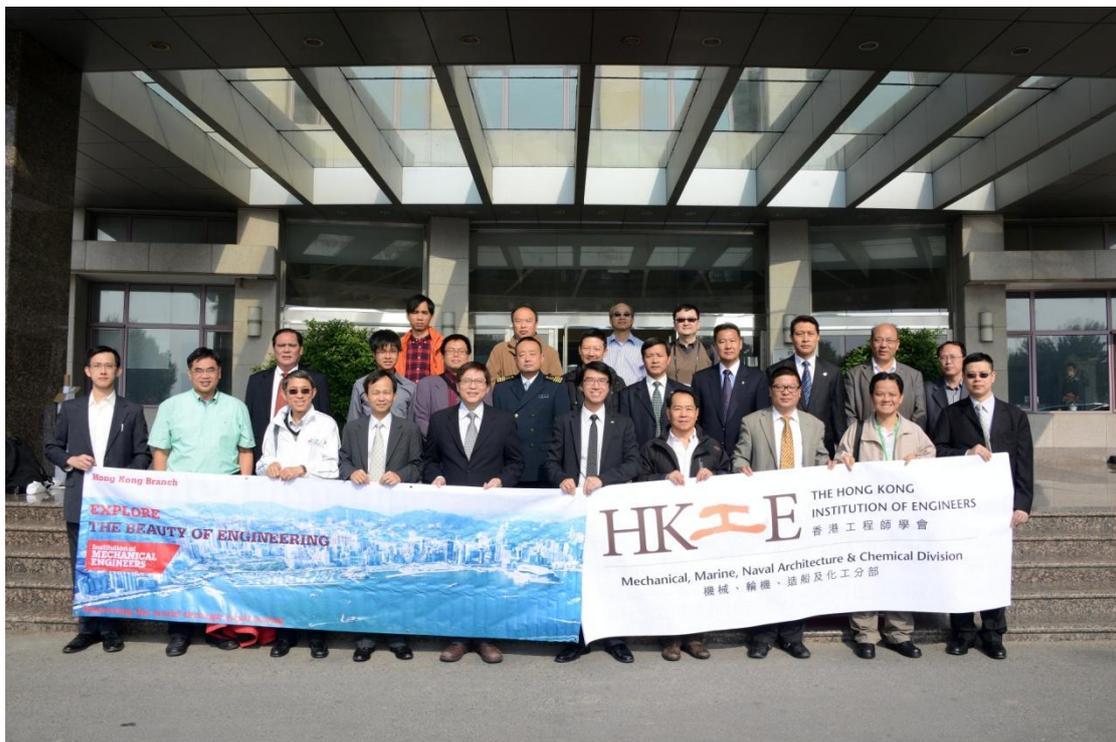


INSTITUTION OF MECHANICAL ENGINEERS HONG KONG BRANCH CUM
THE HONG KONG INSTITUTION OF ENGINEERS
MECHANICAL, MARINE, NAVAL ARCHITECTURE & CHEMICAL DIVISION
JOINT DELEGATION TO DALIAN, CHINA (24/10/2012 – 28/10/2012)

Dalian, with the population of around six million, is the second largest city of Liaoning Province at the southern tip of Liaodong peninsula in the north-eastern China. By the Yellow Sea and Bohai, the city is destined to be inseparable with maritime activities: education, industry and even defence. While marine and mechanical engineering are close brothers of each other, sharing the same interest in mechanical engineering, the Hong Kong Branch of Institution of Mechanical Engineers (IMechE-HKB) and the Mechanical, Marine, Naval Architecture & Chemical Division of The Hong Kong Institution of Engineers (HKIE-MMNC) organised a joint technical visit to Dalian from 24/10/2012 to 28/10/2012 to explore the maritime and engineering establishments of the city.

Dalian Maritime University



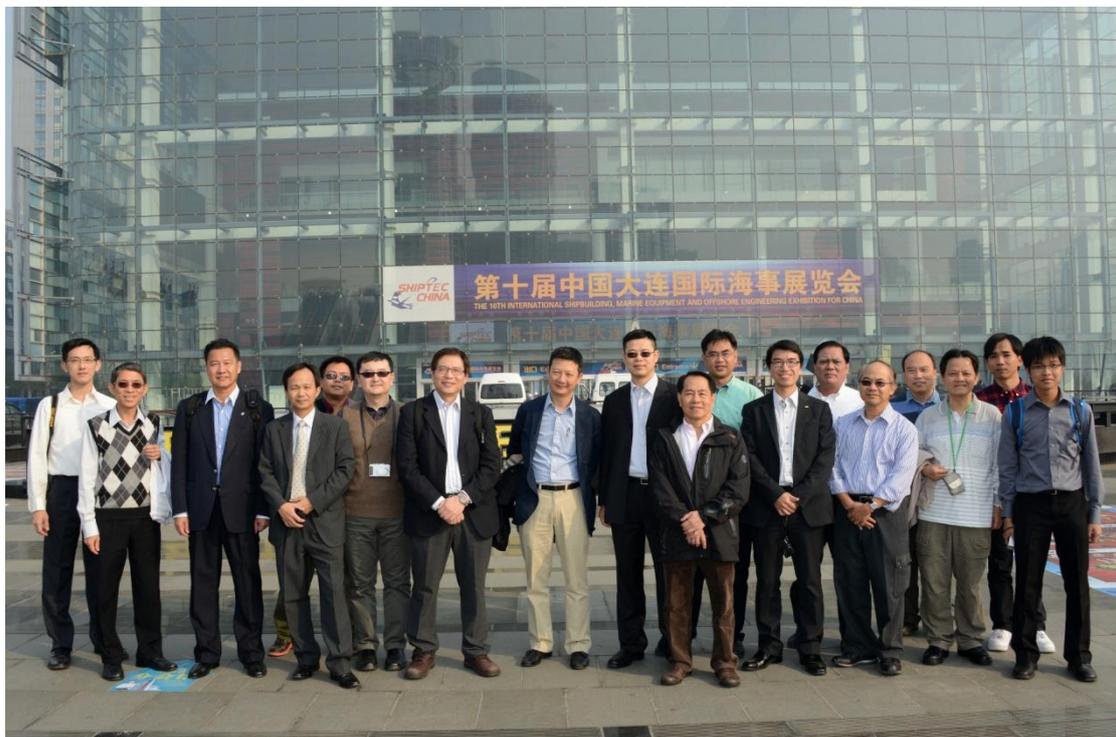
The joint IMechE-HKB and HKIE-MMNC delegation visited Dalian Maritime University (DMU) in the morning of 25/10/2012. DMU is the key maritime institution under the Ministry of Transport of the Chinese government. Its history can trace back to the late Qing Dynasty in 1909. It evolved to its present state after merging with two other navigation colleges in the early 50s. Now DMU has approximately 25,000 students and 1,005 teaching and research staffs, providing full ranges of courses and researches from navigation and nautical studies, marine engineering to pure science, humanities and social science.

The delegation was welcomed by the DMU representatives led by the Vice President Prof. Xin-Xiang Pan. The delegation leader cum IMechE-HKB Chairman, Mr. Louis Szeto, introduced IMechE to Prof. Pan and presented potential collaborations with DMU. By accrediting courses and establishing Student Chapter, IMechE could assist DMU to gain international acceptance via the recognition of the Washington Accord and connection with mechanical engineering students across the globe.

Following the introduction, the delegation was first shown the indigenously-developed full-size bridge and helicopter simulators. DMU had the largest number of bridge simulators in the world. The simulators were capable to simulate all weather, navigational and operational conditions of all major ports and channels. The delegates were particularly impressed by the realness of the bridge simulator. Stepped on the concrete floor outside the simulator after the visit, they felt dizzy walking from a real vessel.

Next were the engine room simulators. The simulators contained all major equipments found in a marine vessel: main engine, generator set, cooling water pump, control room and others, providing comprehensive and practical tutorials to the students. To strengthen the practical training, DMU invested a brand-new MAN-B&W 5S35ME-B9 marine engine with auxiliaries installed inside a purpose-built teaching block. At the time of visit, the facilities were under testing and commissioning. Upon operation in early 2013, DMU would equip with the most modern and sophisticated training tools of marine engines and engine room operations in the country. It was the first time for many delegates to see such advanced and industry-grade equipments dedicated for teaching purpose, and the commitment of DMU in excelling in maritime education was admired.

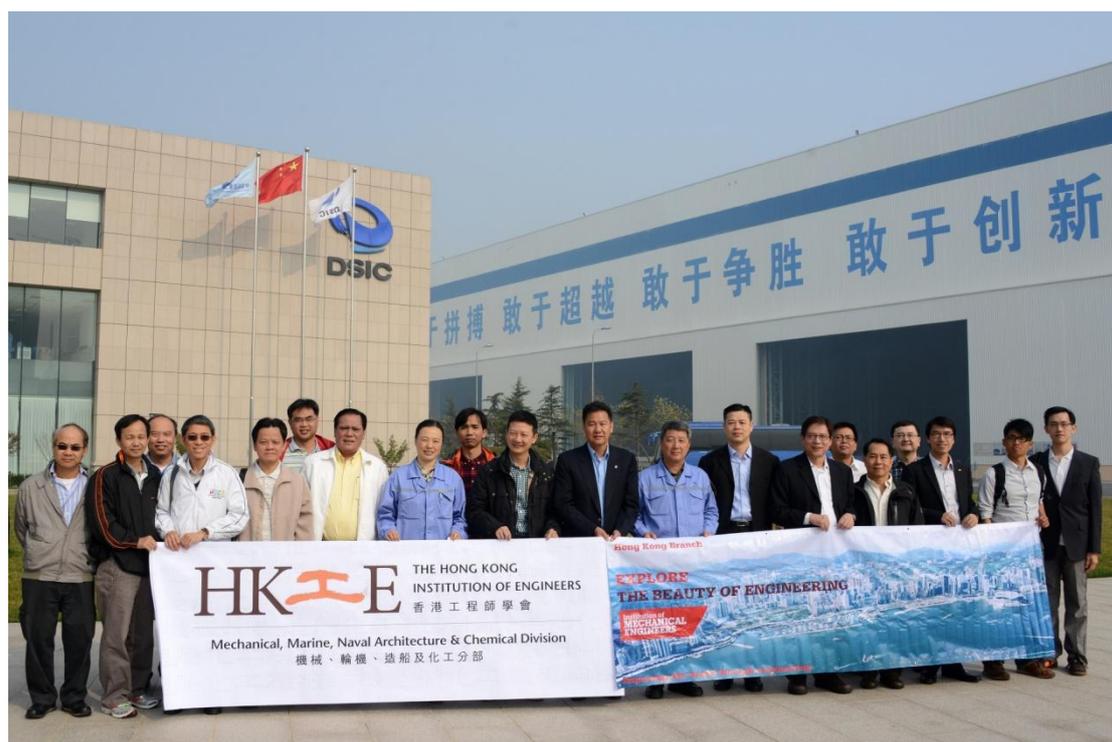
Shiptec China 2012



The delegation continued its visit in the afternoon of 25/10/2012 to Dalian World Expo Center for the 10th International Shipbuilding, Marine Equipment and offshore Engineering Exhibition for China (Shiptec China 2012). Shiptec China was founded in 1992, and held biennially. More than 2,000 meter square exhibition area with about a thousand of booths attracted around 20,000 people to the exhibition. Shiptec China has now become one of major maritime exhibitions in the north-eastern Asia. The exhibition included ship buildings and repairing, maritime equipment & fitting, ports and logistics, offshore engineering, marine technology and maritime servicing.

During the three hours visit to the Shiptec China, delegates could concurrently attend senior forums, technical seminars, presentations, lectures and so on during the exhibition period. On 24/10/2012, Offshore Forum China 2012 and Class Society Conference 2012 were held. Representatives from the industry associations, government and research institutions would give speeches related to offshore engineering, offshore oil and gas exploration, development plan, market trend & prospects in the former forum. On the other hands, representatives from five international classification societies would made elaborations of latest market status and direction to shipyards, ship-owners and marine equipment suppliers in the latter forum.

Dalian Shipbuilding Industry Co., Ltd. Shipyard



In the morning of 26/10/2012, the delegation marched to the shipyard of Dalian Shipbuilding Industry Co. Ltd. (DSIC). Affiliated to the state-owned China Shipbuilding Industry Corporation, DSIC is one of the three principle and strategic shipbuilding bases in China. Founded in 1898, DSIC has created a number of “first” in China, such as the first merchant ship of various classes, the first submarine and the first frigate for the Chinese Navy. With total assets and annual sales of 10 billion and 20 billion RMB respectively, DSIC is proud of being the only enterprise in China

encompasses the entire life cycle of full ranges of military and merchant ocean-going vessels. Furthermore, its business has extended to offshore oil and gas engineering, ocean engineering, onshore steel structure and port equipment design and manufacturing.

With the above introduction in mind, the delegates toured the gigantic vessel birth-place. The delegates visited China's first 300,000 tonne dry dock, in where a Very Large Crude oil Container (VLCC) for a South Korean client was under construction. The VLCC, and so were many others, was the systematic assembly of thousands of different modules to become pre-fabricated blocks, which were jointed together in the dry dock to form the hull and other vessel structures. To maximise productivity, the mega-dry dock builds one full and one rear-half hull at any time, with the front-half hull being constructed in the adjacent dock simultaneously. Once the full hull is set-off for sea trail, the vacant space is filled by the front-half hull, and the rear-half hull comes forward and joins with the front-rear to become a full hull. From sheet metal to a complete hull, the construction takes typically a year. Learning the above knowledge of shipbuilding at the dry lock where a VLCC was built live was an unforgettable experience for the delegates.

Lushun Naval Base

During this five-day visit, the delegates took the opportunity to visit some heritages near Dalian at Lushun. In the Ming Dynasty, the place was given its present name 'Lushun'(旅順), which expresses a wish for safe sailing. There was a Russo-Japanese War in Lushun. Lushun was under Japanese administration for more than 40 years following the surrender of the Russian forces. The Russian forces then got back the administration of Lushun and returned the administration to China until 1953.



Delegates visited Jiguan Hill (雞冠山) which was a battlefield during Russo-Japanese War in 1904. Delegates also visited Lushun Japan-Russia Prison which was built by Russia in 1902 and was extended by Japan in 1907. The State Department of the People's Republic of China announced that the Lushun Japan-Russia Prison Site was a national important preservation of cultural relic in 1998. Finally, delegates visited the most beautiful scene in Lushun called White Jade Hill (白玉山). The name 'white jade' was given by Li Hongzhang (李鴻章). During his way to the hill, he knew the opposite hill was named Gold Hill. He said gold need to be matched with white jade. Hence, the hill was called White Jade hill thereafter. The visit enriched the knowledge of delegates on the historical background of Lushun.

Conclusion and Remark

All delegates agree this delegation very enjoyable and knowledgeable and look forward to next meaningful visit by IMechE-HKB and HKIE-MMNC. IMechE-HKB and HKIE-MMNC would like to express its deepest gratitude to all the visited parties and the participants who contribute to the success of the delegation visit.

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WHT /Roy LAU

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