

For discussion on
26 November 2018

Legislative Council Panel on Economic Development

Incorporating in Local Legislation the Latest Requirements of the International Maritime Organization

Merchant Shipping (Safety) Ordinance (Cap. 369)
Merchant Shipping (Prevention and Control of Pollution)
Ordinance (Cap. 413)
Merchant Shipping (Seafarers) Ordinance (Cap. 478)
Freight Containers (Safety) Ordinance (Cap. 506)

Purpose

This paper seeks Members' comments on six legislative proposals which seek to incorporate into local legislation the latest requirements of four conventions of the International Maritime Organization ("IMO") relating to seafarers' training requirements, the safe operation of freight containers, the carriage of solid bulk cargoes, and the prevention and control of marine pollution.

(I) Seafarers' Training Requirements

Background

2. IMO adopted the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers ("STCW Convention") in 1978 to promote the safety of life and property at sea, as well as the protection of the marine environment by establishing international standards on training, certification and watchkeeping for seafarers. The STCW Convention came into force in 1984 and is implemented in Hong Kong through the Merchant Shipping (Seafarers) Ordinance (Cap. 478) ("the Ordinance") and its subsidiary legislation. IMO adopts resolutions from time to time to amend the STCW Convention to ensure that seafarers possess the necessary qualification and skills for operating ships with new technological and operational practices. The last exercise to incorporate the training and certification requirements for seafarers of the "Manila Amendments" of the

STCW Convention ¹ into our local legislation was completed in November 2016.

Legislative Proposal

3. This exercise seeks to incorporate the latest requirements of two IMO resolutions, i.e. one concerning the training of seafarers working on ships using low-flashpoint fuels² which came into force internationally in 2017, and another concerning seafarers working on passenger ships that came into force in 2018. This will be achieved by making a new regulation under the Ordinance and amending the Merchant Shipping (Seafarers) (Passenger Ships—Training) Regulation (Cap. 478AD) thereunder respectively. Key requirements to be incorporated are highlighted below—

(a) ***Training Requirements on Ships Using Low-flashpoint Fuels***—As there is an increasing number of ships using low-flashpoint fuels, IMO has made it compulsory for seafarers working on those ships to receive relevant training³ starting from 1 January 2017. Seafarers have to attend courses arranged by convention parties to acquire knowledge including the physical properties and characteristics of the fuels used on board, as well as the bunkering, stowage and securing of the fuels. Seafarers working on ships using low-flashpoint fuels are required to obtain a basic training certificate, while masters, engineering officers and officers with immediate responsibility for maintaining and using low-flashpoint fuels on ships are required to obtain an advanced training certificate issued by the Director of Marine (“DM”) in addition to a basic one.

(b) ***Crowd Management Training on Passenger Ships*** — In the wake of a serious cruise accident in Italy in 2012⁴ and in view of the increasing carrying capacity of passenger ships, training courses in

¹ In 2010, to keep training standards in tandem with new technological and operational requirements, IMO adopted a major revision to the STCW Convention, commonly known as the “Manila Amendments”, which updated the training and certification requirements for seafarers to enhance marine safety. The requirements apply to seafarers of all ranks serving on sea-going merchant ships. The Manila Amendments have been enforced internationally with effect from 1 January 2017.

² Low-flashpoint fuels are fuels with a flashpoint of less than 60°C, such as liquefied natural gas.

³ To do so, IMO has mandated the training requirements of the International Code of Safety for Ships using Gases or other Low-flashpoint Fuels (“IGF Code”) under Chapter V of the STCW Convention.

⁴ Italian cruise ship Costa Concordia, with some 4 200 persons on board, capsized after striking an underwater rock near Tuscany, Italy, in January 2012, resulting in 32 deaths.

relation to crowd management for masters, officers and qualified ratings⁵ designated to assist passengers in emergency situations held after June 2018 must include elements in emergency plans and mustering procedures of ships such that these crew members will have the knowledge and ability to control a crowd in emergency situations and assist a crowd to designated assembly and embarkation stations of ships. In Hong Kong, the Maritime Services Training Institute offers crowd management training for seafarers working on passenger ships, and the relevant training courses have included the necessary elements required by IMO.

(II) Safe Operation of Freight Containers

Background

4. To facilitate the international transport of containers, IMO adopted the International Convention for Safe Containers (“Container Convention”) in 1972 to standardise the requirements for testing and inspecting containers, as well as to prescribe the procedures of their maintenance, examination and control for safe transportation. The Container Convention came into force internationally in 1977 and is implemented in Hong Kong through the Freight Containers (Safety) Ordinance (Cap. 506) (“Container Ordinance”) and its subsidiary legislation.

5. In accordance with the Container Convention, any container used for international transport must be affixed with a valid safety approval plate (“SAP”) issued by a convention party to the Container Convention or its Recognised Organisations (“ROs”)⁶. Each SAP must contain information including the country of approval, the manufacturing date of the container, the maximum weight-carrying capability, and the racking test load value.

6. In Hong Kong, DM has delegated the authority to approve containers and SAPs to ROs. The Marine Department (“MD”) is in charge of monitoring compliance and DM could in writing declare that an approval is

⁵ Qualified ratings are crew members of a ship who are qualified to possess certificates of proficiency issued under the STCW Convention.

⁶ Recognised Organisations (“ROs”) are international bodies specialised in the technical areas of ships, such as ship construction, equipment, operation and surveys, etc. At present, Marine Department entrusted ROs through contractual agreements to carry out certain services including ships’ survey and certification.

no longer valid if it considers the container does not comply with any of the requirements of the Container Ordinance.

Legislative Proposal

7. This exercise seeks to incorporate the requirements of the two IMO resolutions that came into force internationally in 2012 and 2014. Containers used for international transport should have already complied with the requirement. The major requirements proposed to be incorporated are highlighted below —

- (a) ***Specifications for Containers with Limited Stacking Ability*** — To prevent containers from collapsing or being damaged during transport, starting from 1 January 2012, there must be conspicuous marking on the SAP for containers with limited stacking or racking abilities (irrespective of their manufacturing dates) such that these containers can be easily identified and arranged at the top of a stack of containers. We will incorporate the new specification requirements into the Schedule to the Container Ordinance.
- (b) ***Alignment of Physical Dimensions and Units on SAP*** — To ensure that a uniform set of terms, dimensions and units are used so as to facilitate the international transport of containers, IMO has required that the physical dimensions and units marked on the SAP of containers must be aligned with the International System of Units⁷. Such changes include replacing the terms “weight” and “stacking weight” with “mass” and “stacking load”. To incorporate this requirement into local legislation, we will amend the Interpretation Section of the Container Ordinance.

(III) Carriage of solid bulk cargoes

Background

8. The International Convention for the Safety of Life at Sea (SOLAS) was adopted by IMO and entered into force in 1980. Different aspects of

⁷ The International System of Units is the most widely used system of measurement which defines the universal meaning of seven basic units of measurement for common physical quantities, such as metre for length and kilogram for weight.

maritime safety are covered under different chapters of the Annex to SOLAS⁸. Requirements concerning the carriage of solid bulk cargoes are embedded in the International Maritime Solid Bulk Cargoes Code (IMSBC Code), which is under Chapter VI of SOLAS. In Hong Kong, the requirements of SOLAS, including those in the IMSBC Code, are implemented through the Merchant Shipping (Safety) Ordinance (Cap. 369) and its subsidiary legislation. IMO updates the requirements of the IMSBC Code from time to time, and the last exercise to incorporate requirements relating to the carriage of solid bulk cargoes into our local legislation was completed in July 2016.

Legislative Proposal

9. To enable necessary precaution for proper stowage and safe carriage of cargoes, shippers are required to provide appropriate information on the cargo to the ship master in advance. Such information includes the quantity of the cargoes, the likelihood of shifting, the moisture content and whether the solid bulk cargoes are hazardous when being transported in bulk carriers. IMO has made it mandatory for shippers to, starting from 1 January 2019, declare an additional piece of information about whether the cargoes being shipped would be harmful to marine environment. To implement IMO's latest requirement on the provision of information in the carriage of solid bulk cargoes, we will need to amend the Merchant Shipping (Safety) (IMSBC Code) Regulation.

⁸ SOLAS covers different aspects of maritime safety, as follows:

Chapter I:	General provisions;
Chapter II-1:	Construction—structure, subdivision and stability, machinery and electrical installations;
Chapter II-2:	Construction—fire protection, fire detection and fire extinction;
Chapter III:	Life-saving appliances and arrangements;
Chapter IV:	Radiocommunications;
Chapter V:	Safety of navigation;
Chapter VI:	Carriage of cargoes and oil fuels;
Chapter VII:	Carriage of dangerous goods;
Chapter VIII:	Nuclear ships;
Chapter IX:	Management for the safe operation of ships;
Chapter X:	Safety measures for high-speed craft;
Chapter XI-1:	Special measures to enhance maritime safety;
Chapter XI-2:	Special measures to enhance maritime security;
Chapter XII:	Additional safety measures for bulk carriers;
Chapter XIII:	Verification of compliance; and
Chapter XIV:	Safety measures for ships operating in polar waters.

(IV) Prevention of Air Pollution from Ships

Background

10. To protect the marine environment and minimise pollution from ship operation, IMO adopted the International Convention for the Prevention of Pollution from Ships (“MARPOL”) in 1973. MARPOL came into force in 1983 and has six annexes regulating the discharge of different pollutants⁹. This legislative exercise focuses on MARPOL Annex VI. MARPOL Annex VI was adopted in 1997 to prohibit the emissions of ozone-depleting substances and regulate the emission of air pollutants such as sulphur oxides and nitrogen oxides from ships, as well as to introduce emission control areas (“ECAs”) in designated waters¹⁰. The requirements of MARPOL Annex VI are implemented in Hong Kong through the Merchant Shipping (Prevention of Air Pollution) Regulation (Cap. 413P). The last exercise to incorporate the requirements of MARPOL Annex VI in our local legislation was completed in March 2016.

Legislative Proposal

11. This exercise seeks to implement the latest requirements of two IMO resolutions that came into force internationally in 2017 and 2018 by amending the Merchant Shipping (Prevention of Air Pollution) Regulation. The requirements include strengthening the requirements of the emission standard of nitrogen oxides in ECAs, as well as the setting up of a data collection system for fuel oil consumption of ships. The requirements will apply to all Hong Kong-registered ocean-going vessels (“OGVs”) wherever they are and all OGVs in Hong Kong waters. Details of the requirements are highlighted below—

⁹ Annexes to MARPOL govern various substances as follows:

- Annex I: Regulations for the prevention of pollution by oil;
- Annex II: Regulations for the control of pollution by noxious liquid substances in bulk;
- Annex III: Regulations for the prevention of pollution by harmful substances carried by sea in packaged form;
- Annex IV: Regulations for the prevention of pollution by sewage from ships;
- Annex V: Regulations for the prevention of pollution by garbage from ships; and
- Annex VI: Regulations for the prevention of air pollution from ships.

¹⁰ ECAs are sea areas in which stricter controls are established to minimise airborne emissions from ships as defined by Annex VI of the 1997 MARPOL Protocol. Currently the ECAs designated by IMO for controlling the emission of sulphur oxides and nitrogen oxides from ships are the Baltic Sea Area, the North Sea Area, the North American Area and the United States Caribbean Sea Area.

- (a) ***New Record Requirement of Nitrogen Oxides Emission in ECAs*** — Different models of diesel engines will have different limits of nitrogen oxides emission. As ships navigating in ECAs are subject to a more stringent emission control limit of nitrogen oxides, they have to be installed or retrofitted with engines which can comply with the required standard. Some ships switch to use a diesel engine with lower emission of nitrogen oxides when they enter ECAs. To facilitate monitoring and inspection by port authorities, starting from 1 September 2017, ships entering and exiting ECAs will be required to properly record any engine status changes in their log book. Hong Kong-registered OGVs having to navigate in ECAs have already complied with the requirement.
- (b) ***Collection of Fuel Oil Consumption Data*** — To facilitate IMO to gather data on ships' fuel oil consumption which will be useful in determining objectively fuel oil consumption limits in the future, ships of 5 000 gross tonnage and above will be required to collect and report their fuel oil consumption data to their flag States or the ROs annually starting from 1 January 2019. IMO will aggregate all data submitted by flag States and ROs to facilitate agreement on fuel oil consumption limits to be imposed in the future. Flag States will issue a statement of compliance on ships' fuel oil reporting, and ships will be required to keep such statement of compliance on board. OGVs have been informed of the detailed requirements and we do not expect there will be problems with compliance.

(V) Prevention of Pollution by Garbage from Ships

Background

12. MARPOL Annex V seeks to eliminate and reduce the amount of garbage being discharged into the sea from ships. Under MARPOL Annex V, garbage includes all kinds of food, domestic and operational waste, all plastics, cargo residues, incinerator ashes, cooking oil, fishing gear, and animal carcasses generated during the normal operation of the ship and liable to be disposed of continuously or periodically. In Hong Kong, the requirements of MARPOL Annex V are implemented through the Merchant Shipping (Prevention of Pollution by Garbage) Regulation (Cap. 413O). The Merchant Shipping (Prevention of Pollution by Garbage) Regulation was last updated in April 2015.

Legislative Proposal

13. To assist governments, ships and port operators in implementing relevant requirements under MAPROL Annex V, IMO developed and adopted the 2012 Guidelines for the Implementation of MARPOL Annex V (“the 2012 Guidelines”). Having regard to the technical nature of the guidelines and that the requirements therein will be updated from time to time, we have adopted a direct reference approach in our local legislation to enable our legislation to be kept up-to-date with IMO’s requirements. In a bid to establish a set of mandatory criteria for classifying whether substances are harmful to the marine environment, in 2016, IMO consolidated the 2012 Guidelines and made them into Appendix I of MARPOL Annex V. The Appendix will provide easy reference to shippers and seafarers. We therefore have to make a technical amendment to update the references to the 2012 Guidelines in the Merchant Shipping (Prevention of Pollution by Garbage) Regulation.

14. In addition, IMO has set out further requirements in relation to the information to be recorded upon each discharge or incineration of garbage on board ship¹¹. We will incorporate such requirements into our local legislation.

(VI) Prevention of Oil Pollution from Ships

Background

15. MARPOL Annex I details the discharge requirements for the prevention of pollution by oil and oily materials from ships. In Hong Kong, its requirements are implemented through the Merchant Shipping (Prevention of Pollution by Oil) Regulation (Cap. 413A). The last exercise to incorporate requirements of MARPOL Annex I into our local legislation was completed in June 2016.

Legislative Proposal

¹¹ Under the new requirements, the information to be recorded upon each discharge or incineration include, among others, the date and time of the discharge or incineration, the category of the garbage involved, and the estimated volume of garbage involved.

16. This exercise seeks to implement an IMO resolution on the provision of oil sludge tanks, which came into force internationally in 2017. MARPOL Annex I sets out specific requirements concerning the provision of an oil sludge tank in ships (e.g. their capacity) and such requirements are technical in nature. As such, we have adopted a direct reference approach to keep our local legislation up-to-date with international requirements wherever possible. This notwithstanding, since IMO has further set out technical requirements on the means of disposal of oil residue, we need to reflect these additional requirements in our local legislation by amending the Merchant Shipping (Prevention of Pollution by Oil) Regulation.

Consultation

17. The Hong Kong Fleet Operation Advisory Committee and the Shipping Consultative Committee of MD have been consulted on the proposals concerning seafarers' training requirements, safe operation of freight containers and prevention of air pollution from ships between December 2016 and May 2018. Members supported the proposals.

18. The Port Operations Committee of MD was consulted on the proposal concerning safe operation of freight containers in May 2018. Members supported the proposal.

19. The Hong Kong Fleet Operation Advisory Committee of MD was consulted on the proposals concerning the carriage of solid bulk cargoes, the prevention of pollution by garbage from ships and the prevention of oil pollution from ships in November 2018. Members supported the proposals.

Advice Sought

20. Members are invited to comment on the proposals. Subject to the drafting progress, we plan to introduce the legislative proposals into the Legislative Council by batches in 2019.

**Transport and Housing Bureau
Marine Department
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