



MARINA

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The Hong Kong Institute of Marine Technology and
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and The Institute of Marine Engineering, Science and Technology

IMAREST

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Shipping & Maritime News

An Interview of HKIMT Honorary President, Mr. M H Liang

In the world of shipping, particularly in Hong Kong, one would never forget the two well-known shipping personalities, Sir Y K Pao and Mr. C Y Tung. Sir Y K first set up his shipping business in Hong Kong under the name of World-Wide Shipping and Mr. C Y Tung's flag was Island Navigation. These two shipping companies were eventually to form the nucleus of the Hong Kong Shipowners Association (HKSOA) and the names of these two families always float in the shipping world.

It was around 1948 that Mr. M H Liang went to Taiwan from Shanghai and served on board a ship in the Tung's fleet. He married into the Tung family and moved to Hong Kong from Taiwan. This began M H's career in the shipping field.



Mr. M H Liang at work

When I first walked into M H's office at Harbour Centre I was amazed to see so many certificates and photos displayed in his office. Nearly all the certificates showed M H's participation and chairmanship in those reputable classification societies and shipping committees. Memorial plaques demonstrated that he had taken part in and had contributed at many governmental consultative committees and working groups. No doubt, those displayed photos could prove his time with the top government officials, political and business celebrities. M H is well known in the shipping community and is one of the active and enthusiastic members behind the scene to promote Hong Kong as an international shipping centre.

After joining the Island Navigation, M H spent most of his time in Japan to look after the Company's new building projects. Although M H had spent over 10

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SHIP REPAIRS



Inside Mr. M H Liang's office

years in Japan his Japanese is not as good as Mr. Frank Tsao's. However, he can speak Shanghainese very fluently though he is a Cantonese. M H returned to Hong Kong in the early 1970s and worked in the Company's marine operations. Upon complete restructuring of the Company in 1987, M H became the Executive Director of OOIL and Vice Chairman of Island Navigation. When Mr. C H Tung became the Chief Executive of the HKSAR in 1997, M H resigned from OOIL and took up the chairmanship of Island Navigation until now.

M H had been the chairman of the Liberian Shipowners Council and the chairman of the Hong Kong Shipowners Association between 1977 and 1979 and 1983 to 1985 respectively. It was M H who asked Mr. Michael Farlie, director of the HKSOA, to embark on a major membership drive in 1984. He gave an instruction that "any firm located in Hong Kong that did any sort of business with our owner members ought to demonstrate their solidarity and support for our "shipping" community by becoming an associate member of HKSOA. Those who failed to see the point or did not

sign up straightaway, had to be reminded what valuable networking they were missing through their absence from the association's many functions. They are also denying their staff the chance of attending our seminars, golf outings, etc." M H understood that associate membership was of vital importance for HKSOA, because when it came to putting its views to the Hong Kong Government or to international organizations, the breadth of its membership enabled it to speak for the whole shipping community rather than shipowners alone.

The UK Government agreed in principle in 1973 that Hong Kong should have its own separate shipping register, but it wanted to carry out lengthy studies before it would commit itself further. The maritime industry in Hong Kong, including HKSOA, was asked for reports of its views, but no further progress was made in matters of a register until the 1980s when M H became the chairman of HKSOA. The question of arrangements that would come into place under China's sovereignty became a pressing issue. M H was very clear about the need of an autonomous Hong Kong Shipping Register at that time. From that time onwards, M H fully committed himself to help the Hong Kong Government in setting up the Hong Kong Shipping Register.

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The autonomous Hong Kong Register of Shipping opened on 3 December 1990. Despite high hopes, it did not succeed in attracting much tonnage in the early days. M H understood that Hong Kong is an international maritime centre, he commented that government should not simply look at the port or terminal matters alone. He opined that maritime industry includes all businesses concerning shipping, the port, the terminals and many other shipping related businesses. M H was one of the initiators of the shipping industry to persuade and convince the government to expand the Hong Kong Port Development Board into the Port and Maritime Board (PMB) in 1998. M H was appointed as a member of the PMB. He was also appointed as the chairman of the Shipping Register sub-committee of the Board. He continues to serve the Board from its inauguration to the present Maritime Industry Council (MIC).

M H was particularly keen in helping and supporting the local maritime industry. One of M H's achievements was to resolve concerns about Hong Kong and Taiwanese ships calling at each other's ports after 1997. During the period of Mr. George Chao's chairmanship at HKSOA, he led a group of shipowners, including M H, to discuss the issue with the Taiwanese counterparts. An agreement was reached in May 1997 on the flag that Hong Kong and Taiwanese ships should fly when they enter each other's ports.

With M H's participation in the PMB, he and Mr. Frank Tsao initiated the re-engineering of the Hong Kong Shipping Register in 1998. As confidence grew after 1997 both with clear stability in the status quo and then an overhaul of regulations and procedures within the Register, the Hong Kong flag fleet stands in excess of 38 million grt to-day.

M H's energy also goes to training and education of the youngsters. He takes part in the Advisory Board of the Logistics and Transportation Department of the Hong Kong Polytechnic University. I recall that shortly after the establishment of the autonomous Hong Kong Shipping Register in 1990, M H joined Marine Department in conducting a seminar for the school

career masters on "Training and Prospects of Seafarers". He helped me a lot in tackling those questions raised by the career masters. He was very proficient in the training of seafarers. Both MH and Mr. Frank Tsao contributed a lot of their time and effort to the Advisory Board of the PolyU. They are now proceeding to influence the government to pay more attention to establishing a Maritime Research and Development Centre in Hong Kong.

Talking about so many maritime and shipping related matters I may be blamed if I do not mention about M H's involvement in the cultural issue. A number of people in Hong Kong, including Mr. Frank Tsao and M H, perceived the need for a maritime museum in Hong Kong. It took Mr. Anthony Hardy's vision and tenacity to turn the dream to reality. With Anthony Hardy's hard work and determination the Hong Kong Maritime Museum was established and opened in 2005. Both M H and Mr. Frank Tsao were the foundermembers of the Trust. Housed in Murray Building and overlooking Stanley Bay, the museum has been funded entirely by the Hong Kong maritime community and is a worthy testimony both to the industry's commitment to "Maritime Hong Kong" and their pride in the past.

I appreciate very much that M H has given me so much of his time in attending my interview. M H said he would continue to serve and work for the industry. Thinking about the imminent election of the Legislative Council M H opines that the industry should have an independent voice at LegCo. He considers that the Maritime Industry Council may invite more industrial bodies to join, such as the Institute of Seatransport. Since the industry has spent much effort in setting up the Maritime Museum, should government step in to help to maintain its survivability, at least, to indicate the future location of the Museum.

(S Y Tsui interviewed M H Liang on 7 August 2008. Some background information of this article was obtained from the "Changing Places – the Remarkable Story of the Hong Kong Shipowners")

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HKIMT & HKJB News

Student Project Presentation at IVE Tsing Yi Technical College



Chairman Nelson Yu gave a welcoming speech

We must thank Y K Szeto for arranging the student project presentation on Friday, 27 June 2008 at the IVE Tsing Yi Technical College. HKJB members, including Nelson Yu, SY Tsui, KS Szeto, Alan Tang, CK Mak, Ernest Chan, KK Lo, Albert Lo, and Richard Dias found time to attend the presentation. Other members, such as Stanley K L Lui of Lloyds and Dr KS Fung also attended.

We all appreciated the effort the students had done for their projects. We opined that the technical content and quality of the presentations could have rooms for improvement. Some students could have presented their projects in a better professional way if they could master better their spoken English.

We were a bit disappointed to see the low number of



A student presented his final year project

students turning up at the event. Perhaps, it was due to the term break. Attending the project presentation would give students more opportunities to develop themselves and to experience themselves in achieving better presentation skills. Some of them had lost the opportunity this time. It was very encouraging to see the Head of the Engineering Department showing up at the presentation. Although he did not stay until the end of the presentations we understood he had given support to his lecturers and students.

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Students and HKJB & HKIMT members at the presentation

We look forward to having a better presentation next year.

(Nelson YU)

Technical and IMO Issues

Revised MARPOL Annex VI – Regulations for the Prevention of Air Pollution from Ships

1. The MEPC57 of IMO held in April 2008 approved the proposed amendments to the MARPOL Annex VI which are expected to be adopted at MEPC 58 to

be held in October 2008. The global enforcement date of the amendments to the MARPOL Annex VI will be 1 March 2010.

2. The main changes are:

(a) **SOx Emission – Sulphur Cap**

Enforcement Date	Fuel Sulphur limit (m/m)
1.3.2010	1.0% in SOx Emission Control Areas (SECAs)
1.1.2012	3.5% global sulphur cap
1.1.2015	0.1% sulphur limit in SECAs
1.1.2020	0.5% global sulphur cap, subject to a feasible review not later than 2018. Should the 2018 review reach a negative conclusion, the effective date would be 1.1.2025.

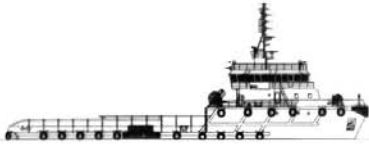
- (b) **NOx Regulations for new engines** (apply to engines of output exceed 130KW except engines for emergencies)

Tier II	NOx emission levels on board ships constructed after 1 January 2011: (a) 14.4 g/kWh when n is less than 130 rpm; (b) $44 * n^{(-0.23)}$ g/kWh when n is 130 or more but less than 2000 rpm; and (c) 7.7 g/kWh when n is 2000 rpm or more.
Tier III	NOx emission levels on board ships constructed on or after 1 January 2016 when operating in a designated Emission Control Area: (a) 3.4 g/kWh when n is less than 130 rpm; (b) $9 * n^{(-0.2)}$ g/kWh when n is 130 or more but less than 2000 rpm; and (c) 2.0 g/kWh when n is 2000 rpm or more.



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(c) **NOx Standards for existing engines**

NOx emission limit of 17.0 g/kW (Tier I standard) for a diesel engine with a power output of more than 5,000 kW **and** a displacement per cylinder at or above 90 litres installed on a ship constructed on or after 1 January 1990 but prior to 1 January 2000 subject to the availability of the approved upgrading kits.

(d) **Ozone Depleting Substances**

Every ship of 400 GT and above which has rechargeable systems that contain ozone depleting substances shall maintain an Ozone Depleting Substances Record Book.

(e) **Volatile Organic Compounds (VOCs)**

A tanker carrying crude oil shall have onboard a VOC Management Plan approved by the Administration.

(Y M Cheng)

LNG Carrier from “DNV Maritime – Ship Type White Papers”

DNV has a view that the energy industry, shipbuilders and shipping lines are facing a host of decisions about the adoption of LNG technologies. The LNG industry is evolving in a way similar to that of the oil markets, hence stimulating the LNG technological development.

There is a quest for better and more efficient solutions for all parts of the LNG chain. Larger and more effective liquefaction plants are being planned; larger ships with

efficient propulsion plants and minimized boil off with onboard re-liquefaction are being built; novel containment systems that challenge the traditional systems are being proposed; and new receiving terminals based on innovative technology are being developed. Sloshing impacts in larger tanks, qualification of novel cargo transfer solutions and assessment of site location based on safety and environmental impact are examples of recent projects. Fatigue considerations and tank sloshing loads are becoming important design parameters.

DNV considers that floating units for receiving, storage, re-gasification and export of natural gas as well as units for offshore production are the emerging markets.

Sloshing has been a concern from the start. With larger carriers, terminals and ships operating with partially filled tanks it becomes even more relevant. In the studies of sloshing, DNV takes the view that practical experiments were favoured over computer simulations. A sloshing impact is characterized by fluid, which hits the tank wall at high velocity. During these impacts gas is entrapped and mixed in the fluid. The effect of this gas on the impact pressures is significant and should not be neglected. Nevertheless, most Computational Fluid Dynamics (CFD) programs incorporate a mathematical model only for the fluid, while the entrapped and dissolved gas bubbles in the fluid are neglected.

DNV had issued in June 2006 a new LNG sloshing class note for membrane tank systems, where liquid motion resonance in LNG cargo tanks can lead to sloshing impacts at sharp corners and knuckles inside the storage tank, with potential risk of damage. The note

emphasizes sloshing loads and tank system strength for normal tank fillings as well as reduced tank-filling operations of membrane-type LNG carriers.

After four decades, diesel engines with Natural Boil-Off Gas (N-BOG) re-liquefaction plants and dual fuel engines with electric propulsion systems have managed to break the steam turbine dominance in the LNG shipping. Steam turbines have a good safety and reliability record. Whilst maintenance demands are limited, there are disadvantages in term of economy, emissions, redundancy and fewer qualified engineers. Dual-fuel engines operate in two distinct operating modes of either diesel or gas. In the gas mode, a small quantity of marine diesel oil is injected into the combustion space to trigger combustion of air and fuel. The diesel mode acts as a normal diesel engine with the injection of heavy fuel oil or marine diesel oil. Dual-fuel engines elegantly match the requirements of LNG shipping when they are combined with electric propulsion. In the pure diesel solution, applying re-liquefaction for BOG handling, twin two stroke diesel engines are locked in direct drive to fixed pitch propellers. Electric output is needed to power the re-liquefaction plant for the Natural Boil-Off Gas.

(An Extract from DNV's Ship Type White Papers-December 2007)

Articles of Leisure

Engineer Who Has Retired

There was an engineer who had an exceptional gift for fixing all things mechanical. After serving his company loyally for over 30 years, he happily retired.

Several years later the company contacted him regarding a seemingly impossible problem they were having with one of their multi-million dollar machines. They had tried everything and everyone else to get the machine fixed, but to no avail. In desperation, they

called on the retired engineer who had solved so many of their problems in the past. The engineer reluctantly took the challenge.

He spent a day studying the huge machine. At the end of the day, he marked a small “x” in chalk on a particular component of the machine and proudly stated, “This is where your problem is”.

The part was replaced and the machine worked perfectly again. The company received a bill for \$50,000 from the engineer for his service. They demanded an itemized accounting of his charges.

The engineer responded briefly:

One chalk mark: \$1

Knowing where to put it: \$49,999

It was paid in full and the engineer retired again in peace.

(From Jokes Directory)

PRACTICALITY

A pastor, a doctor and an engineer were waiting one morning for a particularly slow group of golfers. The engineer fumed, “What’s with these guys? We must have been waiting for 15 minutes!” The doctor chimed in, “I don’t know, but I’ve never seen such ineptitude! The pastor said, “Hey, here comes the greenskeeper. Let’s have a word with him.” “Hi George. Say, what’s with that group ahead of us? They’re rather slow, aren’t they?” The greenskeeper replied, “Oh, yes, that’s a group of blind firefighters. They lost their sight saving our clubhouse from a fire last year, so we always let them play for free anytime.” The group was silent for a moment. The pastor said, “That’s so sad. I think I will say a special prayer for them tonight.” The doctor said, “Good idea. And I’m going to contact my ophthalmologist buddy and see if there’s anything he can do for them.” The engineer said, “Why can’t these guys play at night?”

(From Jokes Directory)

Coming Events in 2008

1. Technical Meeting “Conversion of single hull VLCCs to double hull” (9.9.2008, Tuesday, 6:00pm, at Harbour Club, 25/F, Harbour Building, Central)
2. Technical Meeting “Ballast Water Management System” (30.9.2008, Tuesday, 6:00pm, at Conference Room A, 24/F, Harbour Building, Central)
3. Technical Meeting “Revised MARPOL Annex VI (Air Pollution)” or “Ship Recycling” (tentatively in October 2008)
4. Interferry – 33rd Annual International Conference, 5 – 7 October 2008 at Sheraton Hong Kong Hotel, Kowloon, Hong Kong
5. EAD AGM will be held in Hong Kong on 21 November 2008

6. HKJB & HKIMT Annual Ball 2008 at Shangri-La Hotel Kowloon, Hong Kong (confirmed on 21 November 2008)
7. INMEX Conference and Exhibition in Guangzhou cum Technical Visit to New Shipyard “Longxie” in Nam Sha of Guangdong (tentatively on 26 – 28 November 2008)

N.B.: Updated details and information of the above events will be placed in the website:

<http://www.hkimt.org.hk/technical.html>

[Please mark your diary if you are interested in attending, you will meet other members for information exchange/networking]

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