For discussion on
22 January 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)

Purpose

This paper seeks Members' comments on three legislative proposals which seek to incorporate the latest requirements of three conventions of the International Maritime Organization ("IMO") relating to the management of ballast water, the carriage of dangerous goods and marine pollutants, and the carriage of radioactive materials.

(I) Ballast Water Management

Background

2. A ballast tank is a compartment within a ship that holds water, which is used as ballast to provide stability, and hence maintain safety, for a ship during voyage. As shipping moves over 80% of commodities around the world, it is estimated that over three billion tonnes of ballast water are transferred every year.

3. However, when ships take in ballast water, they also take in the aquatic species, including bacteria or even viruses, which exist in the water. When the ballast water is discharged, the aquatic species are discharged together into the local marine environment. These foreign aquatic species

will invade and disrupt the local marine environment, which presents a major threat to the marine ecosystems.

4. To prevent the spread of harmful aquatic organisms from one region to another, IMO adopted the International Convention for the Control and Management of Ships Ballast Water and Sediments ("Ballast Water Management Convention") in 2004 to regulate the discharge of ballast water of ships by establishing standards and procedures for the management and control of ships' ballast water and sediments. The Ballast Water Management Convention came into force in September 2017.

Legislative Proposal

5. We propose to make a new regulation under the Merchant Shipping (Prevention and Control of Pollution) Ordinance (Cap. 413) to implement the requirements of the Ballast Water Management Convention in Hong Kong. The requirements will apply to all Hong Kong-registered ocean-going vessels ("OGVs"). Some of the major requirements are highlighted below—

(a) ***Ballast Water Exchange*** — Ships are required to take in fresh seawater in exchange of the ballast water in water tanks for dilution before discharge. To minimise the impact of bringing invasive aquatic species to new environments through shipping, ships will be required to exchange ballast water at least 200 nautical miles from the nearest land and at least 200 metres in water depth whenever possible. At least 95% of the total volume of ballast water has to be exchanged before it is discharged to sea.

(b) ***Ballast Water Management Plan*** — Ships will be required to have on board a ballast water management plan which details the safety and operational procedures of using the ballast water management system on ships, conducting ballast water exchange and disposing the sediments in the ballast water, as well as the reporting procedures to port authorities when discharging ballast water. The Ballast Water Management Plan is ship-specific, depending on the size, design and the discharge system on board of a ship.

(c) ***Ballast Water Record Book*** — Improper discharge of ballast water may present serious threats to the marine ecosystems. Ships will be required to carry a ballast water record book, which keeps record of every operation concerning ballast water including the circumstances

and reasons for discharge. The Ballast Water Record Book will be required to be kept on board of the ship for a minimum of two years after the last entry is made.

(II) Carriage of Dangerous Goods and Marine Pollutants

Background

6. IMO regulates the carriage of dangerous goods and marine pollutants through Chapter VII of the International Convention for the Safety of Life at Sea ("SOLAS")[1] and the International Maritime Dangerous Goods Code ("IMDG Code") therein, as well as Annex III to the International Convention for the Prevention of Pollution from Ships ("MARPOL")[2]. Chapter VII of SOLAS provides an international standard for the carriage and safe transportation of dangerous goods for OGVs. The IMDG Code classifies different types of dangerous goods including marine pollutants into various

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[1] SOLAS covers different aspects of maritime safety, as follows:

Chapter I:	Survey of ships and issue of certificates;
Chapter II-1:	Construction of ships covering subdivision and stability, machinery and electrical installations;
Chapter II-2:	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.

[2] 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.

classes[3] and sets out the requirements on packing, labelling, stowage and documentation in respect of the different classes of dangerous goods. Annex III to MARPOL regulates ships carrying the marine pollutants set out in the IMDG Code.

Legislative Proposal

7. In Hong Kong, IMO's requirements with regard to the carriage of dangerous goods and marine pollutants are implemented through the Merchant Shipping (Safety) (Dangerous Goods and Marine Pollutants) Regulation (Cap. 413H). Key requirements to be incorporated in the exercise are highlighted below—

(a) ***Classification of Dangerous Substances*** — One of the major and technical changes to the 2016 edition of the IMDG Code is the classification of dangerous substances. These changes include introducing new criteria and documentation requirements for carrying fireworks; the addition of new criteria for determining the viscosity of flammable liquids for assessing fire risk; and the inclusion of polymerising substances[4] as a type of dangerous substances subject to regulation.

(b) ***Carriage of Lithium Batteries*** — There has been an increasing number of incidents involving the carriage of lithium batteries in recent years. To ensure that lithium batteries are transported safely, packages carrying lithium batteries are required to be marked with a standardised notice indicating that they contain lithium batteries.

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[3] IMDG Code contains nine classes of dangerous goods:
Class 1: Explosives;
Class 2: Gases;
Class 3: Flammable liquids;
Class 4: Flammable solids or substances;
Class 5: Oxidizing substances and organic peroxides;
Class 6: Toxic and infectious substances;
Class 7: Radioactive substances;
Class 8: Corrosives; and
Class 9: Miscellaneous dangerous substances and articles.

[4] Polymerising substances are substances that will undergo a chemical reaction, namely polymerisation, which will generate intense heat and pressure.

(III) Carriage of Radioactive Materials

Background

8. To regulate the carriage of radioactive substances, IMO has adopted the International Code for the Safe Carriage of Packaged Irradiated Nuclear Fuel, Plutonium and High-Level Radioactive Wastes on board Ships ("INF Code"). The INF Code, which is part of the requirements of Chapter VII of SOLAS, sets out the requirements on various aspects including safety, temperature control of cargo spaces and the standard of radiological protection equipment on ships.

9. Currently, there is no Hong Kong-registered ship that carries INF cargo. The usual voyage of ships carrying INF cargo will not pass through Hong Kong waters. Nevertheless, we will incorporate the mandatory requirements of the INF Code into local legislation to fulfil our international obligation in case any such ship is registered in Hong Kong or operates through Hong Kong waters in future.

Legislative Proposal

10. We propose to make a new regulation under the Merchant Shipping (Safety) Ordinance (Cap. 369) to implement the requirements of the INF Code. The requirements will apply to Hong Kong-registered ships and ships within Hong Kong waters that carry INF cargo. Some of the major requirements are highlighted below—

(a) ***Temperature Control of Cargo Spaces*** — Radioactive substances are temperature-sensitive. Ships carrying INF cargo will be required to be equipped with independent ventilation or refrigeration systems that will keep the temperature of the cargo spaces below 55°C.

(b) ***Shipboard Emergency Plan*** — Ships carrying INF cargo will be required to have on board a shipboard emergency plan which sets out the safety and operational procedures for reporting incidents involving INF cargo, as well as a detailed action plan for controlling the release of INF substances and minimising their impacts when incidents occur. Such ships will also be required to have a list of port authorities and emergency contacts.

Consultation

11. The Shipping Consultative Committee and the Local Vessels Consultative Committee of the Marine Department have been consulted on the relevant legislative proposals. Members supported the proposals.

Advice Sought

12. Members are invited to comment on the proposals. Subject to Members' views, we plan to introduce the legislative proposals by batches into the Legislative Council by end 2018.

Transport and Housing Bureau
Marine Department
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