

For discussion on
27 July 2015

Legislative Council Panel on Economic Development
Incorporating in Local Legislation the Latest Standards
of the International Maritime Organization

PURPOSE

This paper informs Members of our proposals to incorporate in the relevant local legislation the latest requirements adopted by the International Maritime Organization (“IMO”) as set out in the International Regulations for Preventing Collisions at Sea, 1972 (“COLREGs”), and respectively in Chapters III, IV and V of the International Convention for the Safety of Life at Sea, 1974, as amended (“SOLAS”).

BACKGROUND

COLREGs

2. The COLREGs have been adopted by the IMO to enhance safety of navigation and prevent collisions between two or more vessels by setting out, amongst other things, the rules of navigation (such as look-out and speed) and standards for shapes¹, lights and sound signals to be used for drawing attention of and giving warning to other vessels. Besides, special signals are designated for sending emergency and distress messages. The COLREGs entered into force internationally on 15 July 1977.

3. The COLREGs are implemented in Hong Kong by means of the Merchant Shipping (Safety) (Signals of Distress and Prevention of Collisions) Regulations (Cap. 369N) (“the COLREGs Regulation”) enacted under the Merchant Shipping (Safety) Ordinance (Cap. 369) (“the Ordinance”). The COLREGs Regulation applies to all Hong Kong registered ships wherever

¹ Shapes are signals hung on a vessel for indicating the operational status (such as making-way, anchored, or aground) of the vessel during day time. Shapes may be in the form of ball, cylinder, cone, diamond, etc.

they may be.

SOLAS

4. SOLAS was adopted by the IMO in 1974 and entered into force globally on 25 May 1980 to ensure international maritime safety by specifying minimum standards for the construction, equipment and operation of ships. SOLAS includes Articles setting out, *inter alia*, the general obligations, followed by an Annex divided into 12 Chapters to cover different types and aspects of ships' operation².

5. SOLAS is implemented in Hong Kong through the Ordinance and its subsidiary legislation. By virtue of section 3 of the Ordinance³ and subject to the scope of application of the specific subsidiary legislation under the Ordinance, regulations made under the Ordinance mainly apply to Hong Kong registered ships engaged on international voyage and other ships visiting Hong Kong. In the current legislative amendment exercise, the following SOLAS Chapters are relevant - life-saving appliances and arrangements (Chapters III), radiocommunications (Chapter IV) and safety of navigation (Chapter V).

Present Situation and Need for Amendment

6. The IMO makes revisions to the COLREGs and SOLAS from time to time. All ocean-going vessels ("OGVs") have to comply with the relevant requirements as and when they come into effect, or else they may be denied entry into international ports. So far, Hong Kong registered ships engaged

² SOLAS contains provisions relating to survey of ships and issue of certificates (Chapter I), construction of ships covering subdivision and stability, machinery and electrical installations, fire protection, fire detection and fire extinction (Chapter II-1 and Chapter II-2), life-saving appliances and arrangements (Chapter III), radiocommunications (Chapter IV), safety of navigation (Chapter V), carriage of cargoes (Chapter VI), carriage of dangerous goods (Chapter VII), nuclear ships (Chapter VIII), management for the safe operation of ships (Chapter IX), safety measures for high-speed craft (Chapter X), special measures to enhance maritime safety and security (Chapter XI), and additional safety measures for bulk carriers (Chapter XII). There are two new chapters, viz. Chapters XIII on verification of compliance and Chapter XIV on safety measures for ships operating in polar waters which will take effect from 1 January 2016 and 1 January 2017 respectively.

³ According to section 3 of the Ordinance, save as otherwise provided in the Ordinance or in regulations made thereunder, the Ordinance shall apply to all ships except-

- (a) ships of war;
- (b) fishing vessels;
- (c) pleasure vessels; and
- (d) local vessels within the meaning of the Merchant Shipping (Local Vessels) Ordinance (Cap. 548) ("Local Vessels Ordinance") except a local vessel referred to in section 3(4) of that Ordinance.

on international voyage have no problems with compliance. As an associate member of the IMO and to maintain our status as an international maritime centre, we need to keep our local legislation aligned with the latest standards in COLREGs and SOLAS.

LEGISLATIVE PROPOSALS

(I) COLREGs

7. We propose to amend the COLREGs Regulation to incorporate the latest requirements with the key changes highlighted below –

- (a) to cover a new type of vessel called “Wing-In-Ground craft” (“WIG craft”), and to specify requirements for it to take off, land or fly near the surface. WIG craft is defined under the updated COLREGs to mean “*a multimodal craft which, in its main operational mode, flies in close proximity to the surface by utilizing surface-effect action*”. At present, there is no WIG craft in Hong Kong;
- (b) to cater for the special configuration of high speed craft of 50 metres or more in length⁴, to relax the vertical separation distance requirement between its two masthead lights, provided that such distance shall not be less than that calculated in accordance with a specified formula;
- (c) taking into account the practical circumstances for vessels of 12 metres or more but less than 20 metres in length, to waive the requirement for them to carry a bell. They only need to carry on board a whistle for making sound signals⁵; and
- (d) to update the list of officially sanctioned means for sending distress signals by replacing “radiotelegraph alarm signal” and

⁴ A vessel of 50 metres or more in length has to carry two masthead lights, and the after one (i.e. mainmast light) must be at least 4.5 metres vertically higher than the fore one (i.e. foremast light). Since the height-to-breadth ratio of a high-speed craft is much lower than other vessels, such vertical positioning requirement would make its masthead lights being placed disproportionately higher than its navigation bridge.

⁵ The use of different sound equipment is to indicate the vessel’s size, operational status and intention of manoeuvring during restricted visibility.

“radiotelephone alarm signal” which have become obsolete, with “a distress alert by means of digital selective calling (DSC)”⁶ and “a ship-to-shore distress alert transmitted by the ship’s Inmarsat or other mobile satellite service provider ship earth station”⁷.

(II) SOLAS Chapter III - Life-saving Appliances and Arrangements

8. SOLAS Chapter III stipulates requirements for OGVs in respect of lifesaving appliances and arrangements, including requirements for life boats, rescue boats and life jackets according to type of ships; as well as requirements on musters, emergency training and drills. Detailed technical requirements regarding the appliances are set out in the International Life-Saving Appliance (“LSA”) Code.

9. SOLAS Chapter III is implemented in Hong Kong through two regulations made under the Ordinance, namely the Merchant Shipping (Safety) (Life-saving Appliances) Regulation (Cap.369AY) (“the Life-saving Regulation”) and the Merchant Shipping (Safety) (Musters and Training) Regulations (Cap. 369AI) (“the Muster Regulation”).

10. The Life-saving Regulation contains requirements pertaining to life-saving appliances and arrangements. We propose to consolidate into the Life-saving Regulation the requirements on muster, emergency training and drills, which at present are implemented by the Muster Regulation. The Muster Regulation will be repealed simultaneously with the amendment to the Life-saving Regulation.

11. We propose to amend the Life-saving Regulation to incorporate the latest requirements of SOLAS Chapter III. The key changes are highlighted below –

Maintenance, Testing and Inspection of Life-saving Appliances

(a) the weekly inspection of survival craft, rescue boats and launching

⁶ DSC is a paging system that uses digital signals to transmit and receive calls on a specific marine radio channel. The call includes essential information of the vessel in distress (such as its identity, position and nature of distress). The call will be repeated automatically until an acknowledgment message is received by the vessel in distress.

⁷ Mobile satellite service is a marine communication service that uses satellite system which enables vessels to stay in constant contact with shore and to call for help in emergency.

appliances shall include, but not limited to, the condition of hooks, their attachment to the lifeboat and the on-load release gear being properly and completely reset. A report of the inspection should be entered in the log-book. For lifeboats, they should be moved out from their stowage location every week to test the launching arrangement;

Additional Requirements on the Provision of Life-saving Appliances

- (b) an immersion suit⁸ should be provided for every person on board a cargo ship. Free-fall lifeboat and inflatable or rigid liferafts shall be carried on board bulk carriers that are constructed on or after 1 July 2006. Passenger ships are required to carry the specified number of infant lifejackets⁹. For adult lifejackets that are not designed to fit persons weighing up to 140kg and with a chest girth of up to 1,750mm, a sufficient number of suitable accessories shall be made available on a ship to allow them to be secured to such persons; and

Emergency Training and Drills

- (c) musters of newly-embarked passengers shall take place prior to or immediately upon departure of a ship where the passengers are scheduled to be on board for more than 24 hours. Ships are also required to follow procedures for the conduct of drills for lifeboat arranged for free-fall launching.

(III) SOLAS Chapter IV - Radiocommunications

12. SOLAS Chapter IV stipulates requirements for the installation, maintenance and operation of radio-communication equipment on all passenger ships and cargo ships of 300 gross tonnage (“GT”) and above that are engaged on international voyage with the objectives of ensuring safe communication and improving the chances of rescue following an accident. SOLAS Chapter IV also sets out standards for ships to implement the Global Maritime Distress and Safety System (“GMDSS”).

⁸ It is a special type of waterproof suit that protects the wearer from losing body heat due to immersion in cold water.

⁹ For passenger ships on voyages of less than 24 hours, the number of infant lifejackets shall be equal to at least 2.5% of the number of passengers on board. For passenger ships on voyages of 24 hours or more, infant lifejackets shall be provided for each infant on board.

13. SOLAS Chapter IV is implemented in Hong Kong through the Merchant Shipping (Safety) (GMDSS Radio Installations) Regulation (Cap.369AR) (“the Radio Installations Regulation”) made under the Ordinance.

14. We propose to repeal the Radio Installations Regulation and make a new regulation to set out the latest requirements of SOLAS Chapter IV through the use of “direct reference approach” (“DRA”)¹⁰ where considered appropriate for the technical provisions. The major changes on standards of radio-communication equipment adopted by SOLAS Chapter IV that would be reflected in the new regulation are set out below -

- (a) satellite EPIRBs¹¹ are required to be tested annually for all aspects of operational efficiency. They are also subject to maintenance at intervals not exceeding five years, which is to be performed at an approved shore-based maintenance facility;
- (b) all two-way communication equipment carried on board a ship needs to be provided with the ship’s position, either automatically or manually. If it is updated manually, the intervals shall not exceed four hours while the ship is underway, so that the information is always ready for transmission by the equipment;
- (c) the transmission of ship-to-shore distress alerts shall be made through Inmarsat geostationary satellite service by a ship earth station; and

¹⁰DRA means making direct reference to provisions under international agreements in local legislation so as to apply those provisions locally. DRA enables timely implementation of international requirements that are technical in nature and are commonly applied in other jurisdictions across the world. With the use of DRA, the relevant legislative provisions will be automatically aligned with SOLAS Chapter IV as and when the latter is revised.

¹¹An EPIRB is an Emergency Position Indicating Radio Beacon, which is used as a distress alerting system, indicating to search and rescue authorities both the identity and position of a vessel, which is in grave and imminent danger and requires immediate assistance. Every EPIRB is pre-programmed with a unique identity before it reaches the customer. When an EPIRB is activated in an emergency, it begins to transmit radio signals that include its identity number and position. Radio signals are detected and processed by satellites which relay the message with the identity number and position to the nearest Maritime Rescue Coordination Centre (“MRCC”). MRCC will then decode the country code from the message. After that, they will access the registration database for that country and expect to find details of the vessel to which the EPIRB belongs to, its radio equipment and who to contact.

- (d) taking into account technological advancement, apart from radar SART¹², ships are allowed to use other types of search and rescue locating devices (including AIS¹³ SART).

(IV) SOLAS Chapter V – *Safety of Navigation*

15. SOLAS Chapter V stipulates requirements relating to the installation of navigational equipment and operational matters of navigational safety. It is implemented in Hong Kong through eleven pieces of subsidiary legislation made under the Ordinance as set out below -

- (i) Merchant Shipping (Safety) (Automatic Pilot and Testing of Steering Gear) Regulations (Cap.369L);
- (ii) Merchant Shipping (Safety) (Carriage of Nautical Publications) Regulations (Cap.369M);
- (iii) Merchant Shipping (Safety) (Navigational Equipment) Regulations (Cap.369AJ);
- (iv) Merchant Shipping (Safety) (Navigational Warnings) Regulations (Cap.369AK);
- (v) Merchant Shipping (Safety) (Arrangements for Embarkation and Disembarkation of Pilots) Regulation (Cap.369AU)
- (vi) Merchant Shipping (Safety) (Minimum Safe Manning Certificate) Regulation (Cap.369AS)
- (vii) Merchant Shipping (Safety) (Cargo Ship Construction and Survey) (Ships Built Before 1 September 1984) Regulations (Cap.369R);
- (viii) Merchant Shipping (Safety) (Cargo Ship Construction and Survey) (Ships Built On or After 1 September 1984) Regulations

¹²The SART (Search and Rescue Transponder) is a portable device, which is used as a complimentary distress alerting system. The SART enables any ship/airplane/helicopter in the area to locate survivors easily by just the use of their proper radar system. When a SART is switched on, it could be triggered by Radar waves sent from other ships/airplanes and transmit a unique signal which could then be detected by Radar of other ships/airplanes for rescue.

¹³AIS means Automatic Identification System.

(Cap.369S);

- (ix) Merchant Shipping (Safety) (Passenger Ship Construction) (Ships Built Before 1 September 1984) Regulations (Cap.369AL);
- (x) Merchant Shipping (Safety) (Passenger Ship Construction and Survey) (Ships Built On or After 1 September 1984) Regulations (Cap.369AM); and
- (xi) Merchant Shipping (Safety) (Use of Signals of Distress) Regulations (Cap.369O).

16. We propose to implement the latest requirements of SOLAS Chapter V by –

- (a) making a new regulation under the Ordinance which will consolidate and update the existing requirements of the five different pieces of subsidiary legislation in paragraph 15(i) to (v) above, namely *Merchant Shipping (Safety) (Automatic Pilot and Testing of Steering Gear) Regulations (Cap.369L)*, *Merchant Shipping (Safety) (Carriage of Nautical Publications) Regulations (Cap.369M)*, *Merchant Shipping (Safety) (Navigational Equipment) Regulations (Cap.369AJ)*, *Merchant Shipping (Safety) (Navigational Warnings) Regulations (Cap.369AK)* and *Merchant Shipping (Safety) (Arrangements for Embarkation and Disembarkation of Pilots) Regulation (Cap.369AU)*. The above five regulations will be repealed simultaneously with the enactment of the new regulation; and
- (b) amending the Merchant Shipping (Safety) (Minimum Safe Manning Certificate) Regulation (Cap.369AS) (“the Safe Manning Regulation”).

17. The key changes to SOLAS Chapter V that will be reflected in the new regulation and the Safe Manning Regulation are highlighted below –

New Regulation

New Requirements for Equipment

- (a) to require ships constructed on or after 1 July 2002 and engaged on international voyage to install Voyage Data Recorder (“VDR”) for recording the ships’ major navigational data. VDR is useful in accident investigations;
- (b) to require that AIS¹⁴ be fitted on board of all passenger ships and all other ships of 300 GT and above that are engaged on international voyage. The installation of AIS will enhance navigational safety by collision avoidance and assisting the watch-keeping of ships;
- (c) to require every ocean-going passenger ship, ocean-going cargo ship of 300 GT and above, and mobile offshore drilling unit¹⁵ to install a Long-Range Identification and Tracking (“LRIT”) System and transmit LRIT information, including its identity, location, and date and time of the position to its flag state;
- (d) to require new ships (i.e. ships constructed on or after 1 July 2012) engaged on international voyage to be fitted with an Electronic Chart Display and Information Systems (“ECDIS”). ECDIS is a computer-based navigation information system equipped with more functional use compared to nautical charts in paper form;

New Operational Requirements on Daily Reporting

- (e) to require all ships of 500 GT and above and engaged on international voyage exceeding 48 hours in duration to submit a daily report to their shipping company. The report shall include the ship's position, course and speed, and details of any external or internal conditions that are affecting the ship's voyage or normal safe operation. This requirement aims to ensure that necessary information could be made available by the shipping company for

¹⁴AIS is an automatic tracking system which integrates a VHF transceiver with a positioning system (such as a GPS) to facilitate data exchange with nearby ships and coastal authorities. The information provided by AIS includes the identity of a ship, its position, course and speed etc.

¹⁵Offshore drilling is used for exploration and extraction of petroleum which lies in rock formations under the seabed.

rescue or investigation purpose in case of casualty; and

Safe Manning Regulation

- (f) to amend the ships' manning requirements based on the "Principles of Minimum Safe Manning" adopted by the IMO on 30 November 2011, which provides updated guidelines for the determination of minimum safe manning. It also sets out principles that should be observed when establishing the minimum safe manning of a ship, such as the capability to operate all onboard fire-fighting and emergency equipment and life-saving appliances, operate all watertight closing arrangements, provide for medical care, etc.

IMPLICATIONS TO SHIPPING INDUSTRY

COLREGs

18. The Marine Department ("MD") has informed the shipping sector (including OGVs and local vessels¹⁶) of the changes to COLREGs, through issue of Merchant Shipping Information Notes, as soon as they take effect internationally. As noted from paragraph 7 above, the proposed amendments mainly seek to relax existing requirements or provide for alternative arrangements to enhance the ease of compliance, rather than to impose new controls or tighten existing requirements. Hence they should have minimal impact on the operation of the shipping industry, other than to reduce their compliance burden.

SOLAS

OGVs

19. Pending amendments to local legislation, MD has promulgated guidelines through the Hong Kong Merchant Shipping Information Notes to facilitate compliance by OGVs and vessels registered under the Hong Kong Shipping Register with the latest international standards of SOLAS. Since the relevant SOLAS requirements have entered into force internationally, all

¹⁶According to section 27 of the Local Vessels Ordinance, all local vessels must comply with the requirements of the COLREGs Regulation as if they were Hong Kong registered ships.

the applicable ships should have already complied with them or else they will be denied entry into international ports. Hong Kong registered ships have shown no problems in compliance. It is observed that the requirements are already being generally complied with by OGVs navigating in Hong Kong waters.

Locally licensed vessels

20. SOLAS applies to ships engaged on international voyage, except for its Chapter V “Safety of Navigation” which sets forth provisions of an operational nature applicable in general to all ships on all voyages. However, the IMO gives discretion to individual Administration to determine the extent to which the requirements of SOLAS Chapter V shall apply to ships operating solely in local waters. Taking into account the relevant requirements and traffic patterns in Hong Kong, local vessels are subject to a separate regulatory regime under the Local Vessels Ordinance and its relevant Code of Practices in respect of matters relating to those covered by Chapters III, IV and V of SOLAS. A separate review has been conducted by the MD in relation to the standards on navigational safety for the local vessels, and the relevant legislative amendments will be taken forward separately as explained in paragraph 22 below.

21. The current legislative exercise to implement the latest requirements of SOLAS will not affect locally licensed vessels. The relevant subsidiary legislation proposed to be amended or made under the Ordinance only apply to Hong Kong registered ships engaged on international voyage and OGVs visiting Hong Kong.

22. For the purpose of enhancing marine safety of locally licensed vessels, MD has introduced various improvement measures in the past two years. On 29 November 2013, MD introduced the first phase of improvement measures by amending the relevant code of practice, including enhancing look-out by crew, requiring the provision of a muster list, reviewing the minimum safe manning scale, improving the signage and directives relating to lifejackets, and requiring fitting water-tight-door alarms in wheelhouse. These measures have been fully implemented in 2014. MD is now working on legislative amendments to require certain local vessels to install AIS, radar and Very High Frequency radiotelephone, as well as to stipulate related operational requirements. We plan to introduce the relevant

amendment regulations into LegCo in the 2015-16 legislative year.

Enforcement

23. On enforcement, OGVs visiting Hong Kong are subject to Port State Control inspections whilst Hong Kong registered vessels are subject to inspections under a quality scheme administered by MD. Locally licensed vessels are subject to regular surveys for verification of their compliance with the Local Vessels Ordinance. Besides, MD's patrol launches would take necessary enforcement actions if they detect any irregularities or breaches during their daily patrols.

CONSULTATION

24. The Shipping Consultative Committee, High Speed Craft Consultative Committee and / or the Local Vessels Advisory Committee, which comprise different stakeholders in the shipping industry, have been consulted on the legislative proposals as appropriate and they have no objection to them.

ADVICE SOUGHT

25. Members are invited to note and comment on the above proposals. Subject to Members' support, we aim at introducing the relevant amendment regulations / new regulations into LegCo in the 2015-16 legislative session.

**Transport and Housing Bureau
Marine Department
July 2015**