship, a difficult question to defend in a court of law.
It appears the best course of action proposed is to employ the use of fast, heavily armed escort ships. This offers an owner and/or masters the best piracy deterrence because it is totally separate from the ship.
This service uses the same high speed security craft as the US Coast Guard to keep pirates away from ships and would use lethal force to prevent a boarding and keep the escorted ship itself free of any direct response to its defence. This ensures the safety of the crew and cargo without liability to the owner. The cost of this service is a fraction of the million dollars' worth of deviation and is a far better deterrent than merely running away.

Lloyd's List Dec. 2010 *****

TERROR ON THE HIGH SEAS

The tanker *Limburg* was set ablaze after being attacked by terrorists in the Gulf of Aden off Yemen. A small boat loaded with explosives hit the ship and a huge fire resulted. This demonstrates how fragile and vulnerable merchant ships are. No armour plating for protection – only mild steel, blood and bones!

The *Limburg* ablaze off Yemen.

Although not the only areas of high seas piracy, the Horn of Africa, the Persian Gulf, the Gulf of Aden, the Red Sea, Indonesia, Malaysia and Singapore remain the most pirate and terrorist infested zones in the world. It is overlooked by the world's media that the targeted ships are manned by civilian merchant seamen who are neither armed nor allowed to carry arms.

Many are captured, tortured and die while the world's navies only posture and pose as a deterrent, with the connivance of world governments, while assuring the public they are engaged in protecting merchant ships. That is their job and the only reason the naval forces need to be there!

In the meantime, just as always, the merchant seamen suffer and governments pretty well ignore the whole scenario due to perceived, if not actual, legal impediments in maritime law. The lack of will to address the problem and protect merchant seamen contrasts unconvincingly with the governments' show of public dismay that is displayed when military personnel are killed or injured.

To be fair the naval forces suffer from the same frustrations in being forced to change their defensive paradigm to one of do little, almost to the point being a non sequiter.

*****

SOMALI PIRATES TORTURING HOSTAGES

BANDITS USE CAPTIVES AS HUMAN SHIELDS
Somali pirates beat, tortured, and threatened to kill captured South Korean sailors, the *Telegraph* reports. "Pirates trampled and beat me whenever I talked with my captain," said one of the seven rescued sailors, who went home yesterday. "I lost my four front teeth after being hit by the elbow of one pirate."

An EU naval commander said the pirates have systematically been torturing captives and making human shields of them. They've tied hostages upside down and pulled them through the water, shut them in freezers, and tied their genitals, the commander said. South Korean commandos rescued the seven sailors last month; pirates were taken to South Korea on the Sunday and face life in prison on charges of hijacking a ship, demanding a ransom, and threatening the captain's life.

BLACKWATER FOUNDER TRAINING SOMALI MERCENARIES

Lawless, chaotic Somalia appears to be a land of opportunity for controversial Blackwater security company founder Erik Prince. The ex Blackwater honcho—who has left the security company he created and set up shop in the United Arab Emirates—is involved in a project to recruit and train thousands of Somalis to protect leaders and battle pirates and Islamic militants, the *New York Times* reports. The multimillion-dollar project involves a controversial South African mercenary firm and is being funded by several Arab countries, American officials say. Prince built Blackwater into a global giant with billions of dollars' worth of contracts in Iraq and Afghanistan, where employees were accused of recklessly violent behaviour in the killing of several civilians.

Prince's precise role in the current operation isn't clear. Critics fear that the use of unaccountable private contractors will undercut international efforts to halt militancy in Somalia, although the chief of one security firm welcomes Prince's involvement. "There are 34 nations with naval assets trying to stop piracy and it can only be stopped on land," the director of Maritime Underwater Security Consultants tells AP. "With Prince's background and rather illustrious reputation, I think it's quite possible that it might work."

ANTI-PIRACY FLOTILLAS RATTLE ARAB SECURITY

Representatives from states bordering the Red Sea met in Cairo in January to forge a common policy against the threat of maritime piracy. Some local commentators say recent deployments of foreign naval vessels to the area to combat Somali corsairs could constitute an even greater threat.
"The stepped-up presence of foreign navies, supposedly here to protect international shipping lanes from piracy, could pose a danger to Arab national security," Gamel Mazioum retired Egyptian brigadier-general and military expert told reporters.

THE LOSING BATTLE AGAINST SOMALI PIRACY

PIRACY CRISIS
Piracy in the Indian Ocean has taken an alarming turn recently, with the killings of two seized Filipino crewmen and the hijacking of an oil tanker with a cargo worth $200m (£125m). The BBC's security correspondent Frank Gardner looks at the losing battle against piracy.
In a lengthy gun battle in the Arabian Sea last month South Korean commandos stormed a pirated ship, the Samho Jewelry, killing eight

pirates, capturing five others and freeing all the crew.

The European Union naval force, Navfor, which patrols the area, is now under mounting pressure to take similar action.

Navfor's spokesman, Wing Commander Paddy O'Kennedy, said storming seized ships put the lives of hostage crew members at risk "At the moment our policy is that the safety of the hostages comes first," he said.

"When you use the military, people get hurt, that's a fact. The captain of the Samho Jewelery, which is the ship that you are referring to, was shot in the stomach during that action."

So is any real progress being made in the fight against piracy off Somalia? The statistics are not encouraging.

Wing Cdr Paddy O'Kennedy; Navfor
Currently at least 30 ships are being held, along with more than 700 hostages. And something has changed in the last few months.

The pirates are using around eight so-called mother ships, far out to sea - large captive vessels with hostages on board that allow them to stay in business during the violent monsoon winds.

"When you get close to ships that have been pirated... they put the crew on deck, they will put a gun against their head, and that's a pretty strong message for us to stay away"

Wing Cdr O'Kennedy says the rewards are just too tempting for Somali pirates to be deterred by a handful of international warships patrolling over 4million square km.

"What we are dealing with here is a business model that is so good, that for a matter of tens of thousands of dollars you can put together a pirate action group, you can send it to sea and if you are lucky and hit the jackpot, you can come back with a vessel that within six months will bring you a return of nine-and-a-half million dollars.

"We are the first to admit we are not deterring piracy."

Powerful deterrent: Piracy in the Indian Ocean is getting more lucrative and more violent. On 26 January, Somali pirates, enraged by an attempt to free their hostages, murdered two of the crew as retribution.

A third man jumped overboard and drowned. It is a powerful deterrent against warships intervening, once a ship has been captured. A number of pirates were killed or captured when South Korean commandos seized this ship

"When you get close to ships that have been pirated they say to us 'stay away or we'll kill the hostages'. They put the crew on deck, they will put a gun against their head, and that's a pretty strong message for us to stay away."

Piracy off Somalia is a highly organised business. There are investors, accountants and a pirate leader on land, and then of course, the actual attack group that puts to sea.

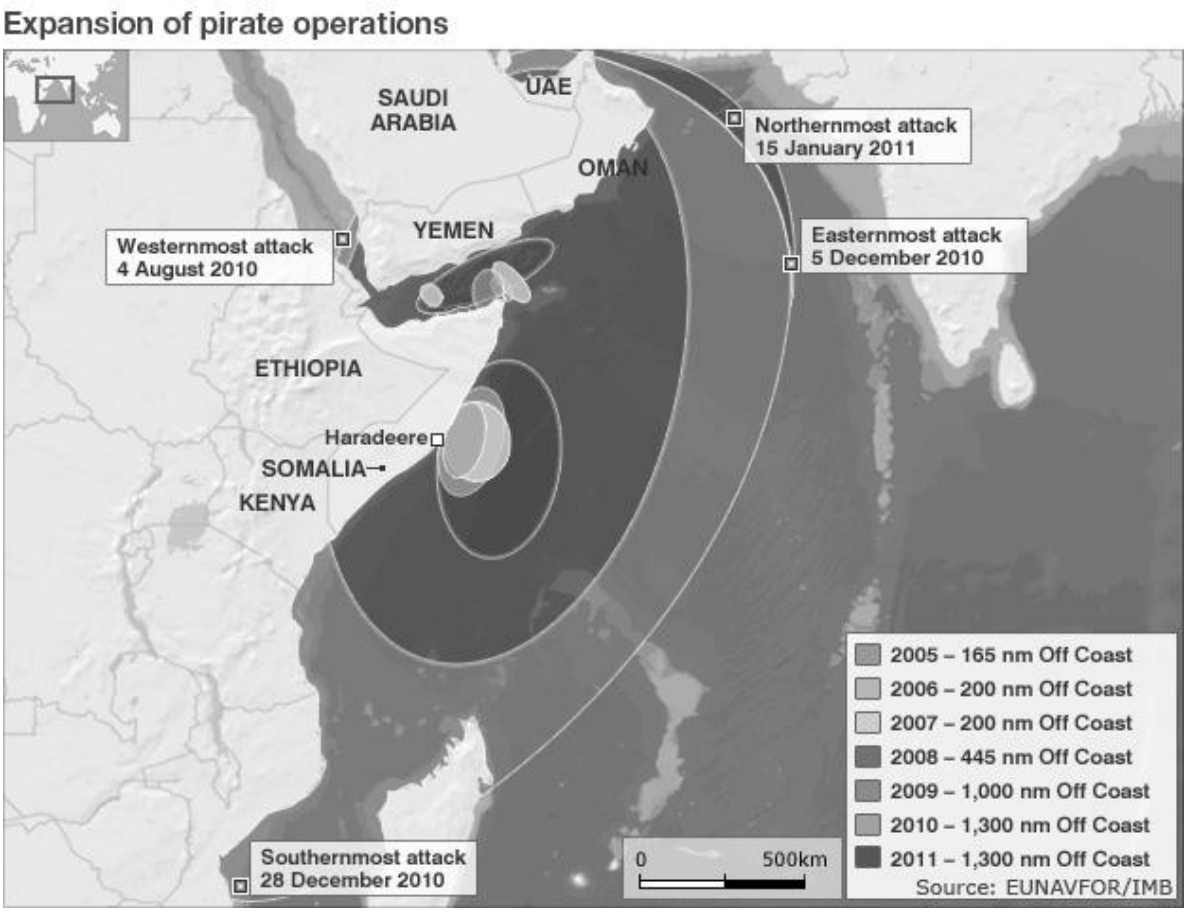
I have been shown an actual pirate notebook, taken from one of the ships they seized and abandoned. Flipping through the pages, I can see a detailed ledger, written in Somali, of provisions supplied to each pirate on board. They all have nicknames. One is called Shino, the Chinaman; another one is called Big Nose.

Empty shelves? : Andrew Palmer, from the London-based maritime security firm Idarat, has been studying how the pirates operate. 00000000000000"Each man is trained in certain aspects, they are trained in navigation, trained in the equipment they use to operate, they are given weapons training, they are told about what type of ship they are going to board, and so they are very much aware of the environment that they are operating in."

But how does this affect anyone in Britain or Europe, thousands of miles away?

On Wednesday 20 January 2011 one of the richest-ever cargos of crude oil was seized off Oman, worth $200m. The capture of the Greek-owned Irene SL is the fourth time an oil super tanker has been pirated.

"We could very quickly be reaching a point where we're going to have to call for seafarers to refuse to sail into this area," says Mike Dickinson, from the seafarers' union Nautilus. "Now what will that mean for the world economy? Well that means ships can't go into the area, that means we have an oil shortage again, maybe then people would take notice, maybe when the supermarket shelves start to empty, when there is no petrol in the forecourt, then people will realise how critical the shipping industry is." *****



Pirates have greatly expanded the areas where they operate in recent years

At 1 February, 31 ships of all sizes from VLCC"s down and about 638 seamen were held captive by Somali pirates who do not hesitate to use torture if their demands for ransom are not met quickly enough or should any rescue attempt be made.

SHIPS HELD IN CAPTIVITY BY SOMALI PIRATES AT 11 JANUARY 2011

Name	Date Taken	Flag	Crew	Type
HUD HUD	23 Mar 09	Unk.	11	Dhow
ICEBERG I	29 Mar 10	Panama	24	RoRo
JIH-CHUN TSAI 68	30 Mar 10	Taiwan	14	Fishing vessel
RAK AFRIKANA	11 Apr 10	St. Vincent - Grenadines	26	Dry Cargo
PRANTALAY 11, 12 AND 14	17 Apr 10	Thailand	77	Fishing vessels
TAI YUAN 227	06 May 10	Taiwan	24	Fishing vessel
MOTIVATOR	04 Jul 10	Marshall Islands	18	Tanker
SUEZ	02 Aug 10	Panama	22	General Cargo
OLIB G	08 Sep 10	Malta	18	Chemical Tanker en route for demolition
ASPHALT VENTURE	28 Sep 10	Panama	15	Tanker
IZUMI	10 Oct 10	Panama	Unk.	Bulk Carrier
YORK	23 Oct 10	Singapore	16	Merchant Tanker
CHOIZIL	26 Oct 10	South Africa	2 (3)	Yacht
POLAR	30 Oct 10	Panama	24	Tanker
HANNIBAL II	11 Nov 10	Panama	31	Tanker
YUAN	12 Nov	Panama	29	General
XIANG	10			Cargo
ALBEDO	26 Nov 10	Malaysia	23	Container
JAHAN MONI	05 Dec 10	Bangladesh	26	Bulk Carrier
MSC PANAMA	10 Dec 10	Liberia	23	Container
RENUAR	11 Dec 10	Panama	24	Bulk Carrier
ORNA	20 Dec 10	Panama	19	Bulk Carrier
THOR NEXUS	25 Dec 10	Thailand	27	General Cargo
EMS RIVER	29 Dec 10	Antigua-Babuda	8	General Cargo
BLIDA	01 Jan 11	Algeria	27	Bulk Carrier
AL MUSAA	10 Jan 11	Unk.	Unk.	Dhow

SOMALIA PIRATE'S MOTHER SHIP DESTROYED BY FRENCH NAVY

The French light surveillance frigate *Nivose* "found, stopped and searched" a suspicious vessel and found that the vessel was a pirate mother ship. Eleven suspected pirates were arrested and the mother ship was destroyed.

P&O APPOINTS THE FIRST UK FEMALE MASTER OF A CRUISE SHIP.

Captain Sarah Breton

Captain Sarah Breton aged 45yrs, who lives on the U.K's Essex Coast is believed to be the first female master of a Cruise Ship in the U.K. When she set sail on board P&O's *Artemis*, she was certainly the first female captain in the 173 year history (1837) of that Company. The promotion was even more special to her as *Artemis*, (then named Royal Princess) had been a vessel which she had previously served on as Third Officer when she joined P&O in 1989. She has also served in *Sky Princess, Canberra, Pacific Princess, Grand Princess* and *Star Princess* and reached promotion to Staff Captain in 2001. She took over command of the Artemis last year after rising through the ranks to the top position on a ship's bridge

Captain Breton is the first female captain in the company's history, which dates back to 1837, and only the second woman to become master of a modern-day cruise ship.

FIRST FEMALE CRUISE SHIP CAPTAIN

The first female to break through the traditional, male dominated role of cruise ship captain was Karin Stahre Janson, who took command of Royal Caribbean's 2,400 ton vessel, *Monarch of the Seas*, in 2007.

Captain Karin Janson

CUNARD APPOINTS ITS FIRST FEMALE MASTER

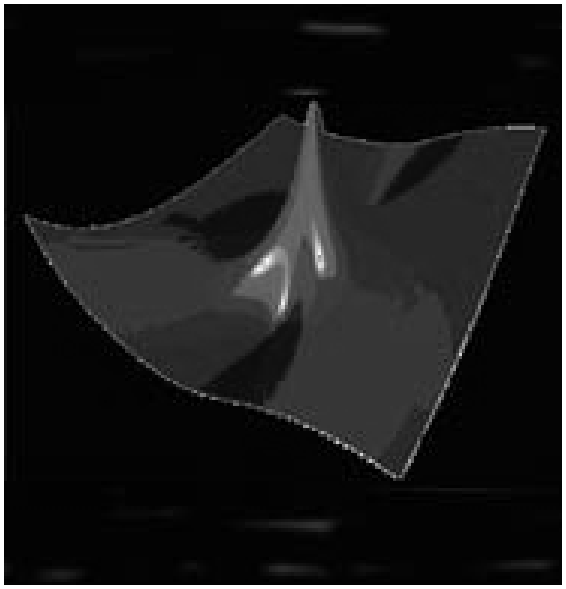
Captain Inger Olsen

Cunard Lines has announced that it has appointed Captain Inger Klein Olsen as its first female captain in the company's history. Captain Olsen assumed command of Cunard Line's *Queen Victoria* on December 1st.last year.

"While we are far from being the first shipping company to have a female captain, it is nonetheless noteworthy when such a long-established British institution as Cunard makes a break with its captaincy tradition," said Peter Shanks, president of Cunard. "But as Mark Twain drily observed, 'the folks at Cunard wouldn't appoint Noah himself as captain until he had worked his way up through the ranks.' Inge has certainly done that," Shanks continued, "and we are delighted to welcome her as our first woman driver.

Forty-three-year-old Captain Olsen was raised in the Faroe Islands, which accounts for her maritime abilities, and she joined Cunard in 1997 as First Officer on board **Caronia**. In 2001 she transferred to the Seabourn fleet, which at that time was part of Cunard. She sailed on Seabourn Sun and Seabourn Spirit before being promoted to the rank of Staff Captain on Seabourn Pride in 2003. *****

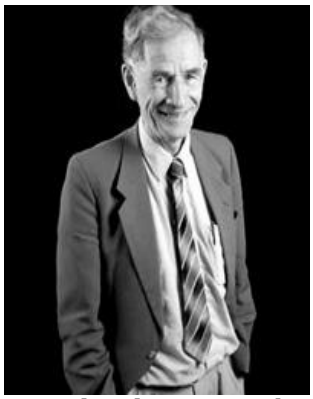
*Read companion to these articles **Master of All** on page 62 of this issue.*



PEREGRINE'S 'SOLITON' OBSERVED AT LAST

soliton upon a distorted background

This illustrates how such extreme wave structures (rogue waves) may appear as they emerge suddenly on an irregular surface such as the open ocean. The destructive power of such a steep nonlinear wave on the ocean can be easily imagined. (PhysOrg.com) -- An old mathematical solution proposed as a prototype of the infamous ocean rogue waves responsible for many maritime catastrophes has been observed in a continuous physical system for the first time



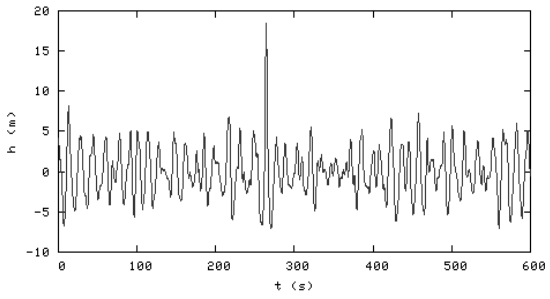
Howell Peregrine (30 December 1938 – 20 March 2007) was a British applied mathematician noted for his contributions to fluid mechanics, especially of free surface flows such as water waves, and coastal engineering.

Howell Peregrine joined the Mathematics Department of University of Bristol in 1964 following his undergraduate and postgraduate training at Oxford and Cambridge. He spent his entire career at Bristol. One of his most remarkable contributions was the theoretical prediction of a new nonlinear entity, now called the Peregrine soliton, that may explain the formation of hydrodynamic rogue waves and that has also been experimentally demonstrated more than 25 years later in the field of nonlinear fiber optics.

ROGUE WAVES AS WE HAVE ALWAYS KNOWN THEM AND ACCORDING TO WIKIPEDIA

Rogue waves (also known as freak waves, monster waves, killer waves, extreme waves, and abnormal waves) are relatively large and spontaneous ocean surface waves that occur far out in sea, and are a threat even to large ships and ocean liners. In oceanography, they are more precisely defined as waves whose height is more than twice the significant wave height (SWH), which is itself defined as the mean of the largest third of waves in a wave record. Therefore rogue waves are not necessarily the biggest waves found at sea; they are, rather, surprisingly large waves for a given sea state. "Rogue waves are not tsunamis, which are set in motion by earthquakes [and] travel at high speed, building up as they approach the shore. Rogue waves seem to occur in deep water or where a number of physical factors such as strong winds and fast currents converge. This may have a focusing effect, which can cause a number of waves to join together."

DAUPNER FREAK WAVE .png



Wave height measurement as a function of recording time showing the rogue wave height. Vertical scale shows average wave height.

PEREGRINE SOLITON MAY EXPLAIN OCEAN'S ROGUE WAVES

Casey Johnston

Researchers have finally observed a special type of wave that has eluded experiments for almost 25 years. The Peregrine soliton, a special type of large wave that can retain its size and shape while traveling at a constant speed, has finally been demonstrated using light pulses traveling through fibre optics. Studies of the Peregrine soliton could help us model the rogue waves that can cause sudden disasters in the ocean, and give definite limits for a large class of solutions to the non-linear Schrodinger equation.

In waves and optics parlance, a soliton is a single wave that retains its shape while traveling at a constant speed for significant distances. This type of wave can only happen in certain media, like water, where movement is unrestricted. For example, as a water wave moves, it tends to break and curl forward. But sometimes its forward motion is sufficient that the wave will continually catch itself and can't break, resulting in a soliton.

A Peregrine soliton is a special type of soliton that is very large and isolated compared to its surroundings. Researchers have long thought of the Peregrine soliton as, among other things, a model for rogue waves in the ocean, huge towers of water that come seemingly out of nowhere (though often during storms) and knock over things like cruise ships.

While rogue waves haven't been witnessed too often, they are suspected to be the cause of several freak accidents on the ocean. The sinking of the *MS München* with all hands during a storm in 1978 is most often attributed to a rogue wave. Another rogue wave 100 feet high hit the *Aleutian Ballad* during an episode of Deadliest Catch, and a fictionalized rogue wave capsized an ocean liner in the fictional Hollywood movie *Poseidon.*

How an enormous wave could arise in often chaotic media like light and water confounded scientists for some time. They worked out the theory that the large wave must be formed as a combination of smaller waves, but it had never been experimentally demonstrated.

To make an artificial Peregrine soliton happen, researchers took a nonlinear fibre optic channel and sent through light waves called "breathers." Breathers are nonlinear waves that have concentrated energy and are either localized in space and oscillate in time, or vice versa.

Western Indian Ocean, 300nm off Durban in the midst of the Agulhas Current

By timing the size and spacing of the breathers just right, researchers were able to get them to combine into a large, solitary wave—a Peregrine soliton. The scientists also found that waves that were more localized in space and time came together into a Peregrine soliton more easily. This may be the reason that rogue waves are relatively rare and seem to happen more often during storms.

Now that they have proved a Peregrine soliton can be created in the lab, the authors hope that meteorologists will be able to use this information to search for and forecast oceanic rogue waves. As a nice side benefit for mathematicians, many implications of the Peregrine soliton extend to nonlinear math in

general. The nature of its formation and dynamics should place limits on a set of solutions to the nonlinear Schrodinger equation. *Nature Physics*, 2010.

The US Coast Guard ship *Hemera* braves the open ocean during a severe storm

The physics just seemed too unlikely in the real world. "It is as if a roomful of people whispering produced the sound of an explosion," said Alex Kasman, a soliton scientist at the College of Charleston who wasn't involved in the *Nature Physics* study. The international group of scientists now plans to work with meteorologists to help predict where rogue waves are most likely to occur and alert ship captains to sheet clear of certain areas or certain storms

To create a Peregrine soliton, scientists sent little light waves, called breathers, down fibre optic wires. Some waves were long and slow, while others were fast and short. While both kinds of waves created an optical Peregrine soliton, the waves that were the most distinct in both time and space created giant light waves more easily.

"This new paper would seem to show that this particular type of soliton is not only a theoretical possibility, but is actually something that can be found in the real world," said Kasman.

Dangerous rogue waves are usually reported during storms that create short, strong waves. Since short, compact light waves lead to Peregrine solitons most readily; this should explain why rogue waves are reported most often during storms.

Dangerous rogue waves are usually reported during storms that create short, strong waves. Since short, compact light waves lead to Peregrine solitons most readily; this should explain why rogue waves are reported most often during storms. *****

PEREGRINE SOLITON?

Seamen of all ranks have known for generations that the biggest waves are a resultant of the sometimes random aggregation of smaller ones. But how random are they really? The old sea adage states that "the 7th wave is usually larger but beware and take care of the 7th 7th!!" Maybe this is not definitive scientific evidence but it is the result of thousands of years of significant observation.

Well at least this research did come up with a buzz-word name *Peregine soliton*. We just called them monsters or *killers*. Now we can get flattened by a *peregrine soliton.* How will that look in a voyage report?

Shipmasters have been there, done that and seen it. Despite coping with the longest period of technical training in the world, gaining tertiary degrees, spending lifetimes on the world's oceans in all conditions and types of vessels but nobody ever seems to ask us!

The Triumph of Time
I will go back to the great sweet mother, mother and lover of men, the sea. I will go down to her, I and no other, close with her, kiss her and mix her with me.
Algernon Charles Swinburne 1837 – 1909

Centuries of Meditations
You never enjoy the world aright, till the sea itself flows in your veins, till you are clothed in the heavens, and crowned with the stars: and perceive yourself to be the sole heir of the whole world.
Thomas Traherne 1637 – 1674

The Rime of the Ancient Mariner
The fair breeze blew, the white foam flew / the furrow followed free; / We were the first that ever burst / Into that silent sea.
Samuel T. Coleridge 1772 - 1834

SINGAPORE SEWERS AND THE MINISTER FOR EARTHQUAKES

Submitted by the Nameless One

A cautionary tale of two friends with an unfortunate penchant for getting into trouble, even with the best of intentions! This story is part of the fabric of the sea. It does not detract from self-respect because stories like it were an essential part of the adventurous and often incandescent sea life in those days. We were young individualists, following our own conventions, in what was then, a much more hostile marine environment and learned to laugh at ourselves. Yes, we eventually grew to learn what dignity was but more importantly we learned when to apply it. Even more significant was that, unlike today, nobody else usually suffered for our indiscretions. Perhaps this story is the exception.

Although it is difficult to believe when one views the modern and immaculate city of Singapore it still retained, in the late 1940,s and early 1950's open trench sewers. Some of these were almost large enough to be described as small canals. As a young man many years ago my ship spent a couple of weeks in Singapore to repair damage suffered during a southwest Monsoon storm.

Modern view of Raffles in Singapore

I had always wanted to visit Raffles Hotel, which had been famous for many, many years, made doubly famous in the writings of Joseph Conrad, Rudyard Kipling and others.

This enforced stay provided that chance. At this time the hotel still hosted the last of the "empire builders' if in an environment of somewhat faded glory. *(Empire Builders was the name given to the old guard British emigrants, Planters, Civil Servants, Commerce Agents etc. who regarded themselves as a class well above the local natives, and guardians of imperialism. Class distinction was a way of life and white skin, preferably British was a prerequisite for entry to Raffles Hotel. Sadly these people could neither see nor accept that imperialism was rapidly waning and soon would be gone forever.)* With a shipmate, Kevin, I resolved to have dinner at Raffles one evening.

In those days convention was "of the essence" and one needed to be properly dressed in a dinner suit. This etiquette was easily overcome by the simple expedient of hiring a couple of black tie dinner suits.

On the appointed night we presented ourselves at the hotel properly dressed and fortified with a good dose of scotch. Perhaps we had supped too well of the good Highland water because the concierge seemed to have some doubts about admitting us and called the Major-domo. Then, Kevin, with a flash of brilliance and great presence of mind announced pompously that he was Minister for Earthquakes in New Zealand and demanded entry.

Suddenly the atmosphere change dramatically and we were admitted with alacrity, even to the extent of being shown to one of the better tables, presented with profuse apologies, a large bunch of flowers and several free drinks. All that evening the hotel staff unfailingly referred to Kevin as "Your Excellency," while I reclined in his reflected glory! If we were believed or not I cannot say but class had its privileges in Malaya (*Singapore was still part of Malaya in those days)* and the staff of Raffles weren't going to jeopardise their positions by upsetting a Commonwealth Minister of the Crown, even if he did have trouble standing up. After all we were white and, in those days, sadly, white was right!

So passed a pleasant evening - - - I think. In any case I don't recall anything out of the ordinary or life threatening. I don't even recall

Raffles concierge

a heck of a lot about dinner! Events of a life threatening nature were soon to come to pass, however, or so it seemed at that time. Yes, our behaviour cannot have gone unnoticed by the Good Lord and he was preparing his judgment, I imagine, with some good humour. Yes again, I did achieve my ambition to have dinner at Raffles Hotel but I cannot say I remember a lot about it so I must accept the descriptions of Somerset Maugham, for even though I trod his steps I was not able, in the circumstances, to remember much detail of what I was experiencing.

At some time late we left. How we left must be left to the imagination as I do not recall anything about it. At least we must have left. It is one of the facts that remains indisputable in my recall of that evening, because we found ourselves in a rickshaw heading back to the ship. *(Rickshaws hauled by a puba-boy were still legal and freely available in those times in Singapore.)* It was about this stage that awareness of our surroundings began to become focused and Kevin's focused quickly on the need to perform a certain bodily function known, colloquially, to seamen as "pumping ballast" or to the wider community as relieving oneself.

It was unfortunate that this happened as we were being drawn through what appeared to be a wide street lined with houses. When Kevin made his demands known the puba-boy called out "No! No!" followed by a stream of Malay that made only the word *No* understood with any clarity. The result was that we believed we were in the hands of a felon rickshaw boy being taken somewhere to be mugged and robbed.

Old time Singapore rickshaw and boy

Kevin's reply was to lean forward and grab the pubastick (*a bamboo wand provided in the rickshaw for prodding the boy to change direction, go faster or for any other reason that took ones fancy.)* Thus armed he gave the boy a swift back hander over the head and demanded he stop. We stopped. But the boy kept wailing "No! No!" interspersed with various English words that made no sense to us. It seemed gibberish, which we unfortunately ignored. Were we not two white pasha's who had just had dinner at Raffles and mixed it with the "empire builders"? We were not consciously racist but times and attitudes change so we felt we knew how to treat uppity Malay boys! Kevin jumped out on his side and I jumped out on the other and this was when *ruat caelum* the heavens fell and all hell broke loose!

On the side on which Kevin alighted, but unknown to us, was a fairly high and steep stone wall down which he tumbled into a muddy and smelly drain. I heard the commotion and rushed to help him out only to be grabbed by the rickshaw boy who held me tightly and started to bellow at the top of his lungs. Next, lights started to come on in the adjacent houses and people appeared as if by magic. Some of the new arrivals helped to hold me while I fought to help Kevin out of the drain. What was worse was that many of the people surrounding us were armed with bamboo poles and each time Kevin tried to climb out they used the poles to push him back in. I was convinced they intended to drown him and began to yell for help at the top of my voice. This was necessary as the

crowd around us was growing all the time and they were yelling almost as loud as I was. More lights came on and more people rushed along with poles on each side of the drain to keep Kevin from getting out.

I could hear Kevin cursing and asking where the hell was I, but there was nothing I could do. By this time confusion had increased into mayhem as the crowds continued to swell and the noise must have been enormous. Events had now sobered both of us enough to be alarmed and I was starting to believe I was about to be killed by the mob. Kevin had no time for such thoughts as he fought to get out of the drain.

The disturbance was far too pervasive to be ignored and soon the Police arrived which added considerably to the commotion. Gradually the police gained control and soon a semblance of silence descended. I was still being restrained by a group of resolute Malay boys when a young police inspector approached and began to explain. It turned out that the drain was actually an open sewer and anyone falling in one was, by law, required to be quarantined for 10 days. Had anyone touched Kevin they would have been quarantined with him. That was why the poles had been used to keep pushing him back in. He was finally rescued by the proper health authorities and I was returned to the ship by the nice inspector in his police car. I don't know if he was amused or not, but he did seem pleased to be rid of me.

The story ended some days later when the "Minister for Earthquakes" was removed from quarantine and returned to us at Penang Island a day or so steaming north of Singapore in the Malacca Straits. I have never visited Raffles since although some of my family have and tossed peanut shells on the floor of the Long Bar. True! It's an old Raffles tradition!

In the years to come Kevin became a well-respected shipmaster who received an award for bravery and skilled seamanship for a daring rescue during a South China Sea typhoon. He died a few years back in Dunedin at 67. He was a lifelong friend going back to primary school. We went to sea together and sailed together more than once

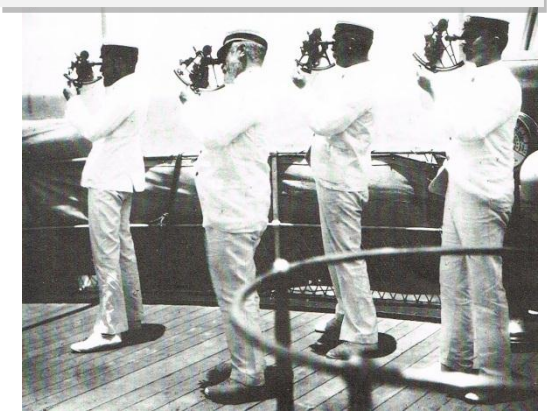
Old 1950's Singapore open sewers

Naturally this tale was not related very often in the years that followed as ship owners are not renowned for their sense humour. They like reliability and are only pleased when a voyage shows a good profit. Passengers too, may have had some concerns regarding their personal safety had they known that the captain's of their vessels had, as young seamen, been either prodded up and down a foreign sewer with bamboo poles or physically restrained by an agitated mob whose good intentions were sadly misunderstood.

The Long Bar in Raffles

Anyway, that is one story. There are others, and at our age who cares now? I know Kevin would have agreed. *****

CHANGING TIMES - CHANGING WAYS



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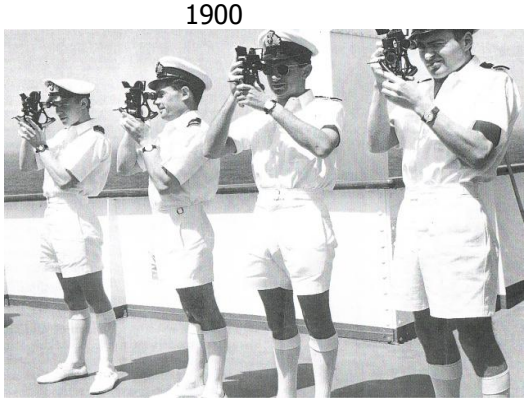

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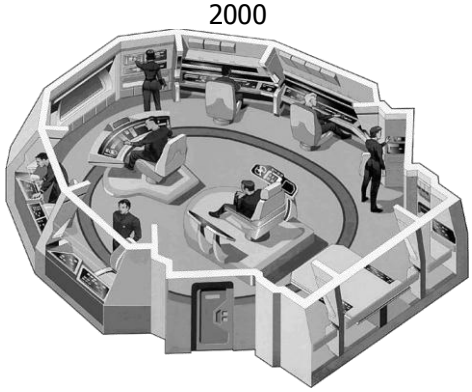


Starship Enterprise? Maybe sooner than we think? Probably only one man aboard though, but will he need to be a qualified Master Mariner??

MARITIME NEWS

Clandestine start for E-ship

The history of the *E-Ship 1* somehow resembles that of German offshore wind farm projects, writes Katrin Berkenkopf in Cologne. For a long time, it seemed uncertain whether they would actually go into operation. Both suffered a number of setbacks, but right now it looks as if they are finally going to go ahead. The extreme confidentiality that surrounded the E-Ship project from the beginning must surely have contributed to the doubts about its functionality.

In early 2006, German wind turbine producer Enercon commissioned Kiel shipyard Lindenau Werft with building a dedicated vessel for the transport of its offshore wind turbine parts. It emerged that the ship was to use the almost forgotten Flettner rotor technology which could save between 30%-50% on bunker consumption — which seemed just right for a vessel employed in the establishment of wind energy. The four rotating Flettner cylinders are meanwhile visible, but Enercon still maintains an air of secrecy around the vessel. What is sure is that Lindenau Werft was not able to complete the project; the yard went into insolvency and the ship was towed to Cassens Werft in Emden for completion in 2008. Earlier this summer, the finishing touches were added by Lloyd Werft in Bremerhaven.

The first voyage with cargo was announced for this month and local news reports suggested that the vessel accepted nine turbines. While Enercon would not comment on whether this journey has taken place, database information shows that the *E-Ship 1* has, in fact, completed a first trip from Emden to Dublin and back. Enercon has already installed a large number of wind turbines in Ireland and recently established Irish headquarters, designed to serve Ireland and the UK. The secretive company envisaged that details on the performance of the *E-Ship 1* would be made public at a

later date. "From the trials, it can be stated that the technology of the E-Ship works," it said last month. This was Enercon's meagre comment on the completion of a third test run. Whether the *E-Ship 1* will have any sister vessels, as was envisaged in 2006, is likely to remain a secret for the time being

SWISSCO ORDERS NEW-BUILD SUPPORT SHIPS

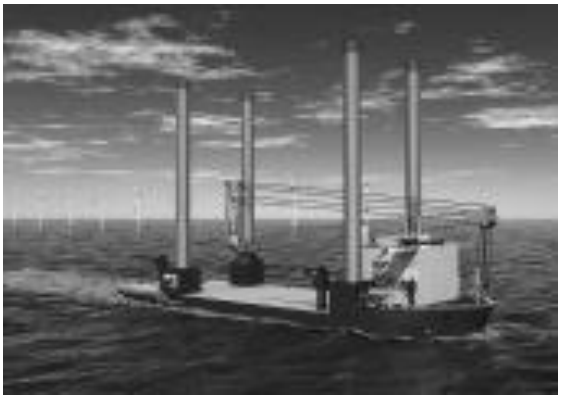
Swissco Holdings Ltd in Singapore has has announced that its wholly-owned subsidiary, Swissco Offshore Pte Ltd, has placed orders for two offshore support vessels for a total value of S$20 million. The two anchor handling tug supply vessels have been placed with a shipyard located in Guangzhou province, China. Designed and equipped to meet the changing demands of clients, these two vessels are expected to be deployed in the South East Asia region as well as the Middle East offshore oil and gas fields. The two vessels are expected to be delivered by the first half of 2012.

"Having just completed the merger of Swissco International Ltd and C2O Holdings Ltd in September 2010, these two new ship orders are the first milestone of our newly merged entity" said Mr Robert Chua, Chairman of Swissco Holdings Ltd. Even though the current market is still feeling the effects of the 2008 credit crisis, we are confident of the prospects of the offshore supply vessel market. We feel it is a right time to initiate our fleet expansion programme to enhance the capabilities of our fleet."

ANOTHER NEW-BUILD OFF- SHORE WIND FARM CONSTRUCTION VESSEL

NewNet

Marine energy infrastructure company Van Oord has commissioned the construction of a four- legged foundation construction vessel to be used in the build of offshore wind farms, as it announces the completion of the first phase of the Belwind project at sea 25 nm off the coast beyond the Belgium port of Zeebrugge.



Concept illustration of new vessel for Van Oord

Van Oord was responsible for the design and construction of all the foundations, the electrical infrastructure and the connection to the onshore grid at the wind farm, located off the coast of Zeebrugge, Belgium.

The Belwind Phase I Offshore Wind Farm includes 55 wind turbines and one offshore high voltage station.

The vessel the company has commissioned will be constructed at the Sietas shipyard in Hamburg, Germany and will be fitted with a crane capable of hoisting 900 tonnes The Belwind farm comprises 55 Vestas V90 turbines, each capable of producing a maximum power output of 3MW.

OIL RIGS MAY TAKE OVER FROM OFFSHORE WINDMILLS

Some off-shore wind farms in Britain are likely to be taken over by oil companies The wind farms could be forced out by oil rigs due to legislation that means oil companies take precedence over turbines if fossil fuels are actually discovered, which seems likely.

The Daily Telegraph has reported the projects include a 250 turbine wind farm in the St George Channel 10 miles off the shores of Wales. Environmental activists are hoping the little-known clause in British law will soon be patched up. But they will be challenged by the oil companies who have been complaining that wind farms disrupt mobile drilling rigs and the safety of servicing helicopter flights.

Under the law, existing rights granted to offshore wind farm operators can be terminated whenever the government declares a license for oil and gas exploration in the same area.

DOCKWISE SEES DEMAND FOR INCREASED YACHT TRANSPORT IN SOUTH PACIFIC

It was reported on February 04 that the DYT Group (Dockyard Yacht Transportation) currently owns and operates a fleet of 48 vessels, and expects to take delivery of six vessels in 2011 and the aforementioned two vessels in 2012.

"The Australian yacht market is very buoyant at present due to the strong Australian dollar," said Roberts. "Being market leaders, DYT and Aurora are working hard to service the South Pacific market for yacht transportation in relation to this large influx of yacht movements."

Super Servant 3, at 456 feet (139 metres) in length and operating on a regular schedule to deliver yachts around the world, will look something like a giant moving marina when it comes to Brisbane. By "sinking" its dock bay, it will safely float off its cargo of yachts. Captains, owners and crew will be aboard the vessels during disembarkment, ready to take them by their own power on to new adventures.

It's an amazing process," said Roberts, "and no other shipping company has this ability to deliver boats in such a manner." Nevertheless, Roberts says DYT often orchestrates lift-on/lift-off arrangements with third-party carriers for clients wanting a more flexible shipping schedule or to explore destinations where the float-on/float-off ships aren't currently route scheduled to go. "With both services combined, we have created a very strong DYT yacht logistics product that is being utilized by many yacht owners and manufacturers and continues to be a leader in the market," said Roberts.

Super Servant 3 departed Port Everglades in early December, 2010, and will have made stops in St. Thomas (USVI), Golfito (Costa Rica) and Papeete (French Polynesia) before arriving in Brisbane. From Brisbane, it will head to Auckland and return to Port Everglades (Ft. Lauderdale, Fla.) in late February, probably via Ensenada (Mexico).

DYT's second "float-on/float-off" voyage to the South Pacific this year will begin in Port Everglades in early July, with stops in Golfito (early/mid July), Brisbane (early August), Auckland (mid-August), and head back via Ensenada (mid-September) to Port Everglades (early October) in time for the Fort Lauderdale International Boat Show. This particular voyage is ideal for those who want to attend the Rugby World Cup which takes place in Sept – Oct. in New Zealand, in August, 2011.

Super Servant 3 is 456 feet (139 metres)
Length x Breadth: 139 m X 30
Speed (Max /Average): 13.9 / 10.4 knots
Flag: Neth.Antilles

In addition, DYT has scheduled these new voyages via the lift-on, lift-off method: Loading in March and April, 2011: Antwerp (Belgium) or Rotterdam (The Netherlands) to Genoa (Italy), then to Brisbane (Australia) and Wellington (New Zealand) *****

GOVERNMENT HANDS OFF WITH PORTS

Transport Minister Steve Joyce has reiterated at a port industry conference in Auckland today that the Government doesn't intend intervening in the structure of the country's competitive ports sector. And Joyce, keynote speaker at the International Association of Ports & Harbours Asia/Oceania regional forum, said the Government thinks the port sector is functioning reasonably well.

"We have a significant number of ocean-going ports well placed around the country for a country of our size with the two big ones Auckland and Tauranga, the two big exporting South Island plants Lyttleton and Port Chalmers and into a number of regional ports that support their local region's freight needs," he said.

"There is certainly enough diversity and competition to promote efficiency as well as rationalisation and investment where appropriate to offer businesses a range of choices for moving their goods." But he said there was an argument that the country had too much investment in too many ports.

"I am not going to insist that port shareholders and ports curb their enthusiasm for their industry. As one who was active in a range of infrastructure portfolios, it's a pleasant change that the problem here could be too much investment. Some people within the industry think government intervention to restructure the port sector is required in this country but I've been pretty clear that it's not the government's role to decide the port's structure."

That decision was for the industry to address, he said. "I think there is a logical hierarchy of ports in this country that is continuing to evolve in a largely sensible manner."

A Ministry of Transport commissioned economic report released late last year looked at the merits and likelihood of three scenarios for international freight services in New Zealand. The three options were putting New Zealand's international trade through Australia; electing two main container ports in the country; or reducing the number of ship operators serving the New Zealand market.

"The report concluded that each of these directive scenarios is less beneficial to the economy than the natural evolution of the port sector that the Government is taking the approach to," Joyce said. "It is best to leave final decisions in the hands of the shippers and let the ports respond with their investment decisions. The Government is working on a number of ways to help lift productivity," he said.

"The first and possibly one of the most important is to make the actual performance of ports and details of the tasks they perform much more visible for all stakeholders. In the past it has been difficult to find good operational performance data for New Zealand ports and this lack of consistent data made it hard to do meaningful analysis."

The Ministry of Transport has launched the freight information gathering system - FIGS - to establish a platform for collecting consistent freight movement information. Four ports took part in the initial stage and work is to be extended to a 10-port system in the next couple of months.

"The initial focus will be on containerised freight until the system is bedded in and then expanded to include all bulk freight as well. I'm confident it will assist the government making more informed decisions about freight related policy and future infrastructure development," said Joyce.

Also with regard to port productivity, a second major project is underway between the MOT and the ports to benchmark relative productivity performance of each of the ports against international norms.

MARITIME HAZARDS AND SUPPORT

Tidal currents

Besides tidal height, the NIWA's new tide model of New Zealand's EEZ also produces tidal currents. For the first time, a detailed overall picture has emerged of the strength (speed) and direction of tidal flows on the continental shelf and around various islands, headlands and straits. Follow the link at the end of this article to see an animation of the twice-daily lunar M2 tidal currents around significant areas of the North Island and other parts of New Zealand. Typically over much of the continental shelf, tidal currents are quite weak and would be hard to measure.

However there are obvious tidal hotspots like East Cape, Cape Reinga and the confines of Hauraki Gulf where strong tidal currents are more evident. These hotspots arise because the tidal flow is constricted by headlands or islands, particularly where the seabed shoals to shallower depths. The effects of strong tidal flows through Cook Strait extend northwards to the bight south of Taranaki.

Photo courtesy Timaru Herald

Over 200 current-meter records of measured ocean currents dating back to 1970 have been re-analysed. Using a technique called "harmonic analysis", specific tides associated with the Moon or Sun are extracted from the measured currents. These field measurements of tidal currents are being used to verify the tide model. The comparison is very encouraging, given the inevitable variability of extracting small tidal currents from data that is dominated by wind-driven and oceanic currents. For more information, see NIWA's Water & Atmosphere article *Ebb and flow: Testing the tides*. (see link below)) The tidal model is in the process of further development with a finer grid resolution nearer the coast and in the larger sounds, fjords and harbours.

Other animations of tidal currents for an average tide range.

Tidal currents at:
Cook Strait (98KB animation)
Foveaux Strait (91KB animation)
Banks Peninsula (113KB animation)
Surface currents for yachties

The sea is constantly on the move, driven by tides, winds and changes in temperature and salinity. While ocean currents are being studied in other NIWA programmes, the focus for the coastal hazards programme is on surface currents nearer the coast. Information on surface currents will assist search and rescue operations, oil spill clean-ups, navigation and of course yacht racing. Computer models of tides and wind-driven currents have now been developed for several areas around New Zealand including the greater Hauraki Gulf.

This research is being utilised by racing syndicates for the America's Cup and the Volvo Ocean Race. Near-surface currents under various wind and tide combinations are being used for America's Cup race tactics off East Coast Bays. Tidal currents from the NZ Tide Model from Ninety-Mile Beach around Cape Reinga to Auckland, and out to East Cape were used to assist the Illbruck syndicate with navigation in Legs 3 & 4 of the Volvo Ocean Race. In the coming year, a tidal current atlas for New Zealand will be published for hourly intervals relative to the high tide at standard ports.

More info at: niwa.co.nz/our-science/natural-hazards/research-projects/all/physical-hazards-affecting-coastal-margins-and-the-continental-shelf/news/maritime *****

THE OYSTER

The storm is raging up above,
And waves are dashing high,
The sea birds, screaming, fly to land,
As thunder rocks the sky.

But down below in waters calm
The oyster sleeps away;
Quite heedless of the wind and waves,
He snoozes, night and day.

He does not shout and rant and rave,
Nor bolts of lightning hurl,
He's dozing in the oyster bed,
And dreaming up a pearl!

Frances Gorman Risser

THE FOURTH SERVICE

The Merchant Navy was so-named by King George V in 1928, to recognise the merchant sailors' tremendous service and sacrifice (over 14,000 casualties) during WWI. The King also bestowed the title of Master of the Merchant Navy and Fishing Fleets on the Prince of Wales. Thus the British (and Commonwealth) Merchant Navy was acknowledged as the 'fourth arm' of the Services.

During WWII approximately 131,000 officers and men served in the Merchant Navy, with 32,000 being killed in action, 5000 listed as missing, lost at sea, and 4633 taken prisoner; this equates to a 30% casualty rate. Overall 4,786 Allied merchant ships were sunk, totalling 21 million tons, equal in tonnage to the entire pre-war British merchant fleet.

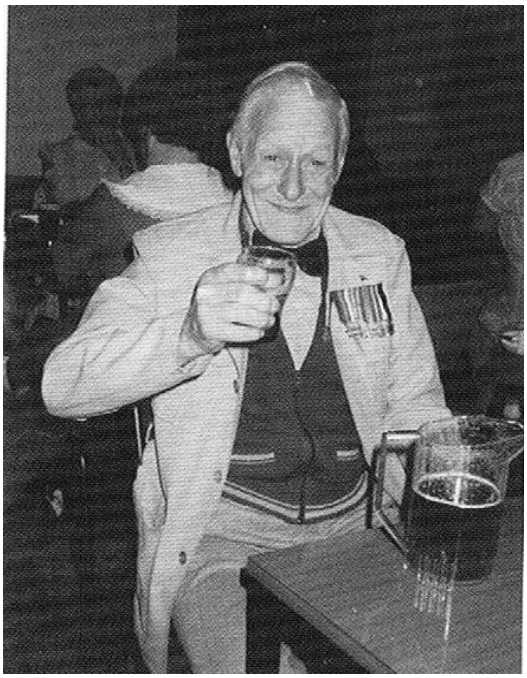
The Colour Party from HMS Philomel provided the Guard for Merchant Navy Day

His Excellency the Governor-General of New Zealand accompanied by his ADC Lt. Sandra Dron at the National War Memorial on Merchant Navy Day

Russian Convoy veterans Ron Sanderson and Chris King laying poppies on the Tomb of the Unknown Warrior.

An *Awatea* veteran is assisted to lay poppies on the Tomb of the Unknown Warrior.

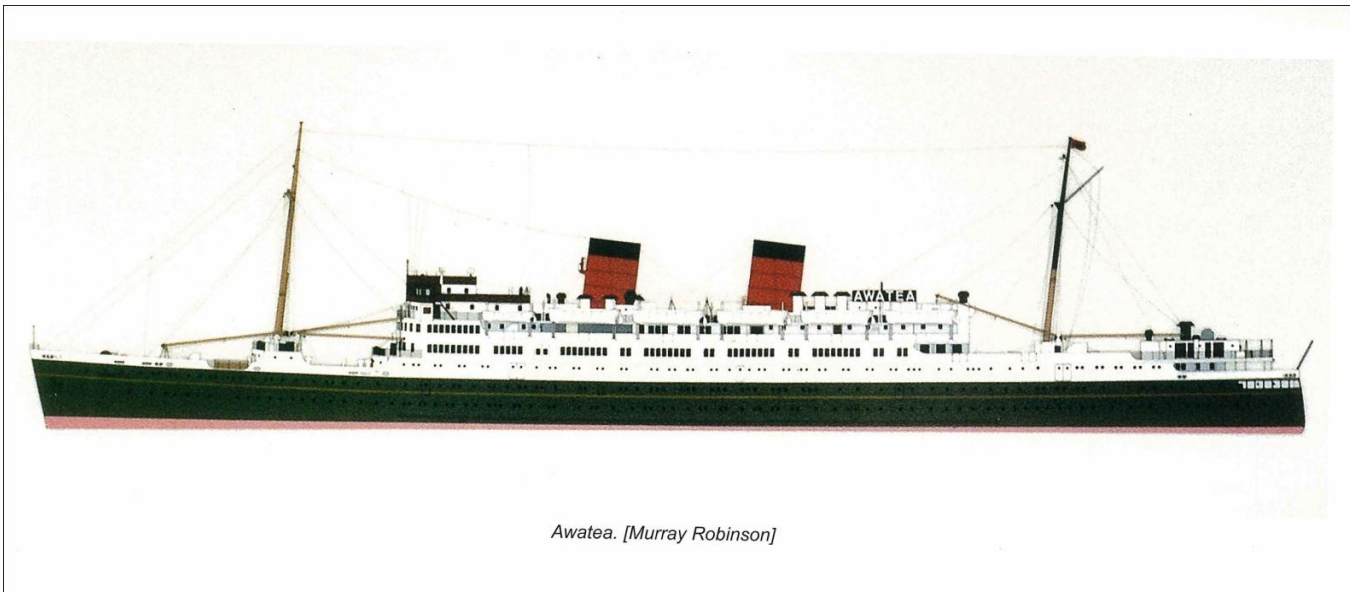
The New Zealand Red Duster flies proudly in front of the National War Memorial Carillon Tower.



George Gee remembers his shipmates.

OUR NAVAL HERITAGE

This year on 3 September, New Zealand recognised our seamen of the Merchant Navy, when the 'Red Duster', the Red Ensign that for over 150 years has been the symbol of British and Commonwealth merchant ships, was paraded at the National War Memorial. The commemorative service was held to remember the merchant seaman who gave their lives in the two world wars. Merchant Navy Day was marked across New Zealand, and one who took special pride in the commemoration was LT Owen Gee RNZN, whose father George Henry Gee, was a donkeyman (auxiliary machinery engineer) in the fast troop transport AWATEA.



Awatea. [Murray Robinson]

His Majesty's Landing Ship *AWATEA*

"she fought the fight of a battleship"

The glamour ships of the pre-war era were the big passenger liners. On the trans-Tasman run the Union Steam Ship Company's liner AWATEA was the star, holding the record for the Auckland – Sydney run, at an average speed of 23 knots.

Soon after war broke out, AWATEA, in common with other merchant ships, had a 4" (102mm) gun mounted on her stern, manned by naval ratings known as D.E.M.S. gunners. (Another of the USSCo liners, the MONOWAI, was taken over by our Navy as an Armed Merchant Cruiser.) In October 1941, with the war situation deteriorating the AWATEA was requisitioned by the British Ministry of War Transport for service as a troop ship, involving installation of Oerlikon guns and protection around the bridge. During AWATEA's call at Vancouver some work was done to convert her accommodation to enable her to carry greater numbers of troops.

The RMS *Awatea* in Algiers with other ships of the amphibious force. HMS *Wilton* passes in front

George Gee was in the Engineering Department; another was Gordon Huston, then the new Junior Engineer, who wrote down his recollections of the AWATEA's

wartime career. "We sailed from Vancouver with a contingent of Canadians aboard to Hong Kong, where these troops were to be stationed. Subsequently the Canadians bore the brunt of the Japanese assault on Hong Kong, and most became POWs."

From Hong Kong AWATEA sailed via Singapore and Colombo to South Africa; they learned that Japan had entered the war. Then the ship headed to the UK, with a stop at Trinidad, where amongst others, they embarked survivors of HMS DUNEDIN, which had been sunk in mid-Atlantic.

Gordon Huston recorded that "We then encountered the most ferocious storm it has been my experience to meet. With our speed cut back to five or six knots and steering at a 45-degree angle across the tremendous seas we survived several days of maximum discomfort. The AWATEA was rolling 47 degrees to port and 45 degrees to starboard and doing a complete cycle in nine seconds. All this of course to the banshee scream of the wind and the air almost solid with wind-blown water."

Nazi Germany had conquered Western Europe, Britain and the Commonwealth had to rely on the sea. Once at Liverpool, AWATEA was refitted for more troops: 'myriads' of hammocks allowed over 3,000 to be embarked. As well, the hull was degaussed, more guns and protection were added. All refrigerating machinery was overhauled, with long voyages and many troops to feed. AWATEA made several trooping runs—when outward bound and full, in convoy; when homeward bound and largely empty, she sailed independently as high speed made her independent of convoys. British Commandos and American Rangers undertook a number of amphibious rehearsals before she sailed in a very large convoy: "Wherever one looked, there were ships."

Gordon Huston explained "We were finally told we were going into the Mediterranean Sea, and in the night of 5 November 1942 we slipped through the Strait of Gibraltar. Next morning dawned a beautiful day; there were still a lot of ships and a strong naval escort. There was an enemy reconnaissance plane circling."

At midnight they anchored off Algiers; the landing craft were lowered and the troops disembarked. The assault on 7 November was successful against opposition from the Vichy French. Later that day, anchored closer in off the port, the assembled troop ships were bombed. "Though no ships were hit, I remember one plane being brought down. I happened to be on deck when this plane, trailing smoke and just skimming the surface, flew between the AWATEA and another ship. The plane certainly did not survive, for a great pall of smoke billowed into the air behind some rising country along the shore line."

Next day at Algiers, AWATEA embarked mainly Air Force personnel, with vehicles, guns, and a tremendous stack of petrol in jerry cans on the after deck.

"Our job was to proceed to Bone, where there was an airfield they were to prepare for our planes to fly in to. However halfway through my four to eight watch, we turned sharply and headed back; Bone was still in enemy hands! At 0800 on 11 November we came to anchor in Boogie Bay, with quite a number of ships around."

The ships were under enemy air attack most of the day, but unloading into lighters continued. "I was quite pleased to see all the petrol go!" Gordon remarked

The AWATEA could put up concentrated AA fire and with the other ships doing the same, and a naval anti-aircraft ship, there were no hits by the enemy. "I well remember at the height of one attack the STRATHNAVER [a large P&O liner] coming in. The planes concentrated on her and huge fountains of water would practically obscure her from sight, but each time she sailed majestically from behind her watery curtain and remained unscathed."

"At 4 pm our unloading was complete and we were under orders to proceed to Gibraltar. By 4.30 we were starting to move away when more bombers appeared and obviously concentrated on the AWATEA and in spite of the fire of our gunners scored hits. She was soon badly damaged up forward when a stick of bombs penetrated No 2 hatch and really created havoc. The steel hatch cover was blown off and sailed up over the bridge and crashed down just feet away from the men there. The AWATEA was in a sinking condition and Captain Morgan's intention was to try and

beach her. However a couple of aerial torpedoes slammed into her port side and exploded just aft of the engine room.

"I happened to be at the after end of the engine room on the port side at the evaporators when the torpedoes hit. The shock knocked me down, and I remember vividly this great wall of water under tremendous pressure shooting straight into the engine room and splashing with great force off everything it hit. I was unhurt, got on my feet and raced for the ladder. I claim to be the last person on the engine room plates, because I was further away from the exit ladder than the others.

"The men in the boiler room knew nothing of what had happened in the engine room, for a watertight bulkhead separated the two compartments. However, when power failed and no answer from the interconnecting telephone, Frank Walsh, started to open the bulkhead watertight door manually, to be greeted as soon as it was cracked off its seal by a jet of water. He re-closed it hurriedly: "Those poor b.....s in there have bought it." They then proceeded to get out themselves out of the boiler room and were fortunate they hadn't delayed, as fire was already taking hold on their route out."

AWATEA was dead in the water with a heavy list to port. The order to abandon ship had been given and a corvette had come alongside. The air raid was over and the sea was flat calm. "The corvette went forward to attempt to fight the fire that was now engulfing the bridge. It was a futile effort; the hull plates from the bow to the bridge were red hot. Our corvette did not stay long and sheered off and soon the burning AWATEA was just a glow in the distance. I feel a mistake was made leaving the Bougie anchorage while it was still daylight. There we had the concentrated anti-aircraft fire from all the other ships and also our rocket batteries could be used to good effect. All this benefit was lost when we moved off and became the sole target for many planes."

AWATEA's survivors endured another day under air attack, aboard a Dutch merchant ship that was in the amphibious force, before reaching Gibraltar. Gordon Huston writes: "We went on to Liverpool, arriving there at the end of November. Early in January 1943 we embarked in the NORTHUMBERLAND for repatriation to New Zealand, arriving at Wellington early March 1943 and being met by Mr. Peter Fraser, Prime Minister, who welcomed us back and thanked us all for services rendered." Captain Morgan said, in reporting on the loss of his ship, that "she fought the fight of a battleship". Gordon Huston, like his ship mates, remained proud to have served in the AWATEA: "She acquitted herself well in a time of our country's need."


AWATEA's survivors on board the Dutch ship; CAPT Morgan (left) shakes hands with the Master. Remarkably all the ships company survived AWATEA's sinking.

Captain G B Morgan surrounded by crew members from the *AWATEA*, thanks to Captain H W Hettema of the MARNIX van ST ALDEGONDA for the rescue and safe delivery to Liverpool.

AWATEA AWARDS

Captain George Morgan DSO
Chief Officer William McGarry DSC
Chief Engineer Harold Simmonds DSC
Senior Third Officer William Muir DSC
Mr George Henry Gee DSM
Mr Ash Ingham DSM

This article and the story of the memorial parade and photos were copied from Navy Today *by kind permission of the Editor, Richard Jackson. Richard also wrote the original article. The Company extends its thanks to Richard.*

"A Tasman Trio" by Murray Robinson tells the story of the exploits of the ***Awatea,*** the ***Wanganella*** and the ***Monowai***. All three were express passenger vessels trading across the Tasman Sea.
Available NZ$40 plus $4.50 packing and Fastpost within NZ per book, or $11.50 packing and airmail per book to Australia. Forward orders and payment (Cheques made payable to "Murray Robinson") to:--Murray Robinson, 134c Raumati Road, Raumati Beach, KAPITI COAST 5032 or contact maillandmrobinson@paradise.net.nz If wishing to use credit card payment email to John Clarkson at shipsinfocas@btinternet.com

DISASTER RESPONSE?
Bill McGuire

Global disaster paves way for global thinking: in the wake of the Indian Ocean tsunami, disaster expert and geophysicist Bill McGuire explains why future disaster management must place a greater emphasis on preparedness as well as response.

The resilience of the human condition, and the speed with which memories are erased following even the most devastating natural catastrophe, are truly astonishing. Little more than 120 years ago, in 1883, Indonesia's coastlines were battered by waves four times higher than those that claimed more than 100,000 lives on Boxing Day 2009. Massive pyroclastic flows--mixtures of hot ash, volcanic debris and scorching gases--poured into the Sunda Straits from the exploding Krakatoa volcano, displacing enough water to cause 40-metre waves to pound the coastlines of western Java and southern Sumatra. Almost 40,000 indigenous Indonesians and many Dutch colonials were killed.

Before the recent devastating earthquake and tsunami, the cataclysmic eruption of Krakatoa constituted the greatest natural catastrophe to strike western Indonesia in modern times. Hence, it would be reasonable to expect that its terrible consequences would have burned a knowledge of the event into the minds and hearts of the descendants of those who lost their lives and who now live along the affected coastlines. While filming in the area last September for a television programme about the great eruption, I was astounded to find, however, that just about the only legacy of the disaster was a discrete memorial hidden away in a small park in the southern Sumatran city of Bandar Lampung. Very few of the present-day inhabitants knew anything about the awful events of 1883, while the Krakatoa Museum--a pretty forlorn building at the best of times--stood ramshackle and derelict.

The Krakatoa example is far from unique: it's normal for memories of catastrophes--whether human-induced or natural--to be quickly blotted out or buried deep. This is a protection mechanism that helps those affected to recover, rebuild and get on with their lives, and without doubt it defines a path back to normality that will be followed by those who survived the 2009 0 tsunami.

(Editor's observations on above)
The above comments are pertinent but the response to the recent Christchurch and Japanese tragedies demonstrates that the human spirit and the global community, working together, has the resilience to recover, achieve and rebuild from most great disasters. We are no longer alone but part of the global village and slowly we become one world-wide caring family, one tribe. *****

The Deep-Sea Cables

The wrecks dissolve above us; their dust drops down from afar --
Down to the dark, to the utter dark, where the blind white sea-snakes are.
There is no sound, no echo of sound, in the deserts of the deep,
Or the great grey level plains of ooze where the shell-burred cables creep.

Here in the womb of the world -- here on the tie-ribs of earth
Words, and the words of men, flicker and flutter and beat --
Warning, sorrow and gain, salutation and mirth
For a Power troubles the Still that has neither voice nor feet.

They have wakened the timeless Things; they have killed their father Time;
Joining hands in the gloom, a league from the last of the sun.
Hush! Men talk to-day o'er the waste of the ultimate slime,
And a new Word runs between: whispering, "Let us be one!"

RUDYARD KIPLING

A philosophy for environmental denial.

"Why should I worry about future generations?
What have they ever done for me?
Groucho Marx.
Quoted by David Suzuki

NORTH ATLANTIC TALES
Captain Guy Dennison

Life aboard the mv *Moveria* was never ever going to be romantic. She was built by Vickers in 1924 and was one of the first diesel merchant vessels constructed. Her blast injection engine (all massive eight cylinders of it) took up almost 30% of the vessels length (352') and being a flush deck, shelter-decker she had almost a full set of spare four-ton cylinder heads clustered around the gantry entry into the engineroom, for good reason as will be revealed later. Rumour had it that this engine was a prototype for a submarine engine. Everybody hoped, if this was true, that they had never fitted one to a submarine!

The engine room also had three scotch boilers. Two small generators occupied a small half deck above the aft end; there being no room on the plates of the engine room floor.

mv *Moveria*

Tall tales and not so tall tales abounded on the life of the *Moveria*; the following story covers the weekly lifeboat drill, carried out no matter where the ship was or, whatever the conditions prevailing.

The Master had been in both sail and steam and now diesel, which he regarded as a creation of the devil, his description of the engine room is unprintable. He was known as Captain "Mad" (but a finer seaman you would have difficulty in finding.) The *Moveria* always had great difficulty in signing on a crew, which in this case had 14 different nationalities on board. Captain Mad, however, was there to sort the ship out.

Lifeboat drill

Our first boat drill was duly signalled and all hands assembled (47) including four apprentices, who dwelt in accommodation that had formally been both a lamp room and a paint locker. We had four radial davit boats of dubious condition which occupied the boat deck, together with the bridge, engine room skylights, chartroom, radio office, master's accommodation, funnel and wheelhouse. As you can imagine, space was at a premium! The weather was typical North Atlantic for October. Wind southwest 40 knots, overcast, heavy rain showers, 25 foot swell and she was as stiff as board

Hands manned the falls on both starboard boats, apprentices lay underneath to fold down the cradles, bosun, two ABs and chippy released the senhouse slips. On the command of the Master, the boats rose, apprentices scuttled out from underneath, thanking providence that the boats had not crushed them and they had not been swept over the side, to join in the heave. Above the howling wind the Master led a chorus of, *"Haul Away, Heave Away we're bound for South Australia".* There were at that time forty six souls who wished the hell they were.

He ordered the boats swung out and after demolishing several of the awning staunchions and some of the engine room crew, the boats hung perilously out over the side. Fortunately, only eight of the ship's crew were allowed to board each boat after they were secured. The cook advised the Master that if he stayed any longer there would be no lunch. Captain Mad being very fond of his tucker reluctantly agreed and gave the order for the boats to be re-stowed.

This terrifying experience was too much for the engine room staff and stewards who fled to the port side leaving the task to the deck crew (assisted by the Master who again started singing some unknown sea shanty from his sailing ship days). After demolishing the remaining staunchions and severely bruising most hands, the boats were finally re-stowed. What was truly amazing was the fact that nobody received any broken bones. The boats did not fare so well. The Master, being totally unimpressed by the efforts of some of

us, held a minor logging session the following day, which was a Monday. He never logged anybody on a Sunday!

Ice navigation

The 'Titanic' film, produced at great cost and accurate in every detail (???) does not follow the recollections of the Moveria's crew when ice was encountered on one run across to Canada.

For most of the passage the lookout was usually stationed on the forecastlehead where the only protection against the icy blast was obtained from a small tattered canvas dodger and the foc'sle ventilator, although, if you were seen cowering or smoking behind this you were in deep s---t. The *Moveria* did have a crow's nest but after one lookout almost froze to death this was discontinued. His hands had become useless and it took six of us to get him down and the ship also needed to be slowed down for the task.

As is fairly normal for that time of year, ice warnings were out in force and as we approached the area of the Labrador current it cooled rapidly accompanied by a heavy sea fog. The lookout had his torch and mercury thermometer which you kept a very good eye on. If the temperature would drop rapidly, it indicated the approach to an iceberg. The ships speed, by this time, would have been reduced to slow and even dead slow with the

USCG Healy amid flows off Labrador

more cautious Masters. You rang the ships bell to indicate the temperature drop which was always replied to by the bridge bell and a shout of, 'where away!' Strangely enough you could usually give an accurate direction and the engine was stopped instantly and even put full astern if your guesswork required it. North Atlantic icebergs can be quite large and pose a considerable hazard; however, there are usually dozens of small fellows, called growlers, being little flat floes up to quite large ones. Needless to say they can easily punch a hole in your vessel if you're moving too fast.

On this particular night the mate on watch was also on the forecastle with the lookout (no sneak cigarettes which were forbidden) and it was a real harrowing event. I don't think anybody slept that night with the continuous bump and thump. There were a lot of growlers around. When dawn finally broke and the sky cleared we were greeted with an amazing sight. As far as the eye could see it was nothing but ice floes surrounding some pretty large bergs. We had to send a man aloft (to the mast table) to spy a passage through the ice field, which we eventually cleared at about 1300. Would you believe there was not a single camera on board with any film in it to record any of it?

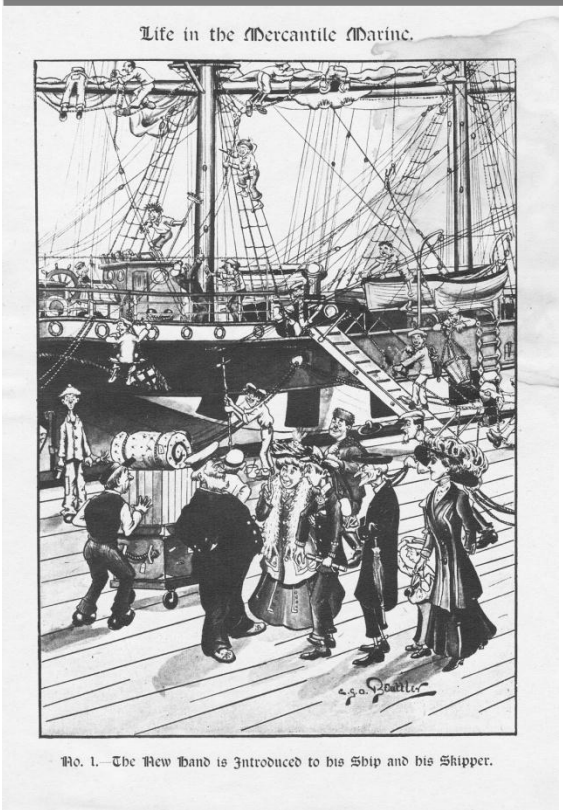
To give the old man his due he ordered a tot of rum for all hands, including the apprentices, which did not please our first mate, a man of very hard principles. Unlike the Titanic movie mentioned above, even after we were fully under way nobody was seen with arms out-stretched in the breeze on the prow of the forecastle!!

More next issue. Look forward to the *The Trials of the Tug Turmoil*.

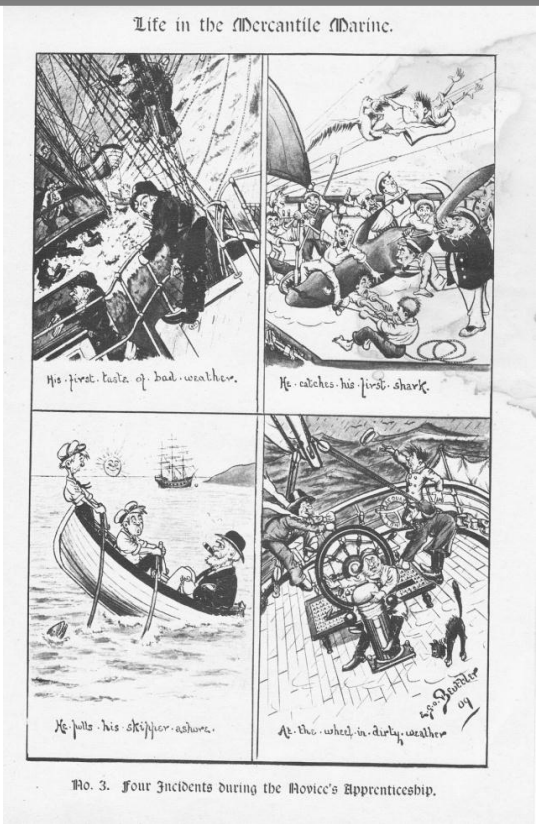
Deep sea tug *Turmoil* standing by the heavily listing *Flying Enterprise* in mid-Atlantic

History Pages

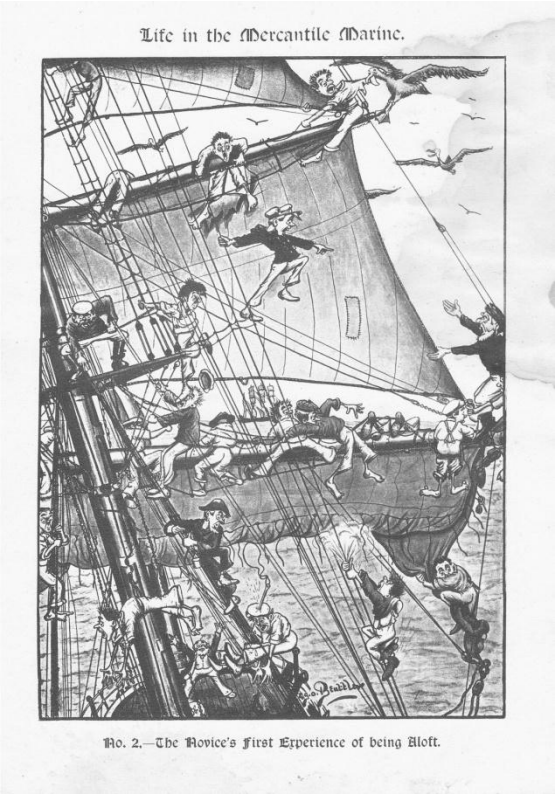
How many now remember these famous old 1910 cartoons by E G O Beuttler? Many of our older members can probably relate to some of the situations depicted? Originals hang in the British, Canadian and USA National Maritme Museums as treasured maritime historical works. They also fetch heaps when sold through Christies. Copies also hang in the Warsash School of Navigation. Sadly these reproductions are showing some deterioration.



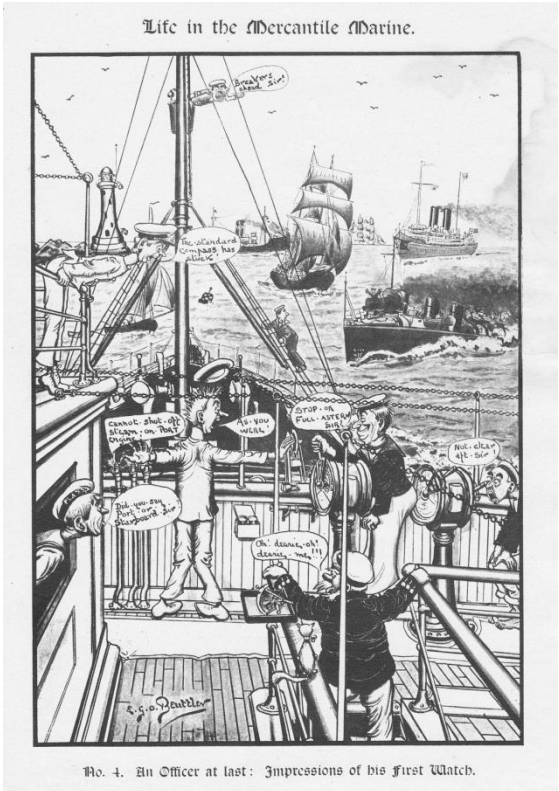
No. 1.—The New Hand is Introduced to his Ship and his Skipper.



No. 3. Four Incidents during the Novice's Apprenticeship.



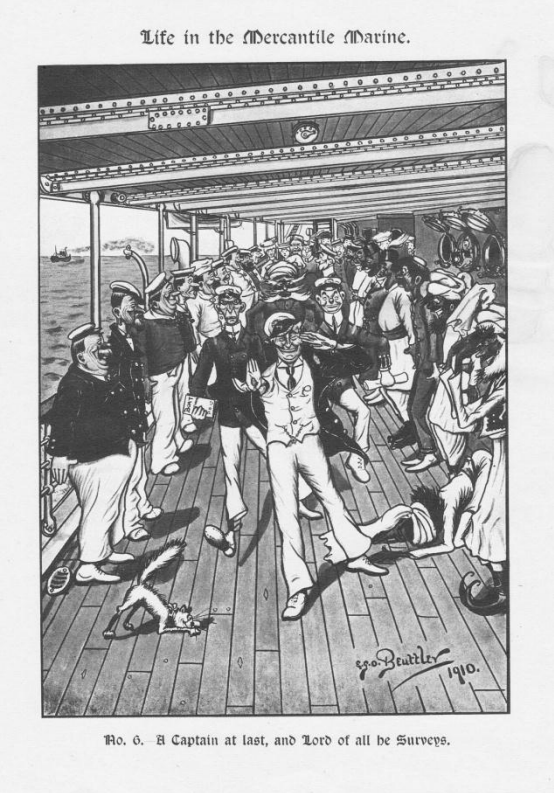
No. 2.—The Novice's First Experience of being Aloft.



No. 4. An Officer at last: Impressions of his First Watch.

No. 5.—The Responsibilities of Rank.

No. 7.—The Last Phase: Retirement.



No. 6.—A Captain at last, and Lord of all he Surveys.

Does anyone know about the life etc. of E. G. O. Beuttler who drew these celebrated cartoons? It seems he was a naval lieutenant during WW1 and a later note mentions a Colonel E Beuttler, however, there is nothing to suggest they are one and the same. Colonel E Beuttler is mentioned as dying 1n 1923.

E.G.O. Beuttler was one of the better wartime illustrators in WW1. His works seem to be in the collections of most important libraries and museums , including Auckland, Wellington and the Alexander Turnbull. The Auckland and Wellington Libraries had no knowledge of his biography but I have not yet tried the Turnbull.

There is a dearth of information on the www net, which is unusual, and I can find nothing of his biography. Maybe your editor is searching in the wrong places! Please let me know if you know or know someone who knows about him.

U-862's CRUISE AROUND NEW ZEALAND DURING WW2. HOW MUCH IS FACT, HOW MUCH IS FALLACY?

www.toptenz.net

Posted by critcalmass in holding ***new zealand sheep safe from u-boat***

There was a story often told that during WW2 a U-boat lay off one of our North Island ports checking out shipping movements etc. It is said that they were surprised by the relaxed attitude of the defences and the locals. Many of the sub's crew were conscripts and some had been farm workers in civilian life. Knowing this the commander Korvettenkapitän Timm lay awaiting nightfall then surfaced and sent two of his ex-farmers ashore in the sub's cutter where they slipped quietly onto a nearby dairy farm and milked some of the cows for fresh milk.

The story becomes more colourful as it is also said they passed by a shop that had the mornings bread delivery waiting outside for the shop-keeper to open up. Naturally they purloined a few loaves as well and returned to the sub just before dawn to enjoy a breakfast garnished with fresh bread and real milk in their coffee.

It may be true but the probabilities are certainly against the fact that it ever happened, anyway, like that.

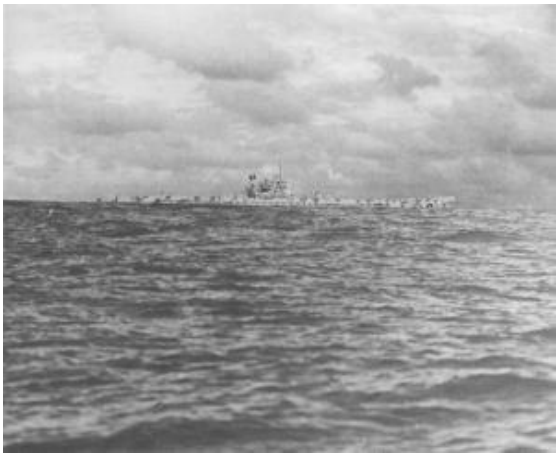
On the other hand, related below is another similar story with some claim to being true, although it is difficult to believe any warship submarine could have entered Gisborne harbour then short-turned 180º in the basin or even backed out again. The same would be reasonably true of Napier also and one feels the writer of this story had little knowledge of the layout of either port during the 1940's.

On the other hand with a little variation the account *could* apply to some of the smaller East Coast unenclosed ports such as Tolaga Bay, Tokomaru Bay, or Hicks Bay. Maybe?

The cruise of U-862 by Critcalmass

You might be interested to know that during her circumnavigation of New Zealand in January of 1945, U-862 actually entered two New Zealand ports looking for suitable targets. Running on the surface, the first one she entered on the night of 15 January 1945, with the docks and shoreline brilliantly lit up, was Gisborne on the North Island. Finding nothing worth to shoot at, she quietly slipped out again without anyone noticing her presence.

The second port was Napier on 16 January 1945. Repeating his daring performance at Gisborne Korvettenkapitän Timm, commander of U-862, again decided that shooting at unsuspecting civilians in waterfront cafes (who could be clearly observed from the conning tower) was not in keeping with the tradition of the German Navy, and again quietly slipped out of the harbour, again without being detected by anyone on shore.



Type IXD2 German U-boat

The author of the book, *U-Boat Far from Home* By, (Allen & Unwin ISBN 1864482672) David Stevens, a native Australian, has this interesting comment: '… Timm seems to have missed a perfect opportunity to stir up trouble in a distant area. A few well-placed rounds with the deck gun would almost certainly have caused a public outcry, conceivably lowering enemy morale and no doubt forcing the redeployment or reinforcement of New Zealand's limited assets.'

Unterseeboot 862 (U862), also known as the Japanese submarine I-502, was a Type IXD2 submarine operated by Nazi Germany's

Kriegsmarine during World War II. It was the only German submarine to operate in the Pacific Ocean during World War II.

U862 was laid down on August 15, 1942 by AG Weser of Bremen. She was commissioned on October 7, 1943 with Kapitänleutnant Heinrich Timm in command. Timm commanded U862 for her entire career in the Kriegsmarine, receiving a promotion to Korvettenkapitän on July 1, 1944.

U862 conducted two patrols, sinking seven ships totalling 42,374 tons.

U862 was one of the most travelled of all U-boats. She sailed from Germany in May 1944 and eventually reached Penang, in Japanese-controlled Malaya, in September 1944. Penang was the base for U-flotilla 33, code-named Monsun ("Monsoon").

On the way there, she launched a T5/G7es Zaunkönig I acoustic homing torpedo at a tanker. The Zaunkönig came around full circle to home in on U862 itself. Only an emergency crash dive saved the U-boat from its own torpedo. She also shot down an Allied PBY Catalina aircraft on August 20, 1944 and then escaped an intense search for her. She sank several merchant ships in the Mozambique Channel between Africa and Madagascar.

U862 departed for her second war patrol from Jakarta in the Japanese-occupied Netherlands East Indies in December 1944. Assigned the task of operating off Australia, she sailed down the west coast of Australia, across the Great Australian Bight, around the southern coast of Tasmania and then north towards Sydney where she sank the U.S.-registered Liberty Ship Robert J Walker on December 25, 1944. She then travelled around New Zealand and actually entered the port of Napier at night undetected. (According to 'U-Boat Far from Home' U862 entered Gisborne Port – not Napier.)

U862 then returned to the Indian Ocean. On February 6, 1945, about 1,520km (820 nm) southwest of Fremantle, U862 sank the U.S.-registered Liberty Ship, Peter Silvester, which was loaded with mules bound for Burma.

U862 was also a trial boat for the FuMo 65 Hohentwiel radar system. This was cranked out of a casing on the port side of the conning tower and rose on a mast. The aerial was hand trained onto targets whilst the U-boat was at the surface. The radar had a range up to 7 nautical miles and was very effective where there was little risk from air attack on the U-boat.

When Germany surrendered on May 6, 1945, she put into Singapore and was taken over by the Imperial Japanese Navy. On July 15, 1945 she became the IJN submarine I-502. I-502 surrendered at Singapore in August 1945 and was scuttled there on February 13, 1946.

The German crew of U862 suffered no casualties, and some returned to Germany several years after the war.

Others having been interned at Kinmel Camp, Bodellwyddan North Wales were to remain in Wales and settled in the neighbouring communities of Rhyl, Rhuddlan and Prestatyn. This was due to the risks of returning to the Soviet occupied areas of Germany after the war.

Two of the crew are buried at the new cemetery at Rhuddlan North Wales on nearby plots.

Captain Joe Vangioni of the vessel *Holmlea* reported sighting a submarine north of Cook Strait in 1942 but the naval officer who was sent to interview him was sceptical of the sighting and no investigation was done. Significantly there was a riot amongst the prisoners of war in the camp north of Featherston a few days later and many prisoners were killed by guards quelling it. These prisoners up until then had been moderate and quiet. Maybe coincidence, but there are those in the maritime community who still wonder? *****

SHIP COLLISIONS, RADAR AND RADIO SIGNAL INTERFERENCE AND OTHER IMPACT ON SAFETY/ DANGER TO PERSONS AND SUFFERING FROM OFF

Currently research is being carried on throughout New Zealand into the feasibility of constructing offshore wind farms and also the possibility of tidal generators. The expectation is that many sites about our coast will be found to have good potential for power generation. Those areas sensibly navigable are of vital concern to mariners and we must ensure these investigations involve our expertise.

The main risk to navigation and ship safety is associated with installation and maintenance and this will be in common with all marine related activities. This not only perceived but actual danger will always require approved, appropriate warnings of danger and avoidance of shipping lanes, etc.

IALA marking recommendations can be viewed at: *Internet - http://iala-aism.org)*
E-mail - iala-aism@wanadoo.fr

Marking of Man-Made Offshore Structures
20ter, rue Schnapper, 78100 Saint Germain en Laye, France
Telephone +33 1 34 51 70 01 Telefax +33 1 34 51 82 05

SHIP COLLISIONS WITH TURBINES

Ship collisions with the turbines are one of the potential risks associated with offshore wind energy development. Collision with a wind turbine foundation could damage or possibly destroy a ship. The potential danger to the environment is the spillage of oil or chemicals from the ship into the water.

Evaluation of several collision scenarios between three different types of turbine foundations (monopile, jacket and tripod) and different ship types (single and double hull tankers, bulk carriers and container ships) has been carried out in several locations of the North Sea and Baltic Sea off Germany. The results have demonstrated two main results: the first is that monopile and jacket foundations are safer than tripod structures, and the second is related to the risk of collision which can be reduced, but not totally avoided. There are several safety approaches applicable to avoid or minimise this potential risk:

- Redundant navigation and control systems such as radar and ships optimised to survive collisions;
- Prohibition on navigation into the wind farm area for certain kind of unsafe ships;
- Introduction of traffic management systems;
- Wind farm monitoring;
- Availability of tug boats for emergencies;
- Crew training.

RADARS AND RADIO SIGNALS

The wind turbine towers may impact on marine operations and especially aviation activity, both civil and military, due to interference with radars that manage aircraft operations. Radar is a system for detecting the presence or position or movement of objects by transmitting radio waves, which are reflected back to a receiver. The radio wave transmitted by radar can be interrupted by an object (also called target), then part of the energy is reflected back (called echo or return) to a radio receiver located near the transmitter.

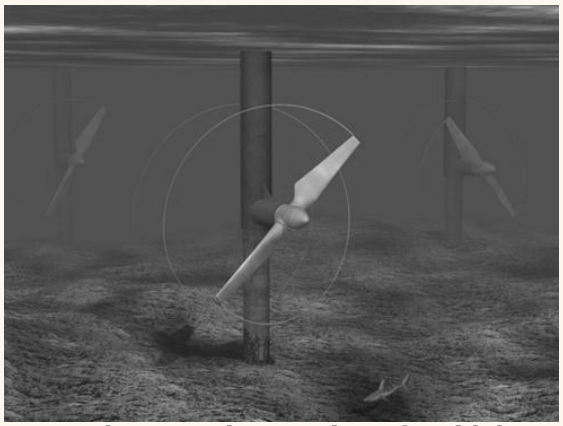
Wind turbines are vertical structures that can potentially interfere with certain electromagnetic transmissions. Mobile structures such as rotating blades may generate more interference on the radars than stationary structures. The effects depend on type of radar, specific characteristics of wind turbines and the distribution of wind turbines. Air traffic management is susceptible to being negatively affected by wind turbine installations. The systems managed by radars are air traffic control, military air defence and meteorological radars. Less severe effects on ships radars are expected.

Because marine hydrokinetic (MHK) turbine technologies are still in their infancy, their impacts on the environment remain largely unknown. Although few empirical data exist for MHK technologies, more data are available for other man-made structures.

This paper discusses fish, mammal, bird, and benthic organism interactions with MHK devices and other man-made structures that may be analogous to these MHK technologies. In experiments conducted on the Mississippi River Lock and Dam No. 2, the survival of

Sea-Gen installed in the Bay of Fundy.

several species of small and large fish that passed through an MHK turbine was 99%. No data on mammal, sea turtle, or bird interactions with MHK turbines were available, but other types of anthropogenic mortality and traumatic injuries to these groups of animals have been well documented. Collisions with ships and fishing gear have greatly impacted



Underwater impression of a Tidal Turbine Farm

most groups of marine mammals. Large whales that inhabit shallow coastal waters and diving birds that use sight to pursue prey underwater are at risk for collision. However, many devices have a positive impact on fish or benthic organism populations because they act as fish aggregation devices or artificial reefs. Most current tidal-stream generators are essentially wind turbines turned upside down and made to work underwater. They often include complex gearboxes and move the entire assembly to face the flow of the water. For example, they turn a half-circle as the tidal current reverses direction. Gears and moving parts require expensive maintenance. When they are used in seawater, protection from rust and corrosion can involve sealed housings for joints and other added components. This pushes up the cost of running the turbines, a cost that is passed on to the consumers of the generated electricity.

SOUTHAMPTON DESIGN ALTERNATIVE TIDAL GENERATOR

This alternative design called the Turnock Sea-Gen is said to have all the advantages of other Sea-Gen's with few of their disadvantages. The Southampton design does not need to turn around because the design of its turbine blades means that they turn equally well, regardless of which way the water flows past them. The blades are also placed in a specially shaped housing that helps channel the water smoothly through the turbine. Neither tower structure nor heavy foundations are needed.

Another beauty of the Southampton design is that everything is wrapped in a single package that can be prefabricated so there will be few on-site construction costs. "Just drop it into flowing water and it will start generating electricity. It will work best in fast-flowing, shallow water," says Turnock, who foresees rows of these devices secured to sea floors and riverbeds.

Turnock Sea-Gen

The present prototype is just twenty-five centimetres across. The research team now plans to design a larger model with improved propeller blades that will further increase the efficiency of generating electricity. All being well, the team envisages the generator becoming commercially available within five years. *****

TRIALS ON RADAR AND VHF INTERFERENCE CARRIED OUT BY THE UK MARITIME COASTGUARD AGENCY AND THE PORT OF LONDON AUTHORITY

From a report compiled by BEWA; DTI; MCA and Port of London

Trials carried out by the above agencies to assess the problems that might be expected by the proliferation of marine based wind farms. The tests were carried out using the vessel *Morven* which is AIS equipped.

The data collected during these trials and the preliminary analysis of the effects observed have proved to be of great value when considering the navigation of vessels within and near to wind farms. The important aspect of the research was the real environment in which it took place. The trials not only involved a sizeable and varied sample of commercial shipping, navigators, VTS and Pilots but it also involved leisure and small commercial craft. The scenarios of passing shipping and other contacts in and close by the wind farm were all covered to varying extents.

From the trials and discussions with mariners it was seen that:

• Mariners passing the Kentish Flats through a pilotage area were aware of the types of effect that was evident but stated that, in the circumstances of these trials; they were of little direct concern to them;

• The phenomena detected on marine radar displays in the vicinity of a wind farm can be produced by other strong echoes close to the observing ship, although not necessarily to the same extent. Trained mariners will recognise and understand the causes of these effects;

• Reflections and distortions by ship structures and fittings created many of the effects observed leading us to conclude that the strong returns from the wind farm was highlighting some vulnerabilities in ships' radar scanner installations;

• The effects observed were transitory in relation to the speed of the vessels passing the wind farm site;

• The spurious echoes were frequently generated by ship's structures and fittings combined with the reflecting qualities of the turbines;

• Other effects were produced by the inherent limitations of marine radar systems combined with the reflecting qualities of the turbines;

• In the circumstances in which these trials were conducted, navigators were able to effectively track other vessels from both within and behind the area of the wind farm;

• Selected small craft operating in and near the wind farm were detectable by radar on ships operating near the array. The return signals appeared to be relatively unaffected by passing through the array although normal or automatic gain levels could eclipse very small targets;

• Echoes of small craft within the wind farm can merge with strong echoes generated by the turbines when the craft pass close to the towers making them invisible to radar observers or automatic plotting facilities. While navigating, this effect will only be temporary until the craft moves away from the turbine;

• Small craft operating within the wind farm array were less detectable by type approved, or non-approved, radars on other vessels when the latter were operating within the array. This appeared to be due to enhanced effects from the close approach to the turbine towers and the reflective effects caused by them. Careful adjustment of Gain could improve detection but skill was required on the part of the operator;

• The Spaniard Buoy was used as a reference target by observers and it was also notable that when on the opposite side of the wind farm array the quality of its returned echo did not appear to be adversely affected;

• Pilots were aware of possible interference but most have not to date found cause to analyse it more closely. Like the other mariners who were familiar with the area and the effects of the wind farm they were relatively unconcerned with them in their present form and position. However, some expressed concern at the possibilities if wind farms were sited closer to regular routes and particularly in way of channel junctions or routes through multiple wind farms

• Modern commercial cargo vessels in particular are regularly fitted with radar scanners that may not be optimally sited in relation to obstructions on board the vessel and other considerations;

• VTS static radars can be subject to similar phenomena as above, (even when the scanner is sectored) if passing vessels provide a suitable reflecting surface; and

• AIS equipped vessels did not suffer loss of signal at any point outside or within the wind farm *****

WORLD'S LARGEST IN 2010

1. Knock Nevis - World's Largest Ship Ever Built

With an impressive length of 458.45 m (1,504.10 ft), the super tanker Knock Nevis was the longest ship ever built.

Features

It possesses the greatest deadweight tonnage ever recorded.
Its displacement tonnage was 646,642 tons making it the heaviest of any ship of any kind.
It is generally considered the largest ship ever built.
It has a fully laden draft of 24.6 m (81 ft)
If fully loaded, it is unable to navigate the English Channel, the Suez Canal or the Panama Canal
It was the longest ship ever constructed, larger than the Petronas Twin Towers in Kuala Lumpur, Malaysia
It's the 5th largest ship in term of gross overall tonnage – 236,710 GT.
Its length is 458.45 m, a beam of 68.8 m, a draught of 24.611, and a depth of 29.8 m.
It has a capacity of 564,763 DWT and can attain a speed of 16 knots.

2. TI Class – World's Largest Double-Hulled Supertanker

With length of 379 metres, the ultra large crude carriers TI Class of Ships are the four largest double-hulled supertankers in the world. The class comprises the ships TI Africa, TI Asia, TI Europe and TI Oceania (TI – Tankers International).

Features

It is the world's largest ocean going ships as of 2004.
The class was originally named the Hellespont Alhambra, Hellespont Fairfax, Hellespont Metropolis and Hellespont Tara.
These oil tankers were constructed in South Korea in 2002/3.
It can attain a speed of 17.5 knots faster than the Knock Nevis
It has a length of 379 m, a depth of 34 m, a breath of 68 m and a draught of 24.5 m.

- It has a capacity of 441,585 DWT, 3,166,353 barrels (503,409,900 l).

3. MSC Fantasia _ Europe's Largest Ship

With a length of 333.30 metres, MSC Fantasia, a Fantasia Class cruise ship, is the largest passenger ship ever constructed for a European ship-owner.

Features

The cost of this ship is $550 million
It has 14 elevators
Its over-all length is 333.30 m or 1,093.5 ft
Its beam is 37.9 m and with a draft of 27.7 m.
It has 18 decks, 13 of which are passenger decks
It can attain speed of up to 23 knots or 43 kph
It can accommodate 3,900 passengers.
It has 1,313 crews
It has a restaurant for suite occupants only, a casual buffet eatery, 2-level main dining room, Tex-Mex Restaurant and Italian panoramic specialty restaurant.
It has a 1,700-seat show lounge, nightclub, library, card room, Internet centre, shopping gallery and Monte Carlo Casino for entertainments.
It has a spa with a total area of 16,000 sq ft or 1,500 m2
It has a beauty salon, treatment rooms, gymnasium with ocean views and thermal suite
It has 4 swimming pools, 1 of which can be covered by a sliding glass dome.

It has deck quoits, shuffleboard courts, tennis and basketball court, mini-golf and a jogging track.

4. Batillus – World's Largest Self-Propelled Object Ever Constructed

The supertanker Batillus with a length of 414.2 metres is **volumetrically** the world's largest self-propelled object ever built. It was constructed in 1976 together with her sister ships Bellamya, Pierre Guillaumat and Prairial.

Features

It is the world's 2nd biggest ship
Although 2nd largest in term of size, it's the world largest by gross tonnage.
It has a beam of 63.01 m, a draft of 28.5 m.
It has a deadweight tonnage of 553.662 t, and gross tonnage of 273.550 t.
It can attain a speed of 16.7 knots or 30 kph
It consumes about 330 tonnes of heavy oil per day and fuel enough for 42 days.

5. MSY Wind Surf – World's Largest Sailing Vessel

MSY Wind Surf, together with other cruise ships of Windstar Cruises, is notable for its modern computer-controlled sailing.

Features

With a length of 187 metres, it's the world's largest sailing vessel.
It is 5-masted motor-sailer type of ship

6. Emma Maersk – World's Largest Container Ship

The container ship Emma Mærsk, with a length of 397 metres, is the world's is the largest container ship ever built.

Features

With her 7 sister ships, they are the longest container ships constructed and the longest ships currently in use.
It is capable of carrying 15,000 twenty-foot equivalent units (TEU).

Emma Maersk and her sisters, has a gross tonnage of about 170,000 gross tons.
It has a beam of 56 m, a draft of 15.5 m and a depth of 30 m
It can attain a speed of 25.5 knots or 47.2 kph.

7. MSC Beatrice – World's 2nd Largest Capacity

The 366.1 meter long MSC Beatrice is a container ship that has the second largest capacity in the world. It has a maximum capacity of 13,798 TEU (empty containers), or 10,500 TEU (14t each). Emma Maersk, the world's largest container ship, has a capacity of 15,500 TEU (12,000t for both ships)

Features
It is the 2nd ship of the 8th MSC Daniela Class vessels.
It has a beam of 51 m, and a draft of 15 m.
It can attain a speed of 25.2 knots or 46.7 kph.
It is operated by 30 crews.

8. USS Enterprise – World's Largest Aircraft Carrier

With a length of 342 metres, the USS Enterprise is the largest naval vessel in the world. It is also the first nuclear-powered aircraft carrier in the world. This single ship class is nicknamed 'Big E'. Enterprise, with 51 years of continuous service, is the second oldest vessel still in commission in the US Navy.

Features
It is set to retire in 2013.
Its replacement is the USS Gerald R. Ford.
Its beam is 40.5 metres and the draught is 12 metres.
It has a speed of 33.6 knots or 62.2 kph.
It is operated by 2,700 sailors, 150 chiefs and 150 officers.
It has about 1,000 km of electrical cables and 60 km of ventilation ducts.

9. Oasis Class – World's Largest Cruiser/Passenger Ship

With a length of 360 metres, the Oasis Class is the world's largest passenger ships. Oasis of the Seas was completed and delivered on October 28, 2009 and Allure of the Seas is under construction and is expected to be completed by late 2010.

MS Oasis of the Seas

The 360 meter-long MS Oasis of the Seas is the world's largest passenger. It is owned and operated by Royal Caribbean International.

Features
It has a two-story loft suites and luxury suits with balconies overlooking the sea
It has a zip-line, a casino and a mini-golf course.
It also has multiple night clubs, several bars and lounges, a karaoke club and a comedy club.
It has 4 swimming pools, volleyball and basketball courts, theme parks and nurseries for children.
It will house the first living park at sea with over 12,000 plants and 56 trees.
It has a capacity of 225,282 GT.
Its beam is 47 metres and its height is 72 metres.
Its draught is 9.3 metres and its depth is 22.55 metres.
It can attain a speed of 22.6 knots or 41.9 kph.
It can accommodate 5,400 passengers double occupancy; 6,296 total.
It is operated by 2,165.
Its cost is US$1.4 billion.

MS Allure of the Seas

MS Allure of the Seas is the sister ship of MS Oasis of the Seas. It will be 360 metres or 1,181 feet long and will have a tonnage of 225,282 tons. Her maiden voyage will be in 2010.

Features

It can accommodate 5,600 people.
Its beam is 47 metres and a height of 72 metres.
Its draught is 9.3 metres and its depth is 22.55 metres.
It has 16 passenger decks and has a speed of 20.2 knots or 37 kph.

10. MS Berge Stahl – World's Largest Bulk Carrier Ship

With a length of 343 metres, the MS Berge Stahl is the world's largest bulk carrier ship. This huge iron ore carrier is registered in Norway.

Features

It has a capacity of 364,767 metric tons (DWT).

It has a beam or width of 65 metres and a draft or depth in the water of 23 metres.

It has a top speed of 13.5 knots or 25 kph

It can only tie up at two ports (Terminal Maritimo de Ponta da Madeira in Brazil and Europort in the Netherlands.

11. Iowa Class Battleships – World's Largest Battleships

The Iowa Class Battleships were a class of six US Navy fast battleships which operated in the Pacific Theatre of World War II. Four were completed in the early- to mid-1940s; two more were laid down, but they were cancelled prior to completion and eventually scrapped. The Iowa class was the final class of U.S. battleships to be built.

Features

Members of the class includes the USS Iowa, USS New jersey, USS Missouri, USS Wisconsin, and the cancelled Illinois and Kentucky.

It's the only remaining battleship class currently in existence that can be reactivated.

These battleships were seen in action during the World War II, the Korean War, the Vietnam War and the Gulf War.

Its primary armament is nine 16-inch (406 mm)/50-caliber Mark 7 naval guns.

It holds the record for the longest ranged straddle in history when USS Iowa engaged and hit the Japanese destroyer Nowaki at a distance of 32.6 km off Truk Atoll on February 16, 1944

Its length is 262.5 metres with a beam of 33 m and draft of 11 m.

It can attain a speed of 35 knots or 65 kph

12. Kirov Class Battlecruisers – World's Largest and Most Powerful Surface Combatant Warships

With a length of 252 metres, the Kirov Class Battlecruisers of the Russian Navy are the largest surface combatant warships. It is also the most powerful surface combatant warships currently in active operation in the world. These over-sized guided missile cruisers or battlecruisers has a speed of 32 knots or 37 kph.

Features

Its beam is 28.5 metres and its draft is 9.1 metres.

Its main weapons are 20 x P-700 Granit Shipwreck missiles

Its other weapons include the automatic 130 mm AK-130 gun system, 40 anti-submarine rockets and 2 six-tube launchers

Kirov is its flagship, the second vessel in the class is Frunze, the 3rd is Kalinin and the 4th is Yuri Andropov.

13. Wasp-Class Amphibious Assault Ships – World's Largest Amphibious Assault Ships

With a length of 257 metres, the Wasp-Class Amphibious Assault Ships of the US Navy are the world's largest vessels of this type in service. They are designed to land forces on hostile shores.

Features

It has an air group of helicopters that are used to ferry Marines and equipment to the shore from the ships.

Up to 20 Harriers can be embarked when the ship is used as a temporary STOL or "Harrier Carrier."

Each Wasp-class warship has a hospital with 600 patient beds and six operating rooms.

Its beam is 32 metres.

It can attain a speed of 20 knots or 37 kph

It is operated by 104 officers and 1,004 enlisted men.

It carries 6 AV-8B Harrier II attack aircraft, 4 AH-1W SuperCobra attack helicopter, 12 CH-46 Sea Knight helicopters and 4 CH-53 Sea Stallion helicopters.

14. RMS Queen Mary 2 – World's Largest Ocean Liner

The transatlantic ocean liner RMS Queen Mary 2 is the world's largest ocean liner with a length of 345 metres. It is the flagship of Cunard Line and was the longest, widest and tallest passenger ship ever built at the time of its construction in 2003. It was also the largest by gross tonnage – (GT) of 148,528 tons.

Features

It has 15 restaurants and bars

It has 5 swimming pools, a casino, a ballroom and a theatre

It has the first planetarium at sea.

It has a maximum speed of 29.62 knots or (54.86 kph), much faster than most other passenger ships.

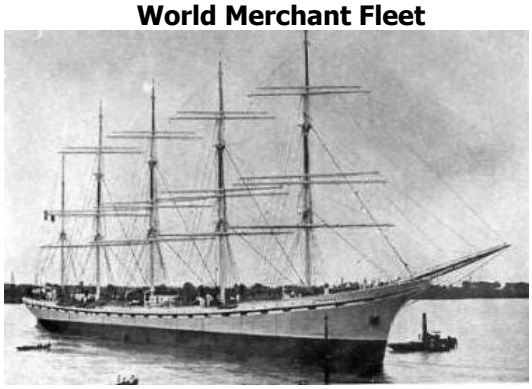
It has a beam of 41 m, a waterline of 45.0 m, an extreme (bridge wings), a height of 72.0 m and a draught of 10.1 m.

It has a total of 17 decks, 13 of which are passenger decks.

It can accommodate 3,056 passengers.

It is operated by 1,253 officers and crews.

15. France II - Largest Sailing Ship in the World Merchant Fleet



The French sailing ship France II, with a length of 146.5 metres, was the largest sailing ship in the world merchant fleet ever built. It was an extremely huge ship of 5,633 GRT. It is one of the most elegant sailing cargo carriers

Features

It had a huge sail area of 6,350 m² [68,350 sq ft].
Its displacement was 10,710 t (10,541 tons
It can carry 7,300 tons of cargo.
It had a beautiful lounge equipped with piano and precious furniture.
It has a beam of 55.65 ft (16.96 m) and a height of 211.6 ft (64.5 m)
It had 7 first class passenger cabins, library, darkroom, seawater therapy equipment.

16. Royal Clipper – World's largest Square-rigged Ship

The Royal Clipper, a steel-hulled five masted fully rigged tall ship used as a cruise ship with a length of 133.8 metres, is recognized by the Guinness World Records as the world's largest square-rigged ship in service.

Features

Star Clippers claims that she is the largest "true sailing ship" built since Preussen.
It has a beam of 16.5 m and a draft of 18.5 m.
It has 42 sails and a sail area of 56,000 ft² or 5,202.6 m².
It has 2 Caterpillar 3516 diesel engines.
It has a capacity of 227 passengers and operated by 106 crews.

17. M/Y Eclipse – World's Largest Yacht

The luxury yacht M/Y Eclipse with a length of 170 metres, is the world's largest private yacht ever constructed.

Features

It is 11 metres longer than the world's previous largest yacht Dubai.
Its total is $1.2 billion or 800 million euros.
It has two helicopter pads, 11 guest cabins, two swimming pools, several hot tubs and a disco hall.
It is also equipped with three launch boats, and a mini-submarine that is capable of submerging to 50 metres.
Approximately 70 crew members are needed to operate the yacht.
It is fitted with intruder detection systems and a German-built missile defence system. The windows in the master suite and the yacht's bridge are also fitted with bullet-proof glass and both are armour plated.
It is also equipped with an anti-paparazzi shield in the form of lasers that sweep the surroundings, and when they detect a CCD, they fire a bolt of light right at the camera to obliterate any photograph

Read more at:
http://www.bukisa.com/articles/262390_the-knock-nevis-emma-maersk-batillus-uss-enterprise-and-others-the-worlds-largest-ships-ever-built#ixzz14zwiFlG3

In Xanadu did Kubla Khan
A stately pleasure-dome decree:
Where Alph, the sacred river, ran
Through caverns measureless to man
Down to a sunless sea.

Kubla Khan
Samuel T. Coleridge 1772 – 1834

The Theory of Intelligence

"Well you see, Norm, it's like this ... A herd of buffalo can only move as fast as the slowest buffalo,

And when the herd is hunted, it is the slowest and weakest ones at the back that are killed first.

This natural selection is good for the herd as a whole, because the general speed and health of the whole group keeps improving by the regular killing of the weakest members.

In much the same way, the human brain can only operate as fast as the slowest brain cells.

Now, as we know, excessive intake of alcohol kills brain cells. But naturally it attacks the slowest and weakest brain cells first.

In this way, regular consumption of beer eliminates the weaker brain cells, making the brain a faster and more efficient machine.

And that, Norm, is why you always feel smarter after a few beers."

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LYTTELTON TOWN DAMAGE

London Street 23 February

ARK BUILDING IN 2011? EVEN NOAH WOULD HAVE TROUBLE!

In this year of the Lord 2011, the God spake unto Noah, who was now living in Taihape and said: *"Once again, the earth has become wicked and over-populated, and I see the end of all flesh before me. Build another Ark and save 2 of every living thing and maybe include a few good decent-living righteous human couples."*

He then gave Noah the blueprints, saying: *"You have 6 months to build the Ark before I will start a torrent of rain for 40 days and 40 nights."*

Six months later, the Lord looked down and saw Noah weeping in his yard - but no Ark. *"Noah!"* He roared, *"I'm about to start the rain! Hurry up now! Where is the Ark?"*

"Forgive me, Lord," begged Noah, *"but things have changed! I needed a Building Permit. I've been arguing with the Marine Surveyor Inspector about the need for a sprinkler system. My neighbours claim that I've violated the neighbourhood by-laws by building the Ark in my back garden and exceeding the height limitations. We had to go to the Local Planning Committee for a decision. Then the Local Council and the electricity company demanded an inordinate load of money for the future costs of moving power lines and other overhead obstructions, to clear a passage for the Ark's move to the sea. I told them that the sea would be coming to us, but they would hear nothing of it. Getting the wood was another problem. There's a ban on cutting local trees in order to save the local forests and wildlife until Environmental Planning and iwi agree. Next I tried to convince the environmentalists that I needed the wood to save the wildlife - but no go! When I started gathering the animals the RSPCA took me to court. They insisted that I was confining wild animals against their will. They argued the accommodations were too restrictive, that it was cruel and inhumane to put so many animals in a confined space and I was not a fit and proper person to take care of animals. Then the Environmental Agency ruled that I couldn't build the Ark until they'd conducted an environmental impact study on Your proposed flood. I'm still trying to resolve a very complex complaint issue with the Human Rights Commission on how many minorities I'm supposed to hire for my building crew. Immigration is checking the visa status of most of the people who want to work with me. The trades unions say I can't use my sons. They insist I have to hire only Union workers with Ark-building experience. To make matters worse, the Inland Revenue seized all my assets, claiming I'm attempting to try and leave the country illegally with endangered species."*

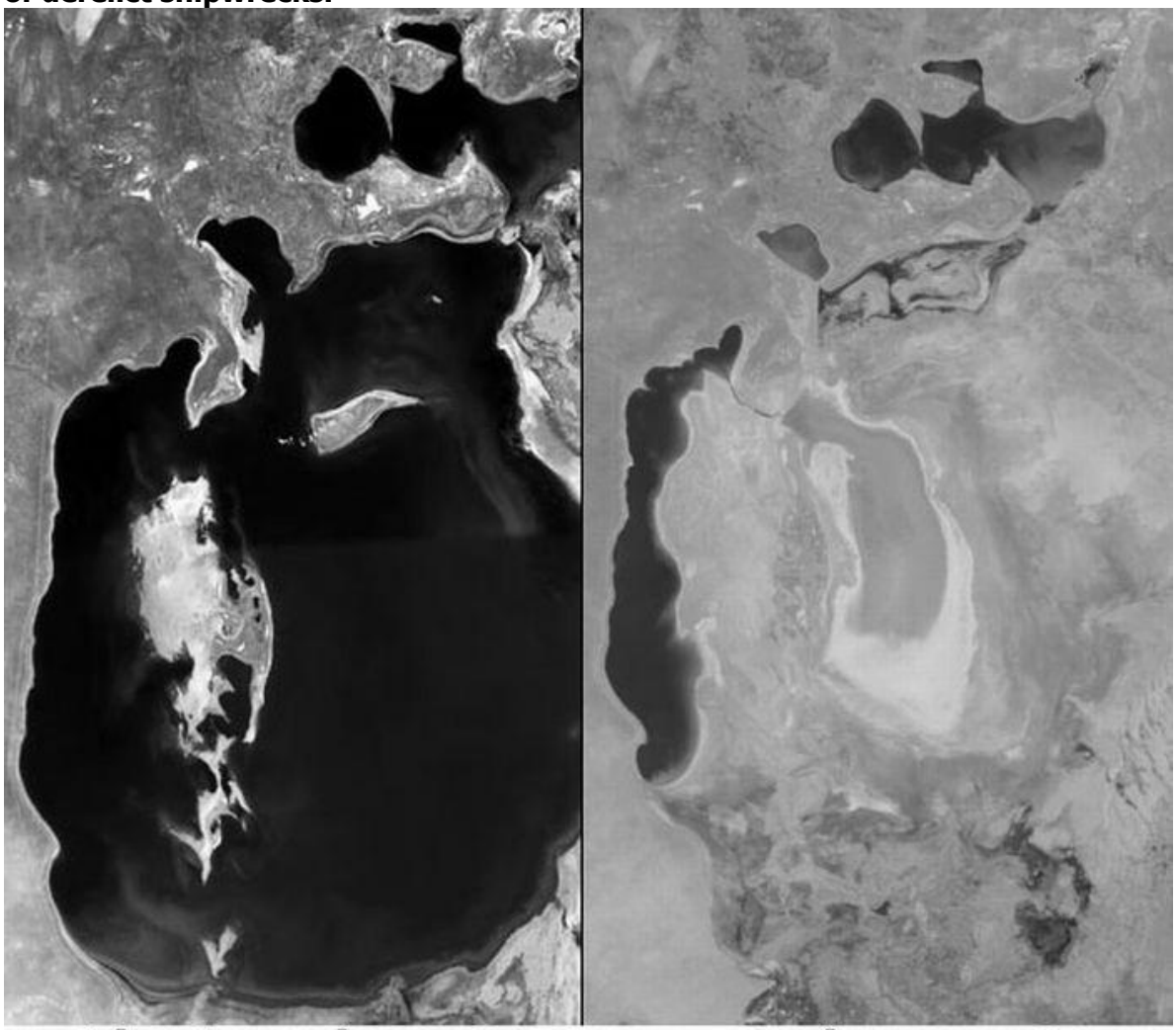
"So, forgive me, Lord, but it would take at least 10 years for me to finish this Ark."

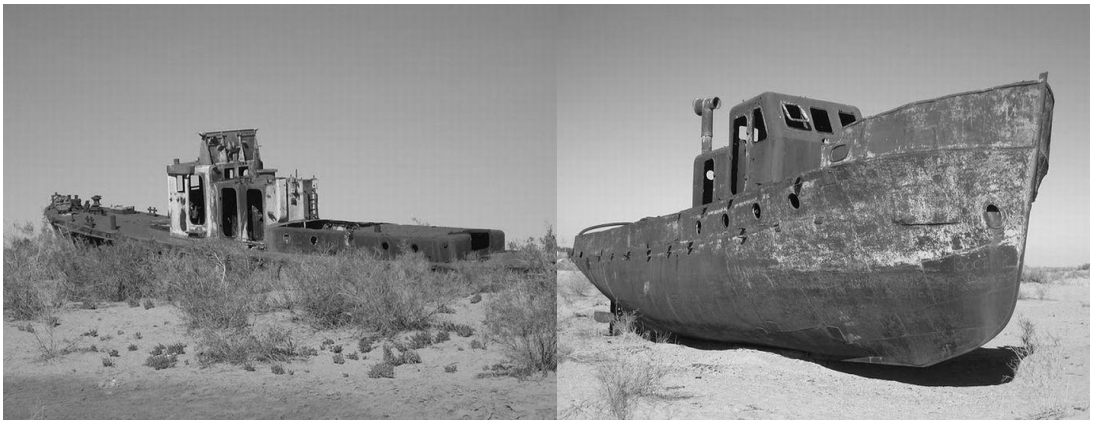
Suddenly the skies cleared, the sun began to shine, and a rainbow stretched across the sky. Noah looked up in wonder and asked, *"You mean you're not going to destroy the world?"*

"No," said the Lord. "The bureaucrats have beaten me to it."

IN MEMORIAM OF THE ARAL SEA??

The Aral Sea was once the world's fourth largest saline body of water. It has been steadily shrinking since the 1960s, after the rivers that fed it were diverted by Soviet Union irrigation projects. And now it's almost gone leaving a desert full of derelict shipwrecks.





EMMA MAERSK CLASS

The Emma Maersk(shown below) , part of the Danish line, runs from Rotterdam - Asia – Europe – via Suez –Shanghai – USA. She is one of 5 ships in this service with others commissioned to be completed in 2012

The fleet are named or will be named Ebba; Edith; Eleonora: Elly; Emma; Estella; Eugen; Evelyn.

These ships were commissioned in agreement with Wal-Mart to transport their goods purchased from China. They hold an incredible 15,000 TEU and have a 207 foot deck beam!! The full crew is just 13 people on a ship much longer and wider than a US Aircraft Carrier (which has a crew of 5,000). She is not Panama capable and is therefore, unable to transit the Panama. In any case her schedule is strictly trans-pacific.

The goods arrive 4 days before the typical container ship (18-20 knots) on a China to- California run. 91% of Walmart products are made in China. So this behemoth is hugely competitive even when carrying perishable goods.

These ships are built in five sections. The sections floated together and then welded together.

Length : 1,302 ft Beam - 207 ft
Net cargo: 123,200 tons
Engine: 14 cylinders in-line 110,000 BHP diesel engine.
Cruise Speed: 25.5 knots
Cargo capacity: 15,000 TEU
Crew: 13 souls

Construction cost - US $145,000,000+
Silicone painting applied to the ship bottom reduces water Resistance and saves 317,000 gallons of diesel per year.

The command bridge is higher than a 10-story building and the vessel has 11 cargo crane rigs that can operate simultaneously unloading the entire ship in less than two hours.

A recent documentary in late March, 2010 on the History Channel noted that most of these containers are shipped back to China empty. Little or nothing goes back west and the ships return light to Asia. Perhaps one may see a reason in this as to why China's commerce and financial power waxes while the United States of America's wanes as more and more of the USA's financial investment in infrastructure and manufacturing capacity is moved offshore for economic reasons.
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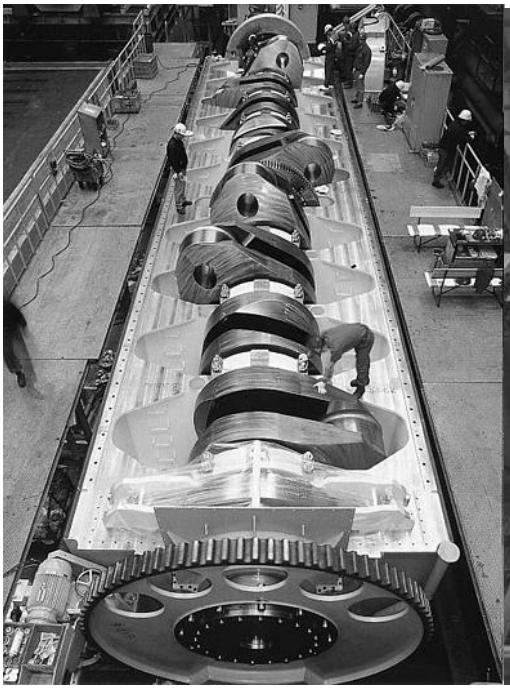
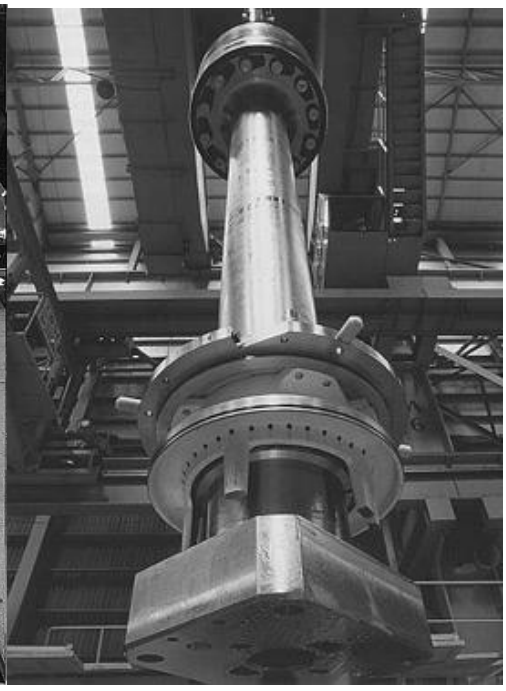




Crank shaft 300 tons

Pistons 20 tons

The Emma Maersk was retro-fitted with a Wartsila-Sulzer RTA96-C turbocharged two-stroke diesel engine. It is the most powerful and most efficient prime-mover in the world today. The Aioi Works of Japan's Diesel United, Ltd built the first engines and is where some of these pictures were taken. It is available in 6 through 14 cylinder versions, all are inline engines. These engines were

Designed primarily for very large container ships. Ship owners like a single engine/single propeller design and the new generation of larger container ships needed a bigger engine to propel them. The cylinder bore is just less than 38" and the stroke is just over 98". Each cylinder displaces 111,143 cubic inches (1820 litres) and produces 7780 horsepower. Total displacement comes out to 1,556,002 cubic inches (25,480 litres) for the fourteen cylinder version

EMPATHY WITH THE CITIZENS OF CHRISTCHURCH AND OUR JAPANESE FRIENDS AND COLLEGUES

Christchurch New Zealand

Tohoku Japan

The members of the New Zealand Company of Master Mariners share their condolences with the families who suffered the horrors of the both earthquakes in Christchurch and the earthquake and the catastrophic tsunami that hit Japan nearly two weeks ago, especially those in north-eastern Japan's Tohoku region. We extended the Company's deepest sympathies to those who lost family and friends in the disasters.

Members at all four of the Company's Branches maintained a period of standing silence in respect. In the traditions of the Merchant Service the Company stands ready to offer such assistance as may be requested. In addition a host of countries have offered their expertise and technology to Japan to assist the continuing struggle to contain the Fukushima nuclear crisis, which has raised concerns over the safety of nuclear power.

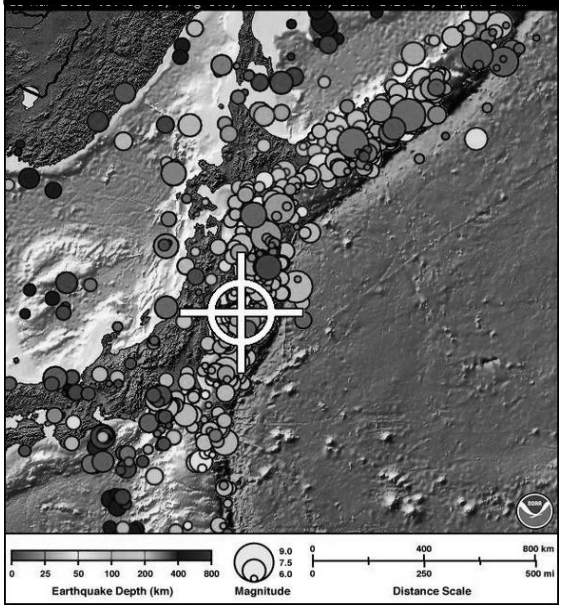
Both New Zealand and Japanese flags were at half-mast in New Zealand and aboard Japanese and local ships for several days to mourn victims of the tragedies that hit the island nation this month. Citizens of this country, ordinary New Zealanders have been visiting the Japan consulate offices to sign a book of condolences for disaster victims. We are aware that the disaster that hit Christchurch earlier in the month which, although close to home and costing some 180 lives is globally less significant in comparison with the catastrophic Japanese quake and tsunami that has cost perhaps, over 10,000 lives.

The New Zealand Company of Master Mariners has association links with the Japanese Captains Association and have always had great respect for the competence and professional approach to the maritime ethic of our brother Japanese marine officers.

May those deities and spirits we hold dear in our various ethics come now to comfort and succour those needful at this time.

Unbelievable infrastructure carnage. 82 metre cargo vessel stranded in the main street of Tohoku

JAPAN'S FISHING INDUSTRY IMPACTED BY EARTHQUAKE AND TSUNAMI



Japan earthquake 11/03/11
Pacific Tsunami Warning Centre

According to Japanese media, the earthquake and subsequent tsunami of 11 March have decimated the fishing industry of Kesennuma Port in Miyagi Prefecture. The waters of the Sanriku coast are renowned as one of the world's richest fisheries, and its high-tech port was home to small local boats and a fleet of deep-sea boats that generally range hundreds of kilometres offshore.

The city's fish market, which handled 22.5 billion yen ($278 million) worth of fish in 2010 is destroyed and its wharf is strewn with smashed boats and cars. Most of the city is a wasteland. Hundreds of workers are without their boats and their jobs, while fuel, refrigeration and a lack of facilities mean everything is on hold. All parts of the industry are at a standstill, including catching fish, unloading, processing and delivering products to consumers. The tsunami washed away fishing boats and oyster farms, and many fishermen and fish farmers are now seeking refuge in evacuation centres.

The tragic tsunami and earthquake have paralysed the local fishing industry. The wharfside offices of many of the wholesalers who used to buy the fish and sell it to retailers have been smashed by the tsunami, and, even if fishermen are able to get out to sea, the fish markets and wharves in many ports are out of action.

Miyagi Prefecture boasts other prominent fishing ports, including Onagawa, Ishinomaki and Shiogama, and had the largest catch of any prefecture on Japan's main Honshu island before the earthquake. But a fisheries cooperative association executive was quoted by Asahi.com as saying the city and Japan could not exist without its fleet.

In 2009, the total catch from fishing and fish farms reached 79.1 billion yen, the fourth largest in Japan as a whole. Its fisheries processing industry produced 281.7 billion yen in 2007, the second most in the country. The Great East Japan Earthquake has brought the industry to its knees. Miyagi Governor Yoshihiro Murai said the prefecture's fishermen and fishery companies would have to start again from nothing. The rest of Japan, and international markets, will soon feel the impact.

The Tsukiji fish market in Tokyo handled only 1,639 tons of seafood transactions on Saturday, about 30 percent less than at the same time last year. Major supermarkets have been unable to buy seafood from the Tohoku region. For the time being, fresh fish are likely to be replaced by imported, dried and frozen products in shops.

Dynamic evidence two stories high.

RELIANCE ON AIS BLINDS FERRY MASTER TO SAFETY RISK

River Mersey collision a reminder of the importance of bridge management

Jeffrey Thomson

Wednesday 19 January 2011

MR JUSTICE Teare's recent Admiralty Court judgment is a salutary reminder of the importance of proper bridge management and effective radar watchkeeping in conditions of restricted visibility.

On February 3, 2007, bulk carrier *Alaska Rainbow* was waiting to enter Alfred Lock on the west side of the River Mersey.

Sea Express 1, a catamaran ferry crossing from the Isle of Man, was inbound with the tide in the narrow river waters.

Heavy fog restricted visibility. Both vessels were equipped with radar and automatic identification systems (AIS), and were in contact with Mersey vessel traffic service.

The bulker announced to Mersey Radio that it was stemming the tide near the lock entrance. Mersey Radio repeated this information twice.

In fact, *Alaska Rainbow* failed to stem the tide and 'snaked' back and forth across the river.

Three other inbound vessels, including a tanker behind which the ferry was maintaining station, had to alter course to pass close by the bulker, which had strayed far into the channel.

The ferry, under the command of a master under examination, detected a large radar target ahead 1.6 miles distant.

The AIS identified *Alaska Rainbow's* two tugs, but not the bulker itself. When the cursor was again placed over the echo, now six cables distant, AIS still failed to identify the bulker and showed the target heading off towards the west bank.

In fact, *Alaska Rainbow* had moved back towards mid-channel. *Sea Express 1* sighted the forward tug and then the bulker when they were only about 50 m away. They collided, causing the ferry serious damage.

The judge found the bulker at fault in not returning to anchorage when it became a hazard to inbound ships. It should have monitored *Sea Express 1* and given warnings, sounded fog signals and kept clear of the inbound channel.

Having announced, misleadingly, that it was stemming the tide out of the fairway, *Alaska Rainbow's* conduct was seriously culpable and a potent cause of the collision.

However, the judge was also heavily critical of the ferry. He found that a proper radar and aural lookout would have identified a large vessel under tow ahead, although the AIS had failed to do so.

He criticised the speed increases to keep station behind the tanker, and the failure to adequately monitor *Alaska Rainbow's* echo, holding — while not applying the 'last opportunity rule' — that the bulker crabbing back across the river should have been detected in time to be avoided.

In another collision case, Mr Justice Steel indicated: "The primary instruments for safe navigation must remain an alert and systematic visual and radar lookout. Information derived from AIS may be erroneous."

Referring to VHF, one commentator foresaw "… a situation where AIS becomes a similar distraction".

The present case fulfilled this prophecy. The master under examination, having failed a berthing assessment the day before, prioritised navigating the vessel over ensuring a proper radar watch. Reliance on AIS made him blind to Alaska *Rainbow's* presence.

Justice Teare faulted the allocation of both command and watchkeeping duties to a single officer, contrary to good bridge management practice.

Good practice would have led the master to abort the rating examination once heavy fog was encountered, or, at the very least, to employ the chief officer to ensure an effective radar watch.

These errors proved costly for *Sea Express 1*: pursuant to the Merchant Shipping Act 1995, section 187(2), liability was apportioned equally between the vessels.

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WHALING COLLISION 'FAULT OF BOTH SIDES'

November 2010.

The collision between a Japanese whaling vessel and a high-tech protest boat off Antarctica was the fault of both captains, New Zealand has ruled. The 6 January collision cut the bow off the protest boat. But Maritime New Zealand said that there was no evidence either side deliberately caused the collision, instead blaming poor seamanship.

It occurred as protesters from the Sea Shepherd environmental group sought to thwart Japan's annual whale hunt. Japan abandoned commercial whaling in 1986 after agreeing to a global moratorium. But it says that whaling is part of its culture and catches hundreds of whales each year as part of what it calls a scientific research programme. Conservationists say the whaling is a cover for the sale and consumption of whale meat. Every year activists follow the fleet to Antarctic waters and attempt to disrupt it.

'Tense environment'

Sea Shepherd had accused the Japanese ship, the Shonan Maru 2, of deliberately ramming its boat, the Ady Gil. The Japanese vessel said the protest boat drove into its path on purpose. The report by Maritime New Zealand said that several incidents in days leading up to the collision had "contributed to a tense operating environment and probable uncertainty over each other's intentions". Poor seamanship on both vessels then led to the collision, it said. "(It) appears to have resulted from a failure by both masters and the crew of both vessels to appreciate and react appropriately to the potential for the collision," the inquiry found.

Japanese officials said they needed to study the investigators' report before commenting. Peter Bethune, captain of the Ady Gil, said the Japanese vessel had "disobeyed all of the rules". A month after the collision, he boarded the Japanese vessel, saying he wanted to protest about the collision. He was then taken to Japan where he spent five months in jail before being convicted of several charges and deported to New Zealand. (BBC)

COLLISION AND ALLISION OF VESSELS

Euclidean Law: No two bodies shall occupy the same space, on the same plane. at the same instant.

Collision: the impact of two vessels both of which are moving

Allision: the striking of a moving vessel against one that is stationary.

Force majure: irresistible compulsion or coercion or unforeseeable course of events.

CASES OF COLLISION

Culpable Fault: Due to the fault, negligence or lack of skill of the captain, sailing mate or the complement of the vessel - ship owner liable for the losses and damages.

Fortuitous Fault: Due to fortuitous event or force majeure - each vessel and its cargo shall bear its own damages

Inscrutable Fault: It cannot be determined which of the 2 vessels caused the collision - each vessel shall suffer its own damages, and both shall be solidarily responsible for the losses and damages occasioned to their cargoes

Error in extremis: Where a navigator, suddenly realizing that a collision is imminent by no fault of his own, in confusion and excitement of the moment, does something which contributes to the collision or omits to do something by which the collision might be avoided, such act or omission is ordinarily considered to be in extremis and the ordinary rules of strict accountability does not apply.

OOPS!