

Guiding light at sea - Lighthouse

Before electronic nautical charts and Global Positioning System (GPS) were invented, seafarers of ocean-going vessels relied on lights from the Waglan Lighthouse to tell them that they were reaching Hong Kong soon. To seafarers from Hong Kong, the lighthouse also indicated that home was just around the corner!

For the current edition of the Hong Kong Maritime News, the Editor paid a visit to the Aids to Navigation & Mooring Unit, the Waglan Island and the Green Island Lighthouses accompanied by Mr. Cheng Kwok-kei, Superintendent of Aids to Navigation /Aids to Navigation & Mooring (Acting), so as to deepen the understanding of the functions, operations and maintenance of the navigation lights.

Functions of the lighthouses

Lighthouses are towers to house navigation lights which provide navigational information to seafarers and guide them to position their vessels at night by making use of different light characteristics, such as colours of the light and flashing rhythm.

Operations of the lighthouses

The Waglan Lighthouse has a visibility range of up to 24 nautical miles, which is the longest visibility range in Hong Kong (about 44.5 km, approximately a round trip between Tsuen Wan and Chek Lap Kok). The Waglan Island does not have water and electricity supply, and storage batteries do not support navigation lights with high electricity consumption. Hence, the Waglan Lighthouse is the only navigation light in Hong Kong powered by generators.

The visibility range of the Green Island Lighthouse is up to 16 nautical miles, which is about 29.6 kilometres, approximately twice the distance between Victoria Peak and Tai Mo Shan. The compact navigation lighting system of the lighthouse includes batteries, solar panels, a light flasher and a photocell. When there is sufficient daylight, the solar panels of the lighthouse generate electricity from sunlight and charge the batteries. When the weather gets dark, the photocell automatically sends signals to turn on the navigation light.

Repair and maintenance of navigation lights

For navigation lights with longer visibility ranges or major traffic control facilities in principal fairways, such as the traffic lights in Ma Wan, colleagues of the Marine

Department (MD) conduct site inspections once every one to three months. For general facilities, such as pier lights, MD's colleagues carry out inspections once every four to six months.

The inspection procedures usually start with a visual inspection of the appearance of the navigation light and a test to see if the light is turned on automatically when the weather gets dark. Next, MD's colleagues have to cross-check its light characters, such as the accuracy of the light's colour and flashing rhythm, and inspect the performance of the batteries and power system. After that, MD's colleagues will clean the solar panels and the surface of navigation lights, in order to ensure that the power system is in good condition and the entire navigation light system fulfills the requirements.

Future development

With the advancement of technology, the existing navigation lanterns with visibility distance of less than 5 nautical miles are gradually replaced by Integrated Power Supply Lanterns. This innovative measure not only enables frontline colleagues to travel to and from remote areas without having to carry bulky and heavy equipment, but also minimises the risks in inspecting the light on a navigation buoy in rough sea. Moreover, the design of the lanterns avoids exposing the components, so as to prevent damages caused by vessel strikes. Apart from lightening the load of equipment of frontline colleagues and ensuring their work safety, the Integrated Power Supply Lanterns also improve the reliability of navigation lights, which helps achieve the goal of enhancing marine safety.

Although many ocean-going vessels nowadays are equipped with advanced equipment, such as electronic nautical charts and GPS, navigation lights are still indispensable as they aid seafarers in positioning and cross-checking the accuracy of navigational equipment fitted on board a vessel, thereby facilitating their control of the vessel's navigation and direction. Unlike road traffic, there are no road markings or traffic signals at sea to guide vessels. Hence, seafarers rely on buoys to tell the boundary of a fairway and confirm the safe water area. Likewise, beacons and isolated danger marks are used to warn vessels of dangerous rocks or shallow waters. Obviously, lighthouses and other types of navigation lights are indispensable in the foreseeable future.

Lighthouse memories

Since the adoption of automated operation on 22 August 1989, MD colleagues no longer stationed on the Waglan Island to man the lighthouse. Mr. Lam, a retired MD colleague who used to work at the Waglan Lighthouse, shared with the Editor his memories of the days spent on the island. Apart from shift duties on the signal tower, he was also responsible for cleaning and simple repair work on the island. He said that although there was not much entertainment on the Waglan Island, he could go fishing when he was off duty. He could even make an extra delicious dish for dinner when he caught a big fish!

To Mr. Lam, he could never forget the shift duties on the Island during typhoons. Even when facing towering waves and high winds, all stationing colleagues would make every effort to take precautionary measures to protect the lighthouse facilities. Some colleagues were also responsible for raising and lowering the typhoon signal flags – which was definitely a tough combat with the ruthless winds!

Remarks

Except with the permission of the Director of Marine, no vessel shall enter any area within 100 metres from the low water mark on Green Island and Waglan Island. Any person who contravenes with the regulation is liable to a fine at level 3 (\$10,000) and to imprisonment for 6 months upon conviction.

"Seeing in the Dark: Stories of Hong Kong Harbour and Lighthouse"

In May this year, the Hong Kong Maritime Museum in collaboration with the Lighthouse Heritage Research Connections of the City University of Hong Kong (CityU) organised a special programme series "Seeing in the Dark: Stories of Hong Kong Harbour and Lighthouse", which explored the 20th century history from the stories of lighthouses and reviewed the history of Hong Kong's marine development. The themed exhibition showcased the creative media work by CityU students and teachers, including cutting edge 3D models of the Waglan Island Lighthouse and teaching materials related to lighthouses. At the exhibition's screening sessions, the "Lighthouse Memories" documentary series was shown.

New round of recruitment for MD assistant ranks

The Marine Officer (MO) and Surveyor of Ships (SoS) grades are the core professional grades in the Marine Department (MD), responsible for discharging the statutory functions relating to all navigational matters in the waters of Hong Kong and safety standards of all classes and types of vessels. Due to the stringent entry

requirements, the two grades have been facing recruitment difficulties over the years. To solve the manpower shortage problem in the long run, assistant ranks were created in 2018 for the MO and SoS grades, namely Assistant Marine Officer (AMO) and Assistant Surveyor of Ships (ASoS) respectively, with a view to recruiting young candidates who are interested in pursuing the maritime career to join the Department as early as possible.

Newly recruited assistant rank officers have to complete a designated training programme in about four years to acquire the necessary professional knowledge, consolidate work experience, attain the required level of competency and obtain the professional qualification from the relevant professional institution. The programme comprises on-the-job training, academic qualification training, and industry attachment opportunities, etc. The Department also arranges serving officers in the MO and SoS grades to provide coaching to share their experience with individual assistant rank officers as their mentors.

The MD will launch another round of recruitment exercises for AMO and ASoS in mid-July this year. Interested and qualified marine talents are welcome to join the MD and unleash their potential. For details, please visit the MD's website: https://www.mardep.gov.hk/theme/maritime_industry/en/introduction_and_vacancies.html

Assistant Marine Officer

Main duties at assistant professional level

- Controlling and regulating ports, shipping and local crafts, public cargo working areas and ferry terminals, and coordinating search and rescue operations in the region
- Managing Government Fleet operations and district marine offices
- Planning the development of the port
- Combating marine pollution
- Providing harbour mooring services and hydrographic charting services

Entry Requirements

- A Bachelor's degree in a relevant discipline relating to the maritime field from a university in Hong Kong or equivalent, acceptable to the Director of Marine
- A Certificate of Competency (Deck Officer) Class 3 or above issued by or a certificate acceptable to the Director of Marine

- Met the language proficiency requirements of "Level 2" or above in Chinese Language and English Language in the Hong Kong Diploma of Secondary Education Examination (HKDSEE) or the Hong Kong Certificate of Education Examination (HKCEE), or equivalent

Assistant Surveyor of Ships

(Three streams: Engineer and Ship, Nautical and Ship)

Main duties at assistant professional level

All streams

Undertaking statutory and other related duties under the Merchant Shipping Ordinances pertaining to maritime safety, pollution prevention, security, seafarers welfare and management including casualty investigations and audits on Hong Kong registered ships and their companies

Engineer and Ship Stream

- Undertaking duties as a marine engineer consultant or manager for the Government on the construction of new vessels and maintenance of the Government Fleet
- Assisting in the conduct of examination for marine engineer officers' certificates of competency
- Undertaking statutory and other related duties under the Boiler and Pressure Vessels Ordinance

Nautical Stream

- Assisting in the conduct of examination for deck officers' certificates of competency
- Undertaking duties as a nautical consultant for the Government

Ship Stream

- Undertaking duties as a naval architect for the Government on the construction of new vessels and maintenance of the Government Fleet

Entry Requirements

All streams

Met the language proficiency requirements of "Level 2" or above in Chinese Language and English Language in the Hong Kong Diploma of Secondary Education Examination (HKDSEE) or the Hong Kong Certificate of Education Examination (HKCEE), or equivalent

Examination (HKDSEE) or the Hong Kong Certificate of Education Examination (HKCEE), or equivalent

Engineer and Ship Stream

- A Bachelor's degree in a relevant engineering discipline from a university in Hong Kong, or equivalent
- A Certificate of Competency (Marine Engineer Officer) Class 3 or above issued by or a certificate acceptable to the Director of Marine

Nautical Stream

- A Bachelor's degree in a relevant discipline relating to the maritime field from a university in Hong Kong or equivalent, acceptable to the Director of Marine
- A Certificate of Competency (Deck Officer) Class 3 or above issued by or a certificate acceptable to the Director of Marine

Ship Stream

- A Bachelor's degree in naval architecture or related technology from a university in Hong Kong, or equivalent

Hong Kong Shipping Registry's new webpage launched

To facilitate the public to browse and search with ease the services, information and latest news provided by the Hong Kong Shipping Registry (HKSR), the Marine Department launched a new webpage for HKSR in March this year.

- Link: <https://www.mardep.gov.hk/en/hksr/index.html>

The new webpage for HKSR features a banner notice board at the top of the page. With full-view images, captions and links to respective information web pages, the users can get the latest updates of issues and events about Hong Kong-registered ships such as the dedicated 24-Hour hotline for urgent dispensation, flag state quality control audit and latest developments of regional desks. The new webpage also adopts a clear navigation structure with all the information related to Hong Kong registered ships arranged under a comprehensive menu. Detailed information are categorised according to the service nature including ship registration procedures, ship compliance and quality assurance, seafarer registration and certification, marine incident investigations and ship security. In addition, quick links are provided to enable users to download application forms and obtain latest news on shipping circulars, maritime conventions, etc.

To keep pace with the setting up of Regional Desks (RDs) in London, Shanghai and Singapore, three separate webpages for these RDs have also been launched. Through HKSR's webpage, users can learn about the services provided by the RDs and other information including their contact.

- Regional Desk (London) - https://www.mardep.gov.hk/en/hksr/rd_ld.html
- Regional Desk (Shanghai) - https://www.mardep.gov.hk/en/hksr/rd_sh.html
- Regional Desk (Singapore) - https://www.mardep.gov.hk/en/hksr/rd_sgp.html

Furthermore, a dedicated 24-hour hotline for application of dispensation was set up in May. Ship owners, ship managers or ship masters who need to make an urgent application of exemption/dispensation on equipment/manning for Hong Kong registered ships after office hours may contact the Cargo Ships Safety Section by calling the hotline.

Departmental News

Mr. Shi Qiang, Assistant Director/Local Vessels and Examination, attended the Qualifications Framework (QF) Partnerships Commendation Ceremony and QF in Action (QFIA) Launch Ceremony on 25 March and accepted the commendation for MD's support and contributions to the implementation of the QF. MD is the first government department to provide QF-recognised qualifications. Through recognising qualifications which cover academic background, professional experience and vocational training, not only did MD enhance the professionalism of the qualifications of Hong Kong seagoing Certificate of Competency and Local Certificate of Competency, the Department has also been recognised as "2020 QFIA Achiever".

The maritime industry is historically a male-dominated industry. But things have changed, nowadays more and more women have chosen to join the sector. Two female officers from MD, Ms. Peggy Hui, Assistant Marine Controller and Ms. Lilian Chan, Ship Inspector (Acting), were interviewed by News.gov.hk, sharing their experience as female workers to join the maritime industry and their work at MD. They consider the career prospects in the maritime industry to be bright, and there are clear career paths for them to set goals and work hard to achieve them.

Video link:

https://www.news.gov.hk/eng/2021/04/20210401/20210401_151545_685.html?type=feature

To further enhance public awareness of safety in the use of local vessels for water sport activities, MD and the Hong Kong Police Force produced a set of brand-new TV and radio Announcements in the Public Interests (APIs) to provide safety advice concerning water sport activities. The APIs, which remind the coxswains and lookout men to always keep an eye on passengers, and the public to put on life-saving gear before engaging in water sports, are now being broadcast on various local TV and radio channels.

Video link: <https://youtu.be/ABipzgO6rFU>

In light of the impact of the COVID-19 pandemic, MD produced a set of promotional and publicity materials on water sports safety for distribution to the trade in lieu of an onsite Safety Afloat Educational Seminar this year. Members of the public can also download the materials from the Department's website as follows:

https://www.mardep.gov.hk/en/publication/materials/publicity_material.html

The Development Bureau in collaboration with the Harbourfront Commission organised the production of a special TV series "Let's Talk about Victoria Harbour". The programmes were aired on TV in April and May with one of the episodes featuring the Government Dockyard (GD). The episode comprises interviews of GD colleagues, including Mr. Jammy Ng, Senior Surveyor of Ships, Mr. Wong Wing Chuen, Marine Surveyor and Mr. Chan Fu, Tech Services Manager. During the interviews, they shared their memories of working at MD and feelings for Victoria Harbour.

Video link: <https://youtu.be/VxVzsfww2P0>

In addition to the daily marine refuse collection and scavenging services, MD conducted a large scale cleansing operation at Aberdeen Typhoon Shelter from 21 to 22 April, to step up efforts to keep the sea clean. Promotional leaflets were also distributed by MD officers to remind the public to keep the harbour clean.