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**MARINE ENGINEERS AND
NAVAL ARCHITECTS**

*TWO OCEANS
JOURNAL*



Cape Peninsula
University of Technology

Maritime Studies

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CONTENTS*Page No*

COUNCIL 2011/2012	1
CONTENTS.....	1
THE PRESIDENT'S REPORT 2011	1
EDITORS PAGE.....	2
RICHARD J JENKINS PR.ENG., C.ENG., F.I.M.A.R.E., F.S.A.I.M.E.N.A.	3
AN APPRECIATION	3
HISTORIC CANNON FIRED AFTER 108 YEARS	5
MARINE INSURANCE.....	7
FAREWELL AND FULL STEAM AHEAD	11
"THE SHREDDER"	12
A SLOW BOAT FROM CHINA	14
A RARE PHENOMENON - COMMUNICATION	18
PHOENIX	20
THE WORLDS FIRST SOLAR POWERED SHIP MV AURIGA LEADER	21
THE WORLD'S FIRST SOLAR POWERED SHIP	22
THE LARGEST, MOST IMPRESSIVE FLOATING OBJECT EVER.....	23
TO BE CONSTRUCTED.- SHELL'S PRELUDE.....	23
THE CORAMBA	27
MEMBERSHIP UPDATE	28
BREAKTHROUGH FOR LARGE ENGINE MANUFACTURING IN CHINA	31

September 2011www.saimena.org.za

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

THE PRESIDENT'S REPORT 2011

Cape Town has experienced a mild winter so far this year, with a below average rain fall, the normal cold fronts and severe winter gales which most sailors dread, have mostly gone South or to the Eastern Cape and Kwa Zulu Natal, which have had unseasonal rain and snow. The ship "Phoenix" ran aground in an East Coast winter storm at Christmas Bay near Sheffield beach and is creating quite a challenge for the salvors.

May I welcome the new members who have joined S.A.I.M.E.N.A. and I hope that you may benefit from your membership in this organisation where you are able to meet and exchange ideas on future developments in Marine Engineering and Naval Architecture in South Africa.

Kevin Watson has been busy with a membership data base software programme which will allow us to have more comprehensive details of the members, We are already seeing the benefits of Kevin's many hours of hard work.

On the educational front, Edward Pines has attended meetings with S.A.Q.A. (The South African Qualifications Authority) and we hope to be able to maintain a healthy relationship with the organisation in the future.

S.A.I.M.E.N.A. has formally forwarded an application to S.A.Q.A. for participation in the pilot project to recognise professional bodies and register professional designations.

A number of S.A.I.M.E.N.A. members are working internationally, including on the project management of building the new South African Polar research Vessel in Finland. It is pleasing to note that South African qualifications and Engineering expertise are in demand and recognised internationally. It is hoped that we can continue to maintain high standards in Marine Engineering & Naval Architecture in this country.

Dick Shaw President

EDITORS PAGE

I am pleased to advise that due to certain trickery and witchcraft which I do not understand, Admiral Kevin Watson managed to place the June edition of the Journal on the web site www.saimena.org.za. Unfortunately not all the adverts were included but we will try to rectify that in this edition.

I asked our overseas members if they would be prepared to utilise this electronic method of receiving the Journal, as the cost of printing and postage is over R140 per member per annum. I am pleased to say some agreed. If any of our local members would be willing to do likewise the saving would be substantial. Please send me an email if you find this acceptable.
ralph.baker@telkomsa.net.

I still get a few journals returned “Address Unknown” after every edition is posted. It would be a great help, and saving, if members who know those missing could let me have the correct address. A list of names is included on page 30.

Durban, for a change, has a shipwreck drama on Sheffield Beach which captivates our interest and poses a financial burden on the ratepayers in removal costs. Some wag suggested that due to the current high crime rate, they should remove all security guards and it would disappear overnight.

The Nautical Institute based in London has promoted a “Command Seminar” in Cape Town on the 8th and 9th of September and invited SAIMENA to present a paper on Piracy. I would like to include a page from the Society of Master Mariners entitled “From the Bridge”. My requests have fallen on deaf ears so far. If any member knows of a Master Mariner who can write (don’t take that the wrong way) please put me in contact with him!

Ralph Baker Hon Editor

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To advertise in this Journal please contact the Hon Editor
at ralph.baker@telkomsa.net

Richard J Jenkins Pr.Eng., C.Eng., F.I.Mar.E., F.S.A.I.M.E.N.A. An Appreciation



History contains the names of many memorable Marine Engineers who have passed through this life and the name of Dick Jenkins will surely now be added to that list.

Many of you will no doubt have known Dick longer than I did as I only met up with him forty five years ago but it was an honour to know and work with him I found him a strong and knowledgeable leader. Never asking anyone to do anything that he would not do himself, he was smallish in stature but big in heart and with a determination to get things done. He was always organising, leading and supporting his 'Team' and received the full support of his Superintendents,

Foremen and Staff who would have gone to the end of the Bay and back for him. Things had to happen and progress to keep up with him.

Explosive at times and always with the appropriate language to meet the occasion he was as easy when meeting the lowest rank of staff or the State President at a Launching.

Much of the development and building of the Dorman Long slipway and fabrication area in the mid 60's must be credited to him and his enthusiasm.

Every working day started with a 09.00 hours round table meeting of all Superintendents to plan the day out - not that we could report on anything as Dick would already have been round the yard and new builds and seen for himself!

Every Friday ended with a gathering at the 'Berea' for sundowners with RJJ enjoying his G & T's and acknowledging everyone's week's efforts.

The fact that he lived to just short of his 91st birthday reflects his tenacity in making sure that he had completed everything she wanted to in his lifetime.

He was a great admirer of Isambard Kingdom Brunell and while his monument is the Great Britain in Bristol RJJ's monuments are the Portal Cranes over the slipway for all to see as they continue the marine history of the Bay.

The Master has rung down 'Finished with Engines' Dick has closed down safely and surely and is now rested up in the Wardroom with the other past mariners and with a tippie in his hand.

Rest in peace, well done and thanks for being a friend as well as a Boss.

Norman Willis



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HISTORIC CANNON FIRED AFTER 108 YEARS

History was made when the Canon Association of South Africa (CAOSA), restored and fired, the 9 inch wrought iron rifled muzzle loading gun. The Canon was fired, at the Middle North Battery Simon's Town at 11:00 am, on Wednesday 16 March 2011.



Canon Association members

The gun was last fired on 27 April 1903 and was struck off charge on 19 September 1906. In 1983/84, the gun, slide, carriage and the mounting were again restored in the Gun Shop in the SA Naval Dockyard, since then the gun was vandalized and stripped.

The Mission and Vision of CAOSA is to locate, record and identify guns, prevent their loss, recover them, where and when appropriate and display and fire them at a suitable public place.

Warrant Officer (WO1) Harry Croome and WO1 Martin Venter (SAN & CAOSA members), ensured the success of this proof - firing exercise, making it possible for the gun to be fired during the much anticipated Navy Birthday Festival, 1-3 April 2011.

When giving his speech, WO1 Harry Croome thanked the SA Naval and SMST Museum for assisting him with the undertaking.



The project was a great success. However it was only the start, with three other 7-inch rifled muzzle loading guns still to be restored at Fort Wynyard, Lion Battery and at Silvermine.

Details of the Canon

- Length: 12 feet 3 inches (3 m 70 mm) nominal length to smallest domes of cascable – total Length to the end of cascable 13 feet (3 m 960 mm)
- Ammunition: Common Shell, Palliser Shell, Boxer Shrapnel, Case Shot and Palliser Shot with gas check
- Range: 3680 yards (3365 m) at 14 degrees or 5800 yards (5303) at 12 degrees
- Penetration: 9 Inch (230 mm) Wrought Iron Armour Plate at 2000 yards (1828 m).

The gun was designed as a broadside gun for ironclad ships, for the defence of harbours and sea fronts and 190 were manufactured. Further, it has 6 rifling grooves, the only gun in the service with this particular number.



Martin Venter, Senior Gunner and Harry Croome

Source S A Navy Intranet

MARINE INSURANCE

According to I Wikipedia the definition of Marine Insurance is:

“Marine Insurance covers the loss or damage of ships, cargo, terminals, and any transport or property by which cargo is transferred, acquired, or held between the points of origin and final destination.” However in my view it should read to include the liabilities of ships, cargo, terminals and such like.

There are three main types of insurance.

The vessel - Hull and Machinery for the vessel to cover loss or damage.

Items carried in the vessel - Cargo insurance.

The liabilities of the vessel.

P&I is an acronym for Protection and Indemnity and is the ship operator's third party liability insurance. In essence it is anything a ship can do to:-

Anyone – crew, passengers, stowaways

Anything – Cargo, property, the environment

The insurers are known as P&I Clubs and they are generally mutual insurers.

First Protection Clubs were formed in 1855 and at this time the Ship Owners had hull and cargo insurance and ship owners often carried their own cargo. Passengers started to be carried in large numbers due to the emigration to Australasia and the U.S. Suddenly ship owners found themselves liable for passenger and crew claims. In addition the hull and machinery insurers did not cover the full loss or damage if vessels collided but only $\frac{3}{4}$ of this so the ship owners needed their own insurance to cover these additional liabilities.

To this day the insurers are known as members and the insurance is based on mutuality. The insured are the ship owners or operators who sit on their board of directors of the P&I Clubs however Management companies handle the claims and day-to-day business of the Club.

There are 13 Clubs in the International Group (IG) and these cover the liabilities of over 90% of world's vessels. These 13 Clubs pool their claims to spread or share the liability. Each Club in the IG covers the first \$8 Million of any claim and then for claims above 8 million to 22 million the other Clubs join to cover the claim and then through various levels of reinsurance they cover risks right the way up to \$3 billion and beyond.

P&I Clubs cover the liabilities to third parties arising out of the following types of claim:

Collision damage not covered by H&M (1/4)

Damage to fixed and floating objects

Damage to the marine environment – pollution

Damage to Cargo

Damage to third party property
 Personal injury, illness or death – crew and passengers.
 Injury to other persons – stevedores etc
 Liabilities in respect of stowaways
 Arrest and detention of vessels
 Fines and penalties including Customs fines
 Quarantine expenses
 Wreck removal

The Role of P&I Clubs is to compensate their insured for liabilities and indemnify them against claims. They monitor the liabilities, costs and claims and they do this through their network of correspondents. There are approximately 1,600 P&I correspondents so invariably there is at least one correspondent in every major port.

The Correspondents are the local representation and are the eyes and ears of the Clubs. Claims handler sitting in London cannot possibly directly handle a matter occurring in say Durban. Many P&I Clubs have both commercial and legal correspondents.

The details of the Club correspondent can be found by looking on the P&I Club's website where all of the details including after hours contacts is listed.

Additionally each Club publishes a book annually that reflects the relevant data and the Master of a ship will have the publication available to him.

It is the P&I Correspondents role to feed back information and highlight the



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priorities and problems of any matter and to give advice on local laws and conditions. Additionally the Correspondent is expected to solve problems and liaise with Authorities such as Maritime Safety, Transnet National Ports Authority and the Department of the Environment. Additionally the Correspondent is expected to investigate incidents and gather evidence to defend claims. To give an example, in a major casualty the order of priority would be to establish all relevant details such as location, the current situation, the liabilities and report back to principals. Then priority must be given to the saving of life, saving and protecting the environment and lastly the saving of property.

In a major shipping casualty there are many facets to consider and first would be the crew/passenger safety and welfare and all would need to be coordinated and monitored by the Correspondent.

In respect of pollution it would be the responsibility of the P&I Correspondent to monitor all clean-up efforts and costs – it may not necessarily be oil pollution but other hazardous properties. In respect of cleanup time is very important so, if the Port or National authorities are not doing anything or don't have the resources, then specialist companies may have to be brought in.

In respect of property damage this may, for example, be dock or shore crane damage.

One of the more expensive types of claims that may be covered by P&I Clubs is wreck removal.

In respect of cargo claims regardless of the terms of the cargo contract, the ship owner or at least the Master has a duty of care to look after the cargo and the owners, will generally be responsible for all damage on or in the vessel. People claims amount to at least 20% of all liability claims. These may include sickness and injury to crew, injuries to stevedores, agents, surveyors or anyone visiting the vessel. The owners have to provide a safe working environment on the vessel.

Stowaways cost ship owners and their P&I insurers up to USD 25 Million every year. Since implementation of ISPS - 1 July 2004 – Ports, Terminals and vessels are supposed to be secure. However despite the fencing, CCTV cameras, the guards, lights and such like stowaways still get onto the vessels. The problem is not unique to Africa.

Another important function of P&I Clubs is the release of vessels from arrest. For example when cargo is damaged, then cargo owners or their underwriters may arrest the vessel. The reason that cargo interests arrest is to

ensure their claim is secured. The P&I Club is able to offer a letter of undertaking (LOU) to cargo interests – a paper guarantee that is acceptable in many countries in the world. The issue of an LOU saves time, as it can be completed after hours and there is often standard accepted wording. A Club correspondent, once he has the authority from a Club, should be able to issue such a letter on behalf of the Club so as to release a vessel from arrest. A Bank guarantee takes considerably longer and cannot be secured outside of normal banking hours.

In respect of major matters it is important to identify the type of claim i.e. Hull or P&I. The P&I insurer will generally always be involved in all incidents where there is third party liability and it is likely that the owner and insurer will be represented by the P&I Correspondent. The P&I Correspondent should be able to evaluate the risks and gather the evidence to defend claims and should have a vast pool of expertise to draw from.

At P&I Associates we have the following disciplines in-house:

Master mariners – ex seafarers

Marine Lawyers

Marine surveyors

Experts in particular types of claims (Crew and stowaways)

However at P&I Associates we have a vast field of expertise that we can bring in on a contract basis such as:

Lawyers

Consultants

Marine Engineers

Civil engineers

Commodity experts

Salvage experts

For major matters it is important to note that the P&I Club and Owner must be represented at any Joint Operations Committee meeting as they are stakeholders in terms of the new South African National Contingency Plan for Pollution and other Marine emergencies. This function may also be covered by the P&I Correspondent.

Source: Capt Alan.Reid. MD P&I Associates (Pty) Ltd

ENGINEERS OPINION

The optimist- the glass is half full

The pessimist-the glass is half empty

The Engineer- the glass is twice as big as it needs to be.

FAREWELL AND FULL STEAM AHEAD

Last year I wrote about the remarkable career of Captain John Drummond.

Sadly he passed away recently. Leaving Pamgbourne College, a nautical school in Britain, he moved (via a lengthy spell in Union Castle that included war service) to East Africa and later the South African harbour services.

When he stepped onto the Pilot launch for the last time, he could reflect with considerable satisfaction on about the 16000 safe pilotages. His swansong I understand remains the only occasion when a retiring pilot has been given a water-spray send off by all four harbour tugs in Cape Town.

In his blood was much salt. His uncle, Lieutenant-Commander Geoffrey Drummond, had won the Victoria Cross and the Belgian Legion of Honour award for his actions while commanding a naval motorboat that was escorting the H M S Vindictive into Zeebrugge harbour in May 1918.

A shell hit the motorboat, killing two crew members and seriously injuring Drummond. Despite his wounds he brought his vessel alongside the Vindictive to rescue crew members after the cruiser had also been hit.

Drummond got his vessel back to sea before collapsing from loss of blood.

Returning to civilian life after World War 1 he rejoined the Navy in World War 2 but died in an accident in 1941. John's brother, Spencer Drummond, was awarded the Distinguished Service Cross for courage and determination in action on board the H M S Belvoir in the Aegean during the invasion of Italy.

Apart from being the goddaughter of Queen Victoria, his cousin, Victoria Drummond, was exceptional in her own right. After an apprenticeship on Clydebank, she joined the Blue Funnel line's Anchises as an Engineer, a remarkable step as women were considered "unsuitable" for sea-going careers in the 1920's. Despite obtaining her second Engineers ticket, the only job she could find at sea was fifth engineer aboard the British India Navigation Steamship Navigation. Undeterred she gained her Chief engineers ticket- from Panama, as the British authorities refused to issue her ticket! With a shortage of Marine Engineers in World War 2 she became second engineer in the steamer Bonita. When an aircraft attacked the old freighter in the North Atlantic, she single-handedly kept the engine going, a feat for which she was awarded the MBE and Lloyd's medal for bravery at sea. She finally became Britain's first female Chief Engineer at sea, though in a Greek ship.

Among the pilot tugs that carried Captain Drummond and his colleagues out to ships in Table Bay was the Cecil G White, one of the five 30m Italian built steam tugs that replaced the ageing pilot vessels in South African ports in the late 50's. One of those, Alwyn Vincent, went to Mossel Bay, and when she

was withdrawn, went to Knysner then Cape Town, where enthusiasts kept her going as a pleasure craft taking tourists around the harbour. Diesel power replaced her steam engines but even that could not keep her going and sadly she lay at the waterfront, collecting guano and cormorant nests.

She will be dismantled this week but fortunately steam enthusiasts from Villiersdorp will transport the parts to their village, and reassemble the old tug complete with her original steam engines, in their museum.

Such enthusiasm and initiative from amateurs is most commendable. After all she was the country's last steamship.

Brian Ingpen

"The Shredder"

A young Engineer was leaving the office late one evening when he found the Boss standing in front of the shredder with a piece of paper in his hand.

"Listen" he said. "This is a very sensitive and important document and my secretary has gone home. Can you make this thing work?"

"Certainly," Said the young Engineer. He turned on the machine, inserted the paper and pressed the start button.

"Excellent, excellent" said the boss as the paper disappeared into the machine. "I just need one copy."

Never assume the Boss knows what he is doing !!

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A SLOW BOAT FROM CHINA

Editors note:-

Chief Engineer Mr S R Gibbs kindly shares a hair raising voyage with us. Due to space limitations it has reluctantly been abbreviated

I joined the PSV Dalani Topaz, now Pacific Amethyst, on 14/05 and relieved Tom as the vessel was in Dry-Docks World, (ex Pan United Shipyard) to complete modifications to comply with DP2 requirements.

Additional watertight bulkhead had to be fitted at frame 18 in each shaft tunnel to satisfy ABS damage stability requirements. During the fitting of these bulkheads it was questioned if this would affect the shaft alignment but the answer was – “a split watertight gland will be fitted the same as on the sister vessel and this will not affect the shafting alignment.” This went ahead and the local ABS surveyor was in attendance during the fitting and also completion of various other modifications for DP2 requirements.

The vessel was in the Shipyard from 12th May until 20th June and went to anchorage to complete a draught survey because it was evident the tank capacities were not accurate to the sounding tables. This exercise was aborted as there was too much outstanding work to be completed and the vessel went back to the Shipyard. This time to Keppel yard where most of the outstanding work was done.

On the 2nd July the vessel sailed from anchorage bound for Cape Town with 2 Welders, an Electrician and a Carpenter, additional to the crew as there were many extra jobs and also many to rectify on the passage across. The weather was fine and the vessel was proceeding on passage very well until 01h40 on 9th July when I was called out due to a problem with #6 shaft bearing on the Starboard intermediate propulsion shaft and the engine was stopped at 02h00 to investigate. The bearing temperature was 10deg.C higher than the others and there was an oil leak from the forward seal, the bearing housing cap was removed and there was evidence that the bearing outer race was actually turning in the housing.

The engine was barred over and the forward section of the shaft turned whereas the aft section remained stationary. It was evident the shaft had sheared in the bearing inner race.



Photo of the shaft taken at Mauritius. (Note how it has sheared inside the inner race)

Once the Owners were informed it was decided to continue the voyage as it would have taken 10 days to reach Singapore, 8 days to reach Colombo, Sri Lanka or, 18 days to reach Cape Town, in the present sea state of 4, on one engine. However, as we progressed the weather deteriorated and the sea was onto the beam which made it very uncomfortable and of course affected our headway as we had to reduce load on the engine. By now there was no turning back as we were in the middle of the Indian Ocean and no other traffic in the vicinity. We were concerned as the weather forecast was not to our advantage but there was nothing we could do about the weather and continued altering course to make it as comfortable as possible as the weather deteriorated.

At 01h45 on 15th July there were major vibrations felt at the Port Aft of the vessel such that everybody was woken up and the Engineer on duty

used the emergency stop and stopped the engine from the MCR. When we proceeded to the steering room we found the area covered in oil and it was evident the "O" ring seal on one of the connections to the steering motors had failed. This was rectified and the engine restarted, all was well until the moment the propulsion unit was clutched in, tremendous vibrations were felt and the unit was declutched as we knew there was something drastically wrong. The unit was clutched in and out several times with the same results. It was obvious something had fouled the propeller and Kort nozzle. So that was us, on a new vessel with 2 perfectly good engines but no propulsion and at the mercy of the sea. As the vessel was drifting towards the shallows and reefs we tried to get the heading around with the use of the thrusters but after a couple of hours the thrusters tripped due to high temperature and it was evident the ventilation in the thruster's room was inadequate. The next plan was to make up sea anchors with what was available on board to slow the drift and try to turn the heading. We used empty 210 litre oil drums in cargo nets and attached them from the bow with mooring ropes. This

Continued on page 18



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slowed the drift but the heading remained the same.

The vessel was rolling up to 40 deg. to Port and Stbd, both radars had packed in some time on the 14th so it was difficult to track the drift of the vessel. It was estimated we would hit the shallows in 60 hours so the only option left was to get the retractable thrusters operating. It was decided to remove the air trunking from the supply fan in the Thruster Room and modify it to get air directly onto the retractable thrusters power pack to keep it cool enough to operate.

We managed to get a good air flow through the melamine deck onto the power pack and started the retractable thrusters but, to avoid pushing our luck we managed to travel along at +/- 1.5 knots and headed for the uninhabited island of Albatross. On the morning of the 16th we retrieved the mooring ropes of the sea anchors and kept our heading for Albatross Island where we arrived at 20h00 on the 17th and as we dropped the anchor in the lee of the island the retractable thruster gave in on high hydraulic oil temp. This was of concern as we knew there was a reef off

continued on page 20

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A Rare Phenomenon - Communication

The Captain's note to the Chief Officer

Early in the morning there will be a total solar eclipse at 09.00 hours.

This is something that cannot be seen every day, so let the crew line up in their best clothes on deck in order that they may see it. To mark this rare phenomenon I will myself explain it to them. If it is raining, we will not be able to see it clearly. In that case the crew should gather in the mess room.

The Chief Officer's note to the First Officer

On Captain's orders there will be a total solar eclipse early tomorrow morning at 09.00 hours. If it is raining we will not be able to see it clearly from the deck in our best clothes. In that case the sun's disappearance will be fully observed in the mess room. This is something which does not happen every day.

The First Officer's note to the Second Officer

On Captain's orders we shall fully observe in our best clothes that the sun disappears in the mess room at 09.00 hours. The Captain will tell us if it is going to rain. This is something that does not happen every day.

The Second Officer's note to the Bosun

If it is raining in the mess room early tomorrow, which is something that does not happen every day, the Captain in his best clothes will disappear at 09.00 hours.

The Bosun's note to the crew

Early tomorrow at 09.00 hours the Captain will disappear. It is a pity that this does not happen every day.

the island but we had no radars and if the anchor dragged we could end up high and dry.

Everybody managed to get some sleep that night and in the morning it was a relief to see we were clear but very close to the reef. Most of the crew took their mattresses back to the cabins as the rolling had been so bad that they had resorted to sleeping on the recreation room deck because it was more comfortable even though there was sleep deprivation.

On the 18th we were informed there was a Smit tug in the area which was on the way to assist us. This was a tremendous morale booster for everybody on board and relief could be felt throughout the vessel, so much so the guys resorted to fishing from the stern, it was a change to see smiles on the faces of those who reeled in the good sized fish. The morning of the 19th we had a meeting to assess the tow arrangement for the tow to Simons Town by a newly built Smit AHTS vessel that was on its maiden voyage from Singapore to West Africa.

She arrived at the island at 23h00 that night. We attempted to secure the tow but it was aborted as the sea was too rough. Another attempt on the morning of the 20th was successful at 10h30 and the tow was underway at 10h42.

Disaster struck again in the early morning of the 21st when the tow parted at 01h30. So once again we were at the mercy of the sea. We had a meeting to decide if it was viable to attempt the tow to South Africa but the weather forecast was not in our favour and the fact that the tug's tow wire was not sized to undertake such a task, the decision was made to head for Mauritius once we reconnected the tow.

At 18h50 that evening we were under way again we didn't push our luck as the sea was still pretty rough and the tow wire could be likened to a shoe lace. The Starboard propeller pitch was feathered to reduce the drag and hence the load on the wire. We were going about our duties with fingers crossed and praying that we would make it safely to Mauritius. It must be stated that everybody was concerned from the time the vessel was without propulsion, even now that the vessel was under tow, but not once did anybody complain about the situation we were in and there was a closeness between crew members and officers such like I have never experienced before in my career at sea.

The Tow.

On the 23rd we arrived at Mauritius at 15h00 and were berthed alongside

CNOI Dry Dock by 16h00. There are no words to describe the relief and joy felt by everybody on board once the gangway was down and we stepped on shore. The next morning divers attended, completed an underwater video survey and the extent of the damage revealed. From the divers report both the Port and Starboard propellers were fouled by fishing gear and the bolts securing the unit were loose allowing the oil to leak out. Repairs will be done in Mauritius and Durban, South Africa.

S.R. Gibbs.
Chief Engineer.

PHOENIX



Above seen the stranded **PHOENIX**, hard aground at Sheffield Beach, just north of Ballito, or about 55 kilometres north of Durban, on the afternoon of Saturday 30 July. Access to the site is quite good, with a walk of around 1.5 kilometres from the area where cars can be parked. Only one very small operational area on the beach is restricted to the public, so a good view and photos of the vessel are possible. As you can see from the photo, there are a small number of salvage personnel, with helicopter delivery of equipment.

Photo : Trevor Jones ©



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THE WORLDS FIRST SOLAR POWERED SHIP MV AURIGA LEADER



THE WORLD'S FIRST SOLAR POWERED SHIP

NYK Lines has announced that the M/V Auriga Leader, the world's first solar power cargo ship, will be undergoing further developments to strengthen the vessels efficiency. Starting in June, the vessel will be fitted with a new hybrid power supply system, a ballast water management system and will be adapted to use low-sulphur fuel in order to further reduce fuel costs and cut carbon emissions.

Since completion of the vessel in December 2008, the car carrier M/V Auriga Leader has been equipped with 328 solar panels placed on its deck as an alternative source of power. Tests, however, have revealed power generation and storage difficulties in adverse weather conditions. It was also found that making the solar panels bigger resulted in problematic fluctuations in the power supply.

The Auriga Leader's new hybrid power supply system now being installed is intended to provide a more stable onboard power supply in the event of harsh weather through the combination of solar power generation and the hybrid power supply system.

Source NYK Lines

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The Largest, Most Impressive Floating Object Ever To Be Constructed.:- Shell's Prelude

Shell has given the go ahead to develop its Prelude and Concerto gas fields off the northwest coast of Western Australia using its innovative Floating Liquefied Natural Gas (FLNG) technology. Australia is a growth centre for Shell globally. We are developing large gas resources and maintain a substantial exploration portfolio off the coasts of Western Australia and Northern Territory, as well as having interests in coal seam gas opportunities in Queensland.

Shell is the 100% equity holder and Operator of the WA-371-P permit, an area which covers around 1,000 sq km in the remote Browse Basin, 475km north-northeast of Broome, Western Australia.

During 2007, Shell discovered the 'Prelude' gas field and in March 2009 discovered the 'Concerto' gas field in the permit area.

Prelude and Concerto have around 3 trillion cubic feet of liquids-rich gas. The relatively small size of the gas fields and the remote location make them an ideal candidate for development via Shell's FLNG technology as it would not be economic to develop the gas via a conventional onshore LNG processing plant. After processing at the site of the gas field, ocean-going LNG carriers will offload liquefied gas, chilled to -162 Celsius and shrunk in volume by 600 times, *Continued on page 26*



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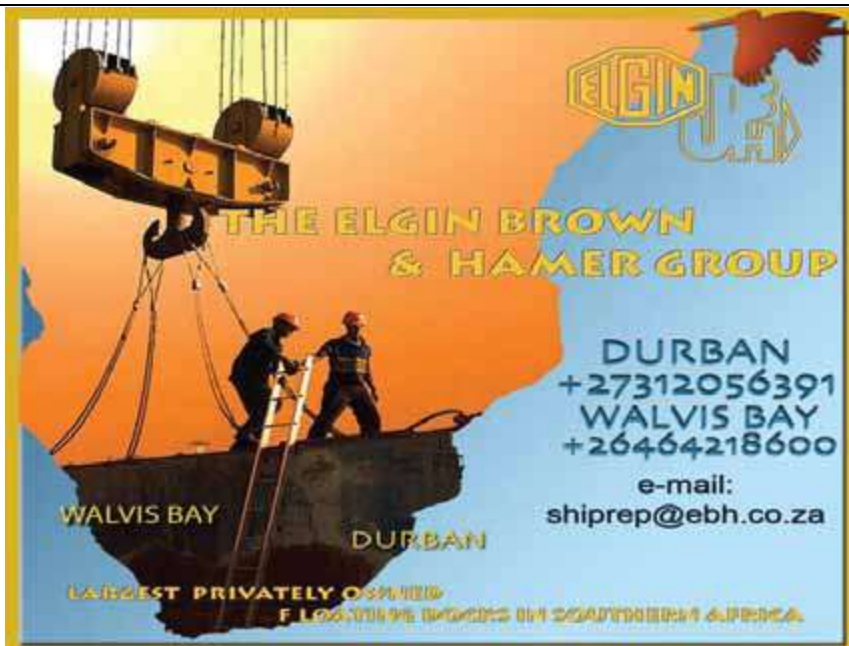
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and other products, directly from the facility out at sea for delivery to markets worldwide. Until now, the liquefaction of offshore gas has always involved piping the gas to a land-based plant. The Project will contribute to the Western Australian and Australian economies through tax revenues, creating hundreds of jobs and providing opportunities for Australian businesses. FLNG technology is an important development for the LNG industry as it reduces both the project costs and environmental footprint of an LNG development, because there is no need for long pipelines to shore; compression platforms to push the gas to shore; nearshore works such as dredging and jetty construction; and onshore development such as building roads, laydown areas and accommodation facilities.

There are currently no FLNG facilities deployed anywhere in the world, so Shell's Prelude FLNG Project is likely to be the world's first. For Australia the Prelude FLNG project will demonstrate a means of developing some of Australia's "stranded" offshore gas reserves – those considered uneconomic for development via an onshore plant because they are too small or remote. The CSIRO estimates Australia



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has around 140 tcf of stranded gas. In July 2009, Shell awarded a consortium of Technip and Samsung Heavy Industries the contract for the design, construction and installation of multiple FLNG facilities over a period of up to 15 years, based upon Shell's proprietary design.

In May 2011, the Board of Royal Dutch Shell plc made the decision to proceed with the Prelude FLNG Project and start construction of its pioneering FLNG facility, to be the largest floating structure ever built.

The FLNG facility itself will be 488m long and 74m wide, and when fully loaded will weigh around 600,000 tonnes - roughly six times as much as the largest aircraft carrier. Some 260,000 tonnes of that weight will consist of steel - around five times more than was used to build the Sydney Harbour Bridge.

Once constructed the facility will be towed to location where it will be permanently moored by 4 groups of massive mooring chains in 250m-deep water. Each mooring chain held to the sea floor by suction piles the size of small houses, and the FLNG facility has been designed to withstand severe weather, even a Category 5 cyclone.

Safety of the FLNG facility has been paramount during its design, and its safety is on a par with modern offshore oil and gas facilities.

THE CORAMBA

In Victoria's worst maritime disaster the Coramba capsized off Phillip Island during a storm on 30 November, 1934, and all 17 on board died. "The ship should never ever have sailed. My father was so worried [about the storm] but he was ordered to go," Mrs O'Callaghan said. The devastation of losing her father and his entire crew was deepened by not knowing where the ship had finally come to rest.

Two weeks ago, maritime historian Des Williams and diver Mark Ryan, of not-for-profit Southern Ocean Exploration, ended one of the state's most enduring shipwreck mysteries when they found the Coramba lying on its port side 66 metres beneath the surface. "Des promised me that he would never give up, and he didn't. He kept his word," Mrs O'Callaghan said.

Mr Ryan described the find as the sweetest discovery of all. "This is the most looked for ship in Victoria. It's a very significant shipwreck," he said. "It was lost with all hands - it had a huge impact on the local community." The surviving family members of the all-Victorian crew were stunned by the news. "It's such a relief," Mrs O'Callaghan said. "I'm glad I've lived this long. I was hoping that I might be lucky enough."

Her most treasured memento of her father is a letter he wrote to her when she was a baby and he often spent months at sea. It was a guide for how to live her life in the event that one day he didn't come home. "My mother gave it to me when I was 12. It's the most beautiful letter. I love reading it. He was such a thoughtful man," she said. Her brother Jack, who was nine at the time of their father's death, died in December. He used to stare at the vast waters off Phillip Island wondering where his father's remains lay.

His wife, Norma Dowling, 82, of Seabrook, said: "Jack would have been over the moon ... just to know that somebody had found it and that they were all laid to rest. Just to know where he was. He could have gone down there and said, that's where my dad is." Mr Ryan said the 50-metre cargo steamer was supposed to enter Melbourne through Port Phillip Heads but a fierce gale made that impossible. It was trying to seek refuge in Western Port Bay when it capsized before any lifeboats could be released. The bridge, and the ship's bell and clock - which had stopped at 10.30pm - were washed ashore, as were four bodies.

"I would assume the others were trapped inside the ship when it went down," Mr Ryan said, adding that the wreck may still contain remains. The 17 members of the Southern Ocean Exploration group had been searching for the Coramba for eight years before last month's unexpected find, Mr Ryan said. The wreck's location, 15 kilometres south-east of Phillip Island, was "wildly outside" where it was thought to be.

"I was actually out looking for a ship called the Kermandie. I knew that as soon as I put the boat over it and checked it with the depth sounder that what we had found was substantially bigger. I knew straight away that it had to be the Coramba," Mr Ryan said. Southern Ocean Exploration had spent nearly \$30,000 trying to find the ship, he said. Diving to the wreck last Sunday, was "absolutely mind-blowing". "The ship's in good condition considering what it went through. The back half of the ship, the stern, is in very good condition, the propellers are good. The front end of the ship is quite

broken up from where it hit bottom," he said.

He couldn't see many artefacts, such as bottles or plates, but more dives are planned for coming weeks. Mr Williams' interest in the Coramba harks back decades. He wrote the 1985 book *Coramba: The Ship the Sea Swallowed*, and said he had been "obsessing over the damn ship" ever since. "I got more involved with the families and it was the human side of the wreck that really got to me, not just finding the rotten thing. There were 17 people lost. In the late Depression era, it was a horror for the families," he said.

John Sullivan, of Cranbourne, whose namesake grandfather went down with the Coramba, agreed that the calamity had been "very traumatic" for the families, and many endured years of financial hardship. He said his 84-year-old father, also named John, had dementia but he would consider telling him the good news. "I am rapt ... the perseverance has paid off." Mr Sullivan said his grandmother's and great-aunt's ashes had been scattered at sea where the ship was believed to have sunk, and he and his father would also have their ashes scattered above.

MEMBERSHIP UPDATE

We are pleased to welcome the following new member.

Mr Ryan Fabian

Where are they now?

Mr R J Lawson of Noordhoek

Mr J R M De Freitas of Maydon Wharf

Mr Mc Farlain of Forest Hills

Mr C J Handley of Port Elizabeth

Mr H H Wilmot of Pinetown

Mr W M Swazi of Simon Town

Mr C H Opperman of Paarl

Mr R H Hutton of Bergvliet

Mr FR Joubert of Simons Town

Mr Bryan Webster websterb@gmail.com would like to contact relatives or friends of the late Charles Oliver who he knew in the mid 1980's in Cape Town. Charles was about 52 years old at that time. (No! He has not won the lotto)

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Breakthrough for Large Engine Manufacturing in China

The new super long-stroke MAN B&W S90ME-C9 engine to be built in China Seaspan Corporation has placed an order for 7 + 18 newbuildings of 10,000 teu container ships at Jiangsu YangZiJiang Shipbuilding. These will be powered by the new super long-stroke engine type MAN B&W 10S90ME-C9, which will be built by the Chinese engine builder CMD.

Traditionally, MAN Diesel & Turbo K98-type engines have been used as prime movers by 8,000-10,000 teu capacity container vessels. Following efficiency optimisation trends in the market, where container ships have increasingly adopted lower ship speeds, the engine designer evaluated the possibility of using even larger propellers with a view to using engines with even lower speeds for propulsion.

Investigations revealed that container ships are indeed compatible with propellers with larger propeller diameters than current designs, and the high efficiencies that follow an adaptation of the aft-hull design to accommodate the larger propeller.

The new, higher-powered, super long-stroke S90ME-C9 engine type meets this trend in the market. MAN Diesel & Turbo investigations indicate an overall efficiency increase of about 7% when using the S90ME-C9, compared with existing main engines, depending on the propeller diameter used.

Choice of engine Canada based Seaspan Shipmanagement Ltd. entered a close dialogue with MAN Diesel & Turbo to decide upon main engines for its expanding fleet of newbuilding container ships. The owner initially considered the MAN B&W K98ME-C engine, but ultimately settled for the super long-stroke 10S90ME-C9 type on account of its superior fuel savings, a choice that required a redesign of the newbuildings' aft-ship to accommodate the lower engine rpm and larger propeller diameter. The yard and its design partner changed the design accordingly. Seaspan has previously built ships at YangZiJiang Shipbuilding with 6K80MC-C engines built by CMD in China.

Ole Grøne, Senior Vice President Promotion & Sales, MAN Diesel & Turbo said: "We continuously keep a close eye on developments and trends within the shipping sector and have watched with interest the increasing demand for lower engine speeds and larger propeller diameters within the container segment. While our portfolio of engines already matches a broad reach of requirements, we have specifically introduced the super long-stroke S90ME-C9 to market to satisfy current trends and are very happy with its immediate adoption in the major shipbuilding markets."

The MAN B&W 10S90ME-C9.2 engines to be installed in Seaspan's newbuildings will in addition feature MAN TCA turbochargers built in Augsburg, Germany.

Source MAN Diesel and Turbo

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