



South African Institute of Marine Engineers and Naval Architects

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Two Oceans Journal October 2010 Edition



**MARINE ENGINEERS AND
NAVAL ARCHITECTS**

Welcome to the 2 Oceans Journal - October 2010 Edition.

The opinions expressed in this Newsletter are those of the writers and not necessarily that of SAIMENA.

www.saimena.org.za



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PRESIDENTS REPORT

The long anticipated and planned 2010 World Cup has come and gone. We have a number of Magnificent Stadiums all built by highly skilled engineers who have left their legacy in South Africa.

Congratulations Dick Jenkins on your Ninetieth Birthday what an achievement. South Africa with a population of 45million has 1 engineer for every 3100 of population as compared with Brazil 1 to 300. Enforced registration of engineers should be law within 2 years.

In response to the national need for engineers and learners entering the engineering profession the Engineering Council of South Africa (ECSA) together with 39 recognised Voluntary Engineering Associations of which SAIMENA is one, have committed themselves to address some of these strategic priorities as part of an initiative called Engenius. SAIMENA's representative on the Engenius initiative is Mr. Peter Meredith who is doing a sterling job. Dave Fiddler is SAIMENA's alternative ECSA representative. ECSA has 33,000 registered members. Professional Registered Engineers stands at 1260 of which 210 are candidate engineers.

The Engine room simulator at the Durban University of Technology has been commissioned and has state of the art equipment, I believe the Durban Branch will be paying a visit to DUT early in 2011. The South African Maritime Training Academy in Simon's Town may be commissioning a Voith Propulsion simulator shortly.

We shall again be donating Marine Engineering Books from the Bill Singleton fund to the libraries of both C.P.U.T. & D.U.T. Both Institutions are experiencing a dire need of Marine Engineering lecturers, if there are any retired engineers who would like to pass their knowledge on, your services will be most welcome. We also require mentors for student engineers.

DUT is in the process of preparing the new course design and material for a Diploma in Marine Engineering. This is intended to be a three and a half year programme with five semesters of academic studies and one year of work-integrated-learning which would include all the workshop modules and industrial experience facilitated by partners in industry.

Council have decided to re-introduce a student grade at a nominal fee of R20.00 per annum we would like to attract more students and younger members to SAIMENA. It has become difficult to get student marine engineers sea time, in the traditional shipping lines of Safmarine and Unicorn, who have flagged most of their vessels under foreign registration. The oil industry is experiencing phenomenal growth; this should create opportunities in other areas.

In closing please assist our able editor Ralph Baker with any interesting articles or snippets of information which you may have.

Dick Shaw President



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EDITORS PAGE

I am beginning to get the hang of this publishing business which becomes easier as I gain confidence in surfing the net. I know it is not original material to those members who have the time and inclination to surf but I strongly suspect that many of those members who are working do not have the time, and those who are retired, seldom have the inclination. It can also be a great time waster and often very frustrating. I am not saying this to justify the printed version of the Journal as opposed to an electronic version but I hope you find an interesting mix of articles that can be read at one's leisure.

I am currently sending all the Journal articles to the SAIMENA website manager for inclusion in the website after the journal has been published, if he thinks fit.

The cost of each Journal, including postage is about R20.00 and increasing. I am under pressure to break even with the costs and with our industry in recession I need additional advertisers. If anyone knows of potential advertisers please put me in contact with them!

Take Care! Ralph Baker



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CHAUNCY MAPLES

EDITORS NOTE

This great little . . .

The Chauncy Maples

www.chauncymaples.org



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THE DANGERS OF ENTERING CONFINED SPACES

Although highlighted in a previous edition of this Journal the high fatality rate due to this hazard should be a matter of grave concern to all seagoing and ship repair personnel. A repetition of this subject is considered prudent.

It is not easy to identify hazardous spaces on ships as any space that is subject to corrosion can result in oxygen deficiency due to the oxidation process. In a similar manner, small store rooms, chain lockers, mast houses and a multitude of similar spaces can become death traps.

In one of IMO's Sub-committee reports in 2009 it is recorded that in an 11 year period the number of confined space casualties 93 fatalities, 9 of which were during rescue attempts.

The IMO defines an enclosed space as one with any of the following characteristics:-

- a. Limited openings for entry and exit
- b. Unfavourable natural ventilation; and
- c. Is not designed for continuous worker occupancy.

The list goes on to provide a non-exhaustive list in five categories:

- 1) Cargo tanks, cargo holds (according to the cargo carried), sewage tanks, food waste tanks, fuel tanks, double bottom tanks, cofferdams, chain lockers, void spaces, duct keels, inter-barrier spaces,
- 2) Trunks and access ways connecting to cargo holds,
- 3) Pump rooms, compressor rooms, mast houses,
- 4) Engine crankcases boilers, engine scavenge air receivers,
- 5) Open deck spaces can be hazardous when structures create "still air zones"

Increasing emphasis is placed on evaluating the risk and conducting a risk assessment where there is the slightest possibility of encountering a hazardous situation. It has been suggested that a risk assessment should be carried out to identify all spaces on board which would meet the definition of an enclosed space.

The South African Shipbuilders and Repairers Association handbook "Code of Practice Ship repair (COP's) Section S71 devotes a section to this hazard.

The following checklist has been compiled by IACS for the guidance of Surveyors. It should be stressed that we expect that Surveyors to be fully aware of the risk involved.

When Ship Repair Safety Officers permit workers to enter hazardous spaces they must be entirely satisfied that all the recommendations are strictly complied with and it is safe to permit the workers to enter the space.

In issuing the permit they accept a very high degree of responsibility for the lives of the workers.

CHECKLIST FOR ENTRY INTO CONFINED SPACE

DO NOT ENTER A CONFINED SPACE UNTIL YOU HAVE CONSIDERED EVERY QUESTION AS WELL AS ANY OTHER ITEM OF CONCERN AND HAVE DETERMINED THE SPACE TO BE SAFE.

THE FINAL DECISION IS YOURS.

1. SAFETY MEETING

YES/ NO Safety meeting is carried out prior to survey to discuss all aspects of safety measures?

YES/NO Will someone accompany you into the space?



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THE EXPANDED PANAMA CANAL

DESIGN FOR A NEW ERA

The opening of the Panama Canal in 1914 revolutionised both world trade and ship design. A century later, a major expansion of this key conduit is poised to do so once gain.

THE EXPANDED PANAMA CANAL,

Scheduled to open in 2014, will dramatically reshape ship classes, trade routes and ports. With ships more than twice as big as today's passing through the transcontinental shortcut – and more quickly – the business possibilities are vast. The time to gear up for this new era is now, say two Wärtsilä experts. “Those who build big new ships that can pass through the new canal first will have a cost advantage,” says Oskar Levander, Head of Conceptual Design, Wärtsilä Ship Power. “The bottom line is that you might as well design your new ship to fit the New Panama canal lock dimensions; otherwise the ship should be clearly bigger than a New Panamax (NPX) vessel to be commercially viable. There's simply such huge value in having a ship that can pass through the Panama Canal.”

The industry is reacting slowly though, he says. “As with emissions regulations, they only react at the last minute; then there's a hectic rush!”

“By and large, the shipping industry is not susceptible to long-term planning and rational analysis,” agrees Lars Anderson, Vice President, Merchant, Wärtsilä Ship Power. Despite the lingering impact of the financial crisis, he is urging customers to begin actively preparing for the new realities of post-2014 shipping. Naturally, the impact of the expansion will vary greatly in different business sectors, ship classes and regions.

Tankers and containers first

For existing ships, the biggest immediate impact will be on tankers and container ships. Many vessels that are now too big will suddenly gain the Panama Canal as an option.

“In container traffic, the impact will be immediate except for some very large vessels,” says Anderson. “Most of the recently ordered 12,000 TEU-class ships will probably be able to pass through and NPX container vessel designs are being established at major shipyards.”

“We'll see a clear new class of NPX container vessels,” agrees Levander. “Most Panamax vessels are now 3000–4500 TEU, whereas NPX will be up to 12,000 TEU” – three or more times as big.” “The old narrow panamax class, which carry unnecessary ballast for sufficient stability might become uncompetitive with the introduction



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AROUND THE PORTS

DURBAN

The recent drought has extended into the ship repair business and the dreaded words "Short time" are often heard being whispered in the empty workshops. The rains have at last come and let's hope the situation improves. There have been two interesting vessels under repair this quarter:- The Pompei and the Hospital ship..... See page 30

CAPE TOWN.

Both Dry-Docks and the Synkro Lift have been busy, maintenance of the aging facilities remains a problem, a tender is out for the docks to be run by private contractors, I believe Transnet have received a number of bids.

The "F.D.S. Saipem" spent over a month in the Sturrock Dry-dock where extensive repairs were carried out including the overhaul of all the thrusters. The small passenger ship "St Helena" was dry-docked, I.M.S. Engineering completed on site repairs to a main engine bed plate in a record time to enable the ship to remain on schedule.

De Beers are busy docking and re-fitting their vessels it appears as if the diamond market will pick up again.

Damen Cape Town have completed two 40 tonne bollard pull tugs on spec with no buyer to date, no doubt a buyer will be found in an African port or with the oil industry off West Africa.

The container ship "Boundary" was towed into Cape Town by the "Smit Amandla" after an engine room fire off Saldanha Bay.

The "Seli 1" the wreck off Blouberg beach is slowly being cut up for scrap steel with most of the accommodation gone.

Shipping movements in the Port are down it appears as if a number of the Transshipment containers are now being shipped through Coega.

SIMON'S TOWN

On the third of November 1910 HRH the Duke of Connaught opened the East Dockyard at Simon's Town. The centenary will be commemorated with a Navy Band concert in the dock bottom and the launch of a book entitled "Simon's Town Dockyard - the first hundred years". Copies will be available after the 3rd of November.

WALVIS BAY

The Namibian Ports Authority will invest R2.7 billion on upgrading the port over the next four years. The capacity to handle TEU's would increase from 260,000 to 500,000 per annum. Using the existing Trans Kalahari road corridor, cargo can be delivered to Johannesburg within 48 hours of being landed. For cargo from Europe and the America's this is about 4 days less than steaming around the Cape to Durban and then by road to Johannesburg. Consideration is being given to extending the rail link between Gobabis and Lobatse.



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MEMBERSHIP UPDATE

MEMBERSHIP UPDATE

Welcome to new Members

Mr Douglas E Hollis of the SA Navy
Mr R Bartel Pr Eng of Greenways, Strand

We regret to advise the death of Mr Charles Oliver in September.

Mr Ben Curran advises that he is now working as a maintenance Engineer in the Zion Mission at Mthata. He wants to know if this is a first?

WHERE ARE THEY NOW?

Every issue of the Journal results in a few envelopes being returned to me marked "Return to Sender"

This is very wasteful as each Journal, with postage costs about R20-00 and if an alternative address is subsequently found a further R5-00 is spent on the second postage. It would really be appreciated if anyone who knows the current address of any of the following members would email me the amended address.

Lieutenant J H J VanDyk Mr R J Lawson Mr E J Sillifant



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DURBAN UNIVERSITY OF TECHNOLOGY DEPARTMENT OF MARITIME STUDIES

UPDATE NOVEMBER 2010

This department is situated in the faculty of applied sciences and offers opportunities for study in three disciplines; sea-going navigation and engineering plus a qualification for the shore-based sector.

On the engineering side we are just completing the second semester where we have 40 students writing examinations in order to obtain the necessary credits towards obtaining their first certificate of competency (engineer officer in charge of an engineering watch). Just under half of this group are employed in the Transnet National Ports training programme, another small group are employed by Unicorn Shipping and two are with Unical bunkering barges. The remainder will be seeking training berths in order to complete their required sea-time and workshop credits. Also this semester we have had three students studying for credits towards their Chief Engineer Certificate of Competency. During the first semester this year we had a group of 20 students studying towards their Second Engineer Certificate of Competency.

In order to be able to provide an improved instructional and training experience for our marine engineer students at all levels we have commissioned an Engine Room Simulator and this was used for the first time during this semester and has proved itself to be a very useful acquisition. We have six training stations and one instructor station from where it is possible to communicate with all the training stations. Two different ships are provided on this Transas system one has a large two-stroke slow speed engine and the other is fitted with a four-stroke medium speed arrangement driving a controllable pitch propeller.

A work in progress is preparing a new diploma programme specifically for Marine Engineers to provide them with all the credits both in areas of technical and managerial skills that are required today.

We look forward to inviting the Durban branch of SAIMENA to our department in February 2011 in order for them to view the Engine Room Simulator and receive a presentation regarding the programme that is being developed.



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UNUSUAL SHIPS

POMPEI

I recently had the privilege of visiting the POMPEI a 300 DW ton vessel used by dredging contractors for dropping large rocks on to the harbour bed. This vessel has two flat decks athwartships, separated by a deckhouse. Each deck is divided longitudinally amidships by two hydraulically powered scrapers. Large rocks up to a meter cubed are loaded on these decks and transported to the drop site. Propulsion is by two azimuthing Schottles and positioning is assisted by a bow thruster. All three propellers are powered by 2 Caterpillar generators.

When over the site the vessel is positioned with a GPS which holds the vessel in position by using the three propulsion systems above and maintains position to within one meter.

When ready to drop the rocks, two hydraulic rams attached to each of the longitudinal scrapers are pressurised and the scraper pushes the outboard row of rocks overboard. An automatic ballasting system compensates for any listing. The vessel can then be re-positioned and more rocks can be pushed overboard.

Needless to say the wear and tear on the decks is considerable and is a boon to the ship repair industry in these difficult times.



Note:

In April 2009, the Jan De Nul vessel "Pompei" was hijacked by [Somali pirates](#) on route from [Aden](#) to the [Seychelles](#). The ship and its crew of ten were released after 71 days on June 28, 2009, after De Nul had paid 2.8 million Euros, according to media reports.

AFRICAN MERCY

This African Mercy is a Christian Charity hospital ship, full equipped to dispense medical assistance to the public in the ports of Africa. There are six operating theatres on board, an ICU unit, laboratory, radiographic unit, dental surgeries and hospital beds for 76 patients.

The bulk of the crew and the medical staff are volunteers and include 25 families. Schooling is provided for the children on board and some staff work on board for lengthy periods.

The ship is currently laid up for a refit in Durban and amongst other major works all six generators are being replaced with four new Generators. The medical staff are working at medical facilities at Applesbosch, near Tongaat until the refit is completed in December.

Length	152m	Breadth	23.7m
Crew Capacity	474	Cargo Capacity	1724 m3



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RICHARD J. JENKINS ACHIEVEMENTS OF 90 YEARS



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