

Melbourne Branch

The Log
The Monthly Newsletter of the Melbourne Branch of
The Company of Master Mariners of Australia Limited
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NEXT MEETING

1830 hrs 29th March 2023

Mail Exchange Hotel

Branch AGM

Seafarer's welfare and mental health



Victorian Regional Channels
Authority

From the Branch Master

Welcome all,

The focus for this month is our AGM to be held as part of our monthly dinner meeting. All positions are declared vacant. Any members who would like to stand should ensure they have their nominations administered and sent to our Secretary.

Noting the position of Deputy Branch Master is vacant.

The dinner talk in February was fascinating and of an excellent standard. We look forward to this month with the Chaplain from the Stella Maris Centre talking to us on seafarer's welfare especially their mental health during life at sea.

Looking forward to seeing you all at the meeting.

Fair winds

Graeme

150 years of LR in Australia

In 1872 Lloyds Register placed advertisements in the local papers for surveyors.

This resulted in David Macleod and Robert Pockley being appointed the first Lloyds Surveyors in Melbourne and Sydney. Within 10 years that had grown to eight surveyors across Australia and New Zealand.

Apart from its central role in shipping LR was involved in major projects such as testing steel plates for the Sydney Harbour Bridge.

LR has been an advisor to the Royal Australian Navy since 1989 and opened its Sydney Naval Liaison Office in 2020. A number of RAN vessels have been built to LR Naval Classification Rules.

The icebreaker Aurora Australis launched in 1989 was classed with LR as is its replacement Nuyina.

LR has five offices and 47 employees in Australia with surveyors and specialist in different technical disciplines to support the Australian Maritime Sector

Wind Assisted Propulsion

In order to meet the IMO requirement to reduce CO₂ emissions by 42% by 2030 and achieve a 50% reduction in greenhouse gases by 2050 the shipping industry is investigating a wide range of alternative fuels and means of propulsion.

Amongst these is the potential of wind as a means of propulsion. The merits of Wind Assisted Propulsion (WAP) have been the subject of Letters to the Editor of the DCN by two university academics.

Christiaan De Beukelaer is a Senior Lecturer in the School of Culture and Communications at the University of Melbourne and is an advocate of WAP. He points out that modern wind powered ships will not rely on the technology of the 19th century instead use modern materials, engineering and systems and will use weather routing software to take advantage of the prevailing winds. A variety of sail types, rotors or kites can be used to suite the particular type of ship.

The International Windship Association reports that more than 20 commercial ships already use wind assist technologies that have been retrofitted on existing ships.

The first purpose built modern sailing cargo ship “Canopee” will start operations this year.

Peter van Duyn a maritime logistics expert from Deakin University does not share De Beukelaer’s enthusiasm for WAP. He accepts that WAP will become more prevalent but says engines will remain the main propulsion for most vessels. He notes that Maersk has large container ships on order that will be powered by green methanol and engine manufacturers are looking at other zero emission fuels. Battery powered ships are operating on short haul routes so there are zero emission alternatives to wind power.

Bureau Veritas in a commentary on WAP wrote “several environmental, technical, design and financial challenges remain before wide spread adoption of WAP is possible”.

Wind propulsion is a primary renewable. Wind does not require infrastructure or storage. The wind energy is turned directly into propulsion power avoiding efficiency losses due to storage and transmission.

The lift and drag properties of a WAP sail system produce a beneficial thrust but also a transverse heeling force and this can impact the controllability of a vessel if a large system is installed. Vessels compensate with rudder angles to reach a sailing equilibrium and reduce the heeling effect.

There are a number of WAP systems in use. The Flettner Rotor is one of the more common. These are tall rotating cylinders that utilize the Magnus effect which is the force that acts on a spinning body in a moving airstream and creates an additional force on the object. The system was developed by the German engineer Anton Flettner who used it on a ship to cross the Atlantic in 1926.

The Flettner rotor can be improved by incorporating a flap to fix the flow separation point which alters the lift and drag forces created. This allows the vessel to sail closer to the wind improving performance upwind.



There are a number of different sail systems being developed.

Wallenius Line is planning to install a telescopic rigid sail on one of its car carriers for testing under real operating conditions.

France's Michelin Group has designed an inflatable wing sail that is automated and fully retractable. They hope to test it on a Ro-Ro vessel operating in Europe.

"Shofu Maru" a 100,400 DWT Bulker owned by Mitsui OSK is engaged in carrying coal from Newcastle to Japan. The ship is equipped with a telescopic hard sail and the additional propulsion power from wind is expected to reduce greenhouse gas emissions by about 5% on a Japan-Australia voyage.

50 Year Member Captain David Wharington



During the February meeting Captain David Wharington was presented with a plaque commemorating his 50 years as a member of COMMA.

David joined his first ship the “River Lodden” in Newcastle on 1st April 1957. After completing his apprenticeship David remained with ANL and in 1966 went to the UK to study for his Extra Master’s Certificate. His next posting was as Assistant Marine Superintendent and latter as Special Projects Superintendent. This was at the time the industry was gearing up for containerisation.

In 1973 he joined the Department of Transport as a Nautical Adviser but resigned in 1980 rather than take a transfer to Canberra.

David joined AOS and worked on laying pipelines to the Rankin Oil Fields. He remained with AOS and worked on many oil and gas projects until he retired 15 years ago. David has been a licenced compass adjuster since 1980 and still adjusts compasses although there is not as much call for this service these days.

We congradulate David on his 50 years of membership.

AMSA and RAN sign MOU

AMSA and RAN have signed a Memorandum of Understanding (MOU) to facilitate the move of merchant vessels from the civilian regulation authority (Flag Administration) to operate under Defence Flag Administration.

The MOU will support both Defence and AMSA to uphold Australia's international obligations for vessel Flag Administration and increase the ability of Defence and other agencies to respond to contingencies in the maritime environment in times of national necessity or crisis.

Mr. Mick Kinley CEO of AMSA said "Vessels operating under Defence Flag Administration have obligations under the United Nations Convention on the Law of the Sea and can gain access to the necessary ports, oceans and waterways to deliver missions for the Australian Government".

Chief of Navy Vice Admiral Hammond said "This MOU is important as it allows Australia to better harness its resources in advancing the national interest in our maritime region".

The Pacific Support Vessel ADV Reliant was acquired on the commercial market via a rapid acquisition process and transferred from civilian to Defence Flag Administration enabling its timely and flexible employment in support of Australia's Pacific partners. ADV Reliant is based in Brisbane and operated by Teekay Shipping



ADV Reliant in Samoa

February Speakers Summary

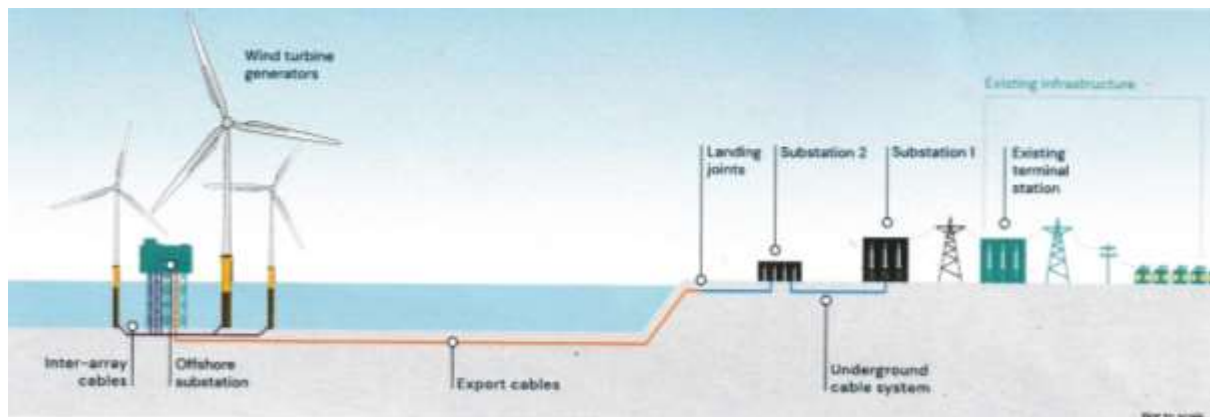
The speaker at the February meeting was Ms Martina Gassner the Environment and Approvals Manager for “Star of the South” offshore wind project. Martina has 15 years of experience in the renewable energy sector in Scotland and Australia including working on the off shore wind farm near St Andrews Scotland.



“Star of the South” is Australia’s first offshore wind project and the proposal is to have about 100 turbines situated around 10 kms off the Gippsland Coast. They would have a capacity of up to 2.2 GW or up to 20% of Victoria’s electricity need. This is a long term project. Feasibility, development and approvals could take 10 years, construction 3 to 5 years and the operational life of turbines is about 30 years. Martina explained that the appeal of offshore is that the wind is stronger and more constant and being off shore avoids land use conflicts.

Work started in 2019 on collecting data on whales, birds, marine habitats coastal processes and fish. Apart from their own investigations they have worked with CSIRO, Deakin and Monash Universities and the oil and gas industry that operates in the same general area. The data is assessed through the Australian Environmental Impact Statement (EIS) and the Victorian Environment Effects Statement (EES). They found as a result of CSIRO tagging that the sea off Gippsland is a nursery ground for the Great White Shark.

The study of the current environment will allow potential problems to be identified and solutions found. For example they found that birds in the area typically fly at less than 25 metres above sea level so making the blade tip clearance above 25 metres should avoid contact with birds.



The drawing above shows the general set up. The underwater cables will be buried under the sea floor and ashore cables will be underground until they meet up with the existing distribution grid. The aim is to have the minimum possible impact on the existing environment. The interests of fishermen is another area of research. Fish stocks have been monitored and provision will be made to allow fishing boats to pass through the wind farm.

This year there will be a concentration on seabed investigation with respect to burying the cables. Other areas under consideration this year are selecting ports to support the operation and refining transmission line routes.

Martina gave a very interesting talk on the complexity and depth of the work done to protect the environment when projects of this scale are undertaken

P.S.

On 11th March the Herald Sun reported that taxpayer's funds will be used to guarantee returns to private companies building wind farms off the Victorian coast. The government will also offer support through contributions to help operators build and finance their wind farms. The aim is to ensure that wind generated power is available when coal fired stations start going off line in 2028. The government has spent \$40M on feasibility studies for three projects off the Victorian coast including Star of the South.

The Port of Hastings has been confirmed as the port where the turbines will be delivered before being shipped out for construction.