#### LOCAL VESSELS ADVISORY COMMITTEE

## Amendments to the Code of Practice - Safety Standards for Classes I to IV Vessels Regarding Provision Requirements of Lifejackets

#### **Purpose**

As the Legislative Council ("LegCo") meeting originally scheduled to be held in July 2019 had been cancelled, the new legislative amendments regarding lifejackets to be implemented on 1 July 2019 could not be submitted to the LegCo for consideration. This paper aims to revise LVAC Paper No. 7/2019, which was circulated to Members earlier in April this year, in order to defer the implementation date of the new legislation and the relevant time of validity, and to set out the newly revised requirements of the Code of Practice - Safety Standards for Classes I to IV Local Vessels (the "CoP") regarding provision of lifejackets as proposed by the Marine Department (the "MD").

## Amendments to the CoP to Explain New Requirements of Life-saving Appliances

2. The Local Vessels Advisory Committee ("LVAC") endorsed the proposed legislative amendments for enhancing the provision requirements of lifejackets on board local vessels at its meeting on 12 November 2018¹. Unless otherwise specified for vessels of certain categories and with operating limitations², the new legislation will require suitable lifejackets to be carried for every person (i.e. regardless of whether he/she is a child or an adult but excluding infants) on board, and commercial passenger-carrying local vessels (i.e. Class I passenger-carrying vessels and Class IV pleasure vessels let for hire or reward) licensed to carry more than 12 passengers to provide infant lifejackets in a number that equals 2.5% of the maximum number of passengers to be carried as specified in their licences. The proposed legislative amendments ("new legislation") were discussed by the LegCo Panel on Economic Development³ on 19 December 2018 and gained its support.

<sup>&</sup>lt;sup>1</sup> Please refer to Paper No. 8/2018 of the LVAC for the details of the legislative proposal.

<sup>&</sup>lt;sup>2</sup> Commercial passenger-carrying local vessels include local vessels limited to be operated in specified sheltered waters or typhoon shelters and floating restaurants satisfying specified requirements.

<sup>&</sup>lt;sup>3</sup> Please refer to LC Paper No. CB(4)322/18-19(03) for the discussion paper.

- 3. Subject to the progress of meeting for the new legislative session starting from this month, the new legislation on life-saving appliances, including lifejackets, ("new requirements") is tentatively scheduled to be implemented on 23 December 2019. Meanwhile, in order to allow sufficient time for the trade to purchase lifejackets for meeting the new requirements, transitional provisions will be made in the new legislation to stipulate that the former legislation shall remain valid within 24 months (i.e. from 23 December 2019 to 22 December 2021) upon the endorsement of the legislation. If the new legislation regarding the lifejackets cannot be submitted to the LegCo for consideration and implemented on 23 December 2019, MD will issue a separate notice to the LVAC notifying it the effective date of the new legislative requirements and the relevant time of validity for the transitional provisions.
- 4. Regarding the new legislation, some provisions and requirements related to lifejackets, such as the definition of a "Suitable Lifejacket" and the technical requirements for the lifejacket suitable for use by both adults and children ("Common Lifejacket"), will be explained in the CoP.

#### **Proposal**

- 5. According to MD's proposal, the following amendments are made to the sections in the CoP about life-saving appliances and their distribution:
  - (a) To stipulate that the new requirements will run in parallel with the former requirements, and the former requirements relating to lifejackets set out in the CoP will continue to be valid for a transitional period as mentioned in Paragraph 3 above;
  - (b) To stipulate that, under the new requirements, every adult and child passenger on board general vessels should be provided with a suitable lifejacket, whereas commercial vessels carrying more than 12 passengers should provide infant lifejackets;
  - (c) To stipulate that, under the new requirements, the acceptable standards of lifejackets include the compliance with the International Life-saving Appliance ("LSA") Code or the required standard of performance level 100 or above issued by the International Organization for Standardization ("ISO") as set out in the document ISO 12402 (Personal floatation devices), together with the recognised certificate issued by a maritime administration, classification society, or notified

body in the European Union (Note: since the lifejacket design authorised by MD years ago does not meet the above standard, lifejackets of such design will no longer be recognised after the transitional period. Shipowners should therefore replace the lifejackets concerned as soon as possible);

- (d) To stipulate that, under the new requirements, "a suitable lifejacket" refers to a lifejacket that is designed and manufactured in accordance with the standards prescribed in the CoP (including general application of lifejackets such as range of weight or height), and fit for the intended wearer. By making reference to the LSA Code, to stipulate under the new requirements that restraining straps should be provided on board to assist any overweight or oversized passengers in securing their lifejackets as they are unable to don the standard-compliant lifejackets;
- (e) To set out in the CoP the existing legislative requirements including the types and numbers of life-saving appliances required on board vessels to facilitate the trade in making reference to the former requirements within the transitional period; and
- (f) To set the technical requirements of the "Common Lifejacket" and provide an index of the list of accredited manufacturers. An electronic label using Radio Frequency Identification (RFID) technology is added to every Common Lifejacket, with which MD officers may use a Reader to perform wireless data identification and retrieval work, thus minimizing the duration of survey and inspection. This kind of technology also assigns an exclusive identification number to every Common Lifejacket, with which MD officers may receive via a Reader the identification number of a Common Lifejacket on board a vessel. It is therefore unnecessary to mark the vessel name (in Chinese or English, as shown on the hull) or the Ownership Certificate number on a Common Lifejacket. For adult lifejackets, child lifejackets and infant lifeiackets without RFID electronic labels and exclusive identification numbers, the vessel name (in Chinese or English, as shown on the hull) or the Ownership Certificate number must be marked on every one of such lifejackets according to the existing requirements.

#### Consultation

6. For implementation of the proposal in Paragraph 5 above, <u>Annexes 1</u> to <u>4</u> set out the draft amendments to the CoP for Classes I to IV vessels respectively. The relevant sub-committees under the LVAC have been consulted on the proposal, with no objection being raised.

#### **Advice Sought**

7. Members are invited to advise on this paper and **Annexes 1 to 4**.

#### **Way Forward**

8. MD will make appropriate amendments to the CoP, depending on the opinions sought from Members. Subject to approval by negative vetting of the new legislation in the LegCo, MD will gazette the implementation of the new CoP.

#### Marine Department October 2019

- **Annex 1:** Amendments to the Code of Practice Safety Standards for Class I Vessels
- **Annex 2:** Amendments to the Code of Practice Safety Standards for Class II Vessels
- **Annex 3:** Amendments to the Code of Practice Safety Standards for Class III Vessels
- **Annex 4:** Amendments to the Code of Practice Safety Standards for Class IV Vessels

## Chapter VII Life-Saving Appliances and Arrangements

#### 1 Definitions

- 1.1 "Survival craft" means lifeboat and liferaft.
  - "LSA Code" means the International Life-Saving Appliance ("LSA") Code adopted by the Maritime Safety Committee of the International Maritime Organization by its resolution MSC.48(66) or its amended version.
  - "SOLAS A Pack Liferafts" are the liferafts provided with normal equipment prescribed by the abovementioned LSA Code.
  - "SOLAS B Pack Liferafts" are the liferafts provided with normal equipment prescribed by the LSA Code less the following equipment:
  - (a) half number of rocket parachute flares, hand flares and buoyant smoke signals;
  - (b) tin openers;
  - (c) fishing tackle;
  - (d) food ration;
  - (e) water tank; and
  - (f) graduated drinking vessels.

## **2** General Requirements

42.1 Life-saving appliances (other than lifejackets) shall be of the approved types. Appliances conforming to the LSA Code and approved by a maritime administration of a jurisdiction to which the International Convention for the Safety of Life at Sea, 1974 is applicable or a classification society are acceptable.

## 2.1A Lifejacket

2.1A.1 New requirements (in Part A below) regarding the life-saving appliances for Class I vessels come into effect on [23 December 2019]. The new legislation includes a transitional arrangement stipulating that within 24 months from the commencement date of the new legislation (i.e. [23 December 2019 – 22 December 2021]), former requirements (in Part B below) including lifejackets shall remain valid.

Part A - New Requirements (Sections 2.1A.2 to 2.1A.8) (Effective on [23 December 2019])

2.1A.2 Under the new Survey Regulation, unless otherwise specified<sup>1</sup>, a Class I vessel shall provide every person (regardless of whether he/she is a child or an adult) on board with a suitable lifejacket (refer to 2.1A.4), the total number of which not less than the maximum number of persons to be carried (i.e. including crew members) as specified in the operating licence. Also, Class I vessels shall provide infant lifejackets in a number not less than 2.5% of the maximum number of passengers to be carried (excluding crew members) as specified in the operating licence.

#### 2.1A.3 Lifejacket Standard

The lifejackets required to be provided on board a local vessel under section 32 of and Schedule 3 to the new Survey Regulation must –

- (a) at least comply with the performance standards and requirements set out in –
  for a local vessel which is permitted to sail solely in the waters of Hong Kong
  - (A) section 2.2.1 or 2.2.2 of the LSA Code; or
  - (B) ISO 12402-4:2006 (Personal floatation devices Part 4: Lifejackets, performance level 100 Safety requirements) issued by the International Organization for Standardization (ISO); and
- (b) be of a type approved by a maritime administration of a jurisdiction to which the International Convention for the Safety of Life at Sea, 1974 is applicable or a classification society or the European Union.

### 2.1A.4 Suitable Lifejacket

A suitable lifejacket means a lifejacket that is designed and manufactured in accordance with 2.1A.3 above, and fit for the intended wearer. A lifejacket complying with such standard is designed with a normal size range, differentiated by the weight and/or height of the

With respect to Class I vessels, this covers local vessels restricted to operate within specified sheltered waters or typhoon shelters and floating restaurants meeting specific criteria.

intended wearer. Such a range of sizes would be marked on the label of lifejacket for reference:

	SOLAS	ISO
Adult	≥43kg, ≥155cm	≥40kg
Child	15-43kg,100-155cm	15-40kg
Infant	<15kg, <100cm	<15kg
"Common	N.A.	15-120kg
Lifejacket"		
(refer to <2.1A.6>		

2.1A.5 To avoid confusion, the lifejackets (except infant lifejackets) placed on board should as far as practicable not to be of mixed standards.

#### 2.1A.6 "Common Lifejacket"

A lifejacket suitable for both adults and children (Common Lifejacket) complies with ISO performance level 100 and so is only suitable to be used by vessels sailing within Hong Kong waters. For details of the Common Lifejacket accepted by MD and the information of the manufacturers, please refer to the Marine Department Notice No. 69 of 2019.

The Common Lifejacket should have a Radio Frequency Identification (RFID) electronic tag attached with a unique identification serial number. The electronic tag should fulfill the following specification requirements:

Material	Silicon (or equivalent).	
Dimension	56 x 12 x 1.8 mm ( +/- 10% on each dimension).	
Frequency band	Within the 860 to 960 MHz band of the UHF spectrum,	
	and shall be readable within the frequency range 865 –	
	868MHz and/or 920 – 925MHz allocated by the Office	
	of the Communications Authority (OFCA) of the Hong	
	Kong Special Administrative Region.	
Protocol	EPC global ISO 18000-6C (or equivalent).	
IC	Higgs 3 (or equivalent).	
EPC memory	96 bits (or above).	
User memory	512 bits (or above).	
Write cycles	100 000 (or above).	
Storage	-40°C to +90°C (or wider range).	
environment		
Wet clean	85°C (up to 60 minutes) (or equivalent).	
	120°C (up to 10 minutes) (or equivalent).	
Iron	200°C (up to 10 seconds with press cloth) (or equivalent).	
Security features	1. The tags shall be compatible with the security scheme	
·	for product authentication.	
	2. Each tag shall be assigned a unique ID in EPC memory	
	bank. Structure of the encoding and numbering	
	scheme shall make reference to * with details to be	
	provided and confirmed by the Marine Department.	
	3. Each tag shall be protected by a locked access password	
	to avoid unauthorised access (32 bits).	
	4. Each tag shall be protected by a locked kill password to	
	avoid unauthorised access (32 bits).	
	5. Each tag shall be assigned an authentication code (96	
	bits) in user memory bank which will be updated during	
	authentication process.	
	6. Data content of the security scheme for tag	
	initialization.	
*Structure of the	1. The code is AA99-99999, of which each "A"	
encoding in the	represents an alphabetic character from A to Z and each	
UHF RFID tag (for	"9" represents a digit from 0 to 9.	
reference)	2. The hyphen is fixed.	
	3. The prefix "MD" will be used in the RFID provided by	
	the Marine Department. The RFID of other Common	
	Lifejackets shall not use "MD" in the encoding.	

- 2.1A7 Oversized or Overweight Passengers on Board
  With reference to the LSA Code, restraining straps should be provided
  on board to assist overweight or oversized passengers/personnel in
  securing their lifejackets as they are unable to don the
  standard-compliant lifejackets.
- 2.1A.8 The life-saving appliances including their types and quantity should be provided according to the new Survey Regulation Schedule 3. The electronic version is available at the URL below:

https://www.elegislation.gov.hk/hk/cap548G!en-zh-Hant-HK/sch3

In determining the number of infant lifejackets and Common Lifejackets required to be provided on board according to the new regulation, the number of lifejackets shall be rounded up if the calculation results are decimal numbers.

Part B – Former Requirements (Sections 2.1A.9 to 2.1A.10) (Transitional Arrangements until 22 December 2021)

- 2.1A.9 The lifejackets required to be provided on board a local vessel under section 32 of and <u>Schedule 3</u> to the <u>former Survey Regulation must</u>
  - (a) at least comply with the performance standards and requirements set out in for a local vessel which is permitted to sail solely in the waters of Hong Kong
    - (A) section 2.2.1 or 2.2.2 of the LSA Code; or
    - (B) ISO 12402-4:2006 (Personal floatation devices Part 4: Lifejackets, performance level 100 Safety requirements) issued by the ISO; and
  - (b) be of a type approved by a maritime administration of a jurisdiction to which the International Convention for the Safety of Life at Sea, 1974 is applicable or a classification society.

For existing vessels, life-saving appliances which have been approved by the national maritime authority of their country of manufacture in accordance with the national standard or have been approved by MD are also considered acceptable.

2.1.A.10 For the former life-saving appliances as well as their types and quantity, please refer to Annex Z-1.

In determining the number of children lifejackets required to be provided on board according to the former regulation, the number of lifejackets shall be rounded up if the calculation results are decimal numbers.

The life-saving appliances, type and quantity shall be provided according to Schedule 3, Tables 1, 2 of the Survey Regulation, The electronic version is available at URL—

http://www.legislation.gov.hk/blis\_pdf.nsf/6799165D2FEE3FA948257

http://www.iegisiation.gov.nk/biis\_par.nsf/6/99165D2FEE3F/A948257 55E0033E532/4B0D89C173F9FB2F482575EF0018F44D/\$FILE/CA P\_548G\_e\_b5.pdf

In determining the number of children lifejackets required to be provided onboard per Tables 1, when decimal numbers are calculated the numbers of children lifejackets required shall be rounded up.

Repeal

- 2.3 Radiocommunications equipment shall have a licence issued be of a type approved by the Communications Authority (CA), Hong Kong.
- 2.4 One lifebuoy must be able to support two adult persons.
- 2.5 Each of the buoyant lifeline, self-igniting light and self-activating smoke signal required by the Survey Regulation shall be attached to a lifebuoy and be placed in proximity of the vessel's both sides.
- 2.6 Lifebuoys shall be marked on both sides with the name (as that shown on the hull of vessel) or Certificate of Ownership number of the vessel on which they are carried.
- 2.7 For existing vessels sailing within river trade limits, the previous requirements are applicable on the provision of appliances. As such, two numbers of combined self-activating smoke and self-igniting light attaching to lifebuoys are to be provided.
- 2.8 Donning instructions shall be posted in the appropriate areas in the vessel.

#### **3** Replacement of Life-Saving Appliances

Any item of life-saving equipment marked with an expiry date shall be replaced on or before that date.

### 4 Operational Readiness, Maintenance, Inspections and Servicing

- 4.1 Whenever a local vessel is being used or operated, every life-saving appliance carried on board the vessel shall be
  - (a) in working order;
  - (b) ready for immediate use; and
  - (c) placed in an easily accessible position.
- 4.2 Every inflatable liferaft and hydrostatic release unit shall be serviced at a service station accepted by the Director at intervals not exceeding 12 months or a period as permitted by the Director.

#### 5 Survival Craft Muster and Embarkation Arrangements

- 5.1 Survival craft shall be stowed as close to accommodation and service areas as possible.
- 5.2 Muster and embarkation stations of survival craft shall be readily accessible from accommodation and work areas.
- 5.3 Alleyways, internal and external stairways and exits giving access to the muster and embarkation stations of survival craft shall be lighted.

## 6 Stowage of Survival Craft and Buoyant Apparatus

- 6.1 Each survival craft shall be stowed
  - (a) in a way that neither the survival craft nor its stowage arrangements will interfere with the operation of any other survival craft at any other launching station;
  - (b) as near to the water surface as possible provided that it is safe and practicable; in serious situations where a fully loaded survival craft has an angle of trim or heel up to 20° or the

weather deck starts to be flooded, etc., the embarkation point should be at least 2 m above the waterline;

- (c) in a state of continuous readiness so that two crew members can carry out preparations for embarkation and launching in less than 5 minutes;
- (d) in a fully-equipped manner;
- (e) in a secure and sheltered area as far as practicable to prevent any damages that may be caused by fire and explosions.
- 6.2 Liferafts shall be so stowed as to permit manual release from their securing arrangements.
- 6.3 Liferafts shall be so stowed as to be readily transferable for launching on either side of the vessel unless liferafts are stowed on each side of the vessel.
- Every liferaft shall be stowed with its painter permanently attached to the vessel and with a float-free arrangement so that the liferaft can float free and, if inflatable, can inflate automatically when the vessel sinks.
- 6.5 Each buoyant apparatus shall be stowed -
  - (a) as to be readily transferable for launching on either side of the vessel;
  - (b) with a float-free arrangement so that the apparatus can float free when the vessel sinks.

### 7 Launching Stations

Launching stations shall be in such positions as to ensure safe launching having particular regard to the clearance from the propeller and steeply overhanging portions of the hull with the object of ensuring that so far as practicable, the survival craft can be launched down on the straight side of the vessel.

## 8 Survival Craft Launching Arrangements

8.1 Means shall be available to prevent any discharge of water onto the survival craft during abandonment.

## 9 Stowage of Lifebuoys

- 9.1 Lifebuoys shall be so distributed as to be readily available on both sides of the vessel and as far as practicable on all open decks extending to the vessel's side. At least one lifebuoy shall be placed in the vicinity of the stern.
- 9.2 Lifebuoys shall be so stowed as to be capable of being rapidly cast loose, and not permanently secured in any way to allow float free.
- 9.3 Except as otherwise provided, one lifebuoy shall be fitted on each side of the vessel with a buoyant lifeline attached.
- 9.4 Except as otherwise provided, lifebuoys with self-igniting lights and those with self-igniting lights and self-activating smoke signals shall be equally distributed on both sides of the vessel and shall not be the lifebuoys provided with buoyant lifeline.

## 10 Stowage of Lifejackets

- 10.1 Lifejackets shall be so placed as to be readily accessible and their positions shall be plainly indicated.
- The additional lifejackets, when provided, shall be stowed in conspicuous places on deck or at muster stations.
- 10.3 If a lifejacket is individually stored in a plastic bag, and
  - (a) where the plastic bag is completely transparent, the plastic bag shall be easily ripped open; and
  - (b) where the plastic bag is opaque or is not completely transparent
    - (i) the plastic bag shall be easily ripped open; and
    - (ii) there shall be clear indication at a conspicuous place on the outside of the plastic bag that the plastic bag contains a lifejacket.

If one or more lifejackets are stored in an enclosed space (for example: a cabinet, a bag) which is opaque or is not completely transparent, there shall be a clear indication at a conspicuous place on the outside of the enclosed space that the enclosed space contains a lifejacket.

## Operating Instructions for Survival Craft and their Launching Controls

Posters and signs provided on or in the vicinity of survival craft and their launching controls shall illustrate the purpose of controls and the procedures for operating the appliance and give relevant instructions.

## 12 Manning of Survival Craft

There shall be a sufficient number of crew members to operate the survival craft and launching arrangements for abandonment by all the people on board. The crew should be acquainted with their duties.

#### 13 Lifejackets of Class I Vessels

- 13.1 Apart from the other lifejacket requirements in the Code, lifejackets shall comply with the following requirements:
  - (i) The name of the vessel (in Chinese or English, as that shown on the hull of the vessel) or the Certificate of Ownership number shall be printed on each of the lifejackets on board. For lifejackets of the minimum sizes, the Chinese characters shall be 12 mm in height and 8 mm in width, while the English letters and numerals shall be 8 mm in height and 5 mm in width. A Common Lifejacket having a Radio Frequency Identification (RFID) electronic tag attached with a unique identification serial number is regarded as complying with this requirement. For adult lifejackets, children lifejackets and infant lifejackets without RFID electronic tags and unique identification serial numbers, the vessel name (in Chinese or English, as shown on the hull) or the Ownership Certificate number must be marked on every one of them.
  - (ii) Sufficient signs indicating the locations of lifejackets should be displayed on board;
  - (iii) Demonstration (by crew or through video or posters displayed on

board) of how lifejackets are donned should be given;

- (iv) At the piers used for passenger embarkation and disembarkation, videos or posters demonstrating the donning of lifejackets should be played or put up (applicable only to operators with designated piers for passenger embarkation and disembarkation); and
- (v) It is not required to print the vessel's name or its Certificate of Ownership number on spare children lifejackets provided for use under special circumstances.

## <u>Former Requirements of Life-Saving Equipment</u> including Their Types and Quantity on Board Class I Vessels

For former requirements of life-saving requirements including their types and quantity, reference should be made to Schedule 3 (Table 1 and Table 2) to the former Merchant Shipping (Local Vessels) (Safety and Survey) Regulation (Survey Regulation). The requirements are as follows:

Table 1 Class I Vessels

Operation Life-saving area appliances	Specified s wate		Anywhere within waters of Hong Kong
lifejacket	any number	Total	100% adult lifejacket + 5% children lifejacket
lifebuoy	minimum number per Table 2	100% <sup>(1)</sup> and (2)	minimum number per Table 2
buoyant lifeline <sup>(3)</sup>	1 for vessel (L)<12 m 2 for vessel (L)≥12 m		
self-igniting light <sup>(4)</sup>	2		
VHF (very high frequency) radio installation <sup>(5)</sup>	1		

#### Notes:

- (1) Where the required quantity of life-saving appliances is expressed as a percentage, it means the percentage of the total number of persons on board.
- (2) The scale for a floating restaurant may be reduced by 50% if it is—
  - (a) attached to the shore and provided with adequate gangways; or
  - (b) not attached to the shore, but provided with—
    - (i) above-water flotation in the form of a steel embarkation pontoon moored alongside; or
    - (ii) steel tenders at both ends capable of being towed to a safe place away from the floating restaurant.
- (3) The minimum length of buoyant lifeline for a Class I vessel or Class IV vessel that is licensed to carry more than 60 passengers is 30 m.

- (4) Required for a Class I vessel or Class IV vessel that carries more than 100 passengers.
- (5) Required for a ferry vessel that plies outside the Victoria port.

Table 2
Minimum number of lifebuoys as required in Table 1

Vessel length (L) (m)	Number of lifebuoys
(L)<12	2
12≤(L)<15	4
15≤(L)<18	6
18≤(L)<21	8
21≤(L)<24	10
(L)≥24	12

## Chapter VII Life-Saving Appliances and Arrangements

#### 1 Definitions

- 1.1 "Survival craft" means lifeboat and liferaft.
  - "LSA Code" means the International Life-Saving Appliance ("LSA") Code adopted by the Maritime Safety Committee of the International Maritime Organization by its resolution MSC.48(66) or its amended version.
  - "SOLAS A Pack Liferafts" are the liferafts provided with normal equipment prescribed by the abovementioned LSA Code.
  - "SOLAS B Pack Liferafts" are the liferafts provided with normal equipment prescribed by the LSA Code less the following equipment:
  - (a) half number of rocket parachute flares, hand flares and buoyant smoke signals;
  - (b) tin openers;
  - (c) fishing tackle;
  - (d) food ration;
  - (e) water tank; and
  - (f) graduated drinking vessels.

### **2** General Requirements

42.1 Life-saving appliances (other than lifejackets) shall be of the approved types. Appliances conforming to the LSA Code and approved by a maritime administration of a jurisdiction to which the International Convention for the Safety of Life at Sea, 1974 is applicable or a classification society are acceptable.

## 2.1A Lifejacket

2.1A.1 New requirements (in Part A below) regarding the life-saving appliances for Class II vessels come into effect on [23 December 2019]. The new legislation includes a transitional arrangement stipulating that within 24 months from the commencement date of the new legislation (i.e. [23 December 2019 – 22 December 2021]), former requirements (in Part B below) including lifejackets shall remain valid.

Part A - New Requirements (Sections 2.1A.2 to 2.1A.8) (Effective on [23 December 2019])

2.1A.2 Under the new Survey Regulation, unless otherwise specified<sup>1</sup>, a Class II vessel shall provide every person (regardless of whether he/she is a child or an adult) on board with a suitable lifejacket (refer to 2.1A.4), the total number of which not less than the maximum number of persons to be carried (i.e. including crew members) as specified in the operating licence.

## 2.1A.3 Lifejacket Standard

The lifejackets required to be provided on board a local vessel under section 32 of and Schedule 3 to the new Survey Regulation must –

- (a) at least comply with the performance standards and requirements set out in
  - (i) for a vessel which is permitted to sail within river trade limits
    - (A) section 2.2.1 or 2.2.2 of the LSA Code; or
    - (B) ISO 12402-3:2006 (Personal floatation devices Part 3: Lifejackets, performance level 150 Safety requirements) issued by the International Organization for Standardization (ISO); and
  - (ii) for a vessel which is permitted to sail solely in the waters of Hong Kong
    - (A) section 2.2.1 or 2.2.2 of the LSA Code; or
    - (B) ISO 12402-4:2006 (Personal floatation devices Part 4: Lifejackets, performance level 100 Safety requirements) issued by the ISO; and
- (b) be of a type approved by a maritime administration of a jurisdiction to which the International Convention for the Safety of Life at Sea, 1974 is applicable or a classification society or the European Union.

With respect to Class II vessels, this covers local vessels restricted to operate within specified sheltered waters or typhoon shelters and work boats complying with Schedule 2 to the Regulation.

#### 2.1A.4 Suitable Lifejacket

A suitable lifejacket means a lifejacket that is designed and manufactured in accordance with 2.1A.3 above, and fit for the intended wearer. A lifejacket complying with such standard is designed with a normal size range, differentiated by the weight and/or height of the intended wearer. Such a range of sizes would be marked on the label of lifejacket for reference:

	SOLAS	ISO
Adult	≥43kg, ≥155cm	≥40kg
Child	15-43kg,100-155cm	15-40kg
"Common	N.A.	15-120kg
Lifejacket"		
(refer to <2.1A.6>		

2.1A.5 To avoid confusion, the lifejackets placed on board should as far as practicable not to be of mixed standards.

### 2.1A.6 "Common Lifejacket"

A lifejacket suitable for both adults and children (Common Lifejacket) complies with ISO performance level 100 and so is only suitable to be used by vessels sailing within Hong Kong waters. For details of the Common Lifejacket accepted by MD and the information of the manufacturers, please refer to the Marine Department Notice No. 69 of 2019.

The Common Lifejacket should have a Radio Frequency Identification (RFID) electronic tag attached with a unique identification serial number. The electronic tag should fulfill the following specification requirements:

Material	Silicon (or equivalent).
Dimension	56 x 12 x 1.8 mm ( +/- 10% on each dimension).
Frequency band	Within the 860 to 960 MHz band of the UHF spectrum,
rrequency band	and shall be readable within the frequency range 865 –
	868MHz and/or 920 – 925MHz allocated by the Office
	of the Communications Authority (OFCA) of the Hong
	Kong Special Administrative Region.
Protocol	EPC global ISO 18000-6C (or equivalent).
IC	Higgs 3 (or equivalent).
EPC memory	96 bits (or above).
User memory	512 bits (or above).
Write cycles	100 000 (or above).
Storage	-40°C to +90°C (or wider range).
environment	
Wet clean	85°C (up to 60 minutes) (or equivalent).
	120°C (up to 10 minutes) (or equivalent).
Iron	200°C (up to 10 seconds with press cloth) (or equivalent).
Security features	1. The tags shall be compatible with the security scheme
	for product authentication.
	2. Each tag shall be assigned a unique ID in EPC memory
	bank. Structure of the encoding and numbering
	scheme shall make reference to * with details to be
	provided and confirmed by the Marine Department.
	3. Each tag shall be protected by a locked access password
	to avoid unauthorised access (32 bits).
	4. Each tag shall be protected by a locked kill password to
	avoid unauthorised access (32 bits).
	5. Each tag shall be assigned an authentication code (96
	bits) in user memory bank which will be updated during
	authentication process.
	6. Data content of the security scheme for tag
	initialization.
*Structure of the	1. The code is AA99-99999, of which each "A"
encoding in the	represents an alphabetic character from A to Z and each
UHF RFID tag (for	"9" represents a digit from 0 to 9.
reference)	2. The hyphen is fixed.
	3. The prefix "MD" will be used in the RFID provided by
	the Marine Department. The RFID of other Common
	Lifejackets shall not use "MD" in the encoding.

- 2.1A7 Oversized or Overweight Passengers on Board
  With reference to the LSA Code, restraining straps should be provided
  on board to assist overweight or oversized passengers/personnel in
  securing their lifejackets as they are unable to don the
  standard-compliant lifejackets.
- 2.1A.8 The life-saving appliances including their types and quantity should be provided vessels according to the new Survey Regulation Schedule 3. The electronic version is available at the URL below:

https://www.elegislation.gov.hk/hk/cap548G!en-zh-Hant-HK/sch3

In determining the number of Common Lifejackets required to be provided on board according to the new regulation, the number of lifejackets shall be rounded up if the calculation results are decimal numbers.

Part B – Former Requirements (Sections 2.1A.9 to 2.1A.10) (Transitional Arrangements until 22 December 2021)

- 2.1A.9 The lifejackets required to be provided on board a local vessel under section 32 of and Schedule 3 to the former Survey Regulation must
  - (a) at least comply with the performance standards and requirements set out in
    - (i) for a vessel which is permitted to sail within river trade limits
      - (A) section 2.2.1 or 2.2.2 of the LSA Code; or
      - (B) ISO 12402-3:2006 (Personal floatation devices Part 3: Lifejackets, performance level 150 Safety requirements) issued by the International Organization for Standardization (ISO); and
    - (ii) for a vessel which is permitted to sail solely in the waters of Hong Kong
      - (A) section 2.2.1 or 2.2.2 of the LSA Code; or
      - (B) ISO 12402-4:2006 (Personal floatation devices Part

- 4: Lifejackets, performance level 100 Safety requirements) issued by the ISO; and
- (b) be of a type approved by a maritime administration of a jurisdiction to which the International Convention for the Safety of Life at Sea, 1974 is applicable or a classification society.

Dumb lighters and hopper barges operating within river trade limits may be equipped with portable liferafts approved by recognized authorities (RA) or authorized organizations (AO). Other types of vessels when operating within river trade limits shall be equipped with SOLAS B Pack liferafts.

For existing vessels, life-saving appliances which have been approved by the national maritime authority of their country of manufacture in accordance with the national standard or have been approved by MD are also considered acceptable. (Moved to 2.2A)

2.1.A.10 For the former life-saving appliances as well as their types and quantity, please refer to Annex Z-1.

In determining the number of children lifejackets required to be provided on board according to the former regulation, the number of lifejackets shall be rounded up if the calculation results are decimal numbers.

2.2 The life-saving appliances, type and quantity shall be provided according to Schedule 3, Tables 3-5 of the Survey Regulation, The electronic version is available at URL

http://www.legislation.gov.hk/blis\_pdf.nsf/6799165D2FEE3FA948257 55E0033E532/4B0D89C173F9FB2F482575EF0018F44D/\$FILE/CA P\_548G\_e\_b5.pdf

In determining the number of children lifejackets required to be provided onboard per Tables 1, when decimal numbers are calculated the numbers of children lifejackets required shall be rounded up.

Repeal

If a dumb lighter or hopper barge is intended to operate within river trade limits but not equipped with the prescribed appliances, the owner shall, according to the condition stated in Note(4) of Table 4 of Schedule 3 to the Survey Regulation, declare by a specified form that

the vessel is at all times accompanied by another local vessel (e.g. a tug) equipped with appliances sufficient for complements of both vessels. (Moved to 2.2A)

2.2A Dumb lighters and hopper barges operating within river trade limits may be equipped with portable liferafts approved by recognized authorities (RA) or authorized organizations (AO). Other types of vessels when operating within river trade limits shall be equipped with SOLAS B Pack liferafts.

For existing vessels, life-saving appliances which have been approved by the national maritime authority of their country of manufacture in accordance with the national standard or have been approved by MD are also considered acceptable.

If a dumb lighter or hopper barge is intended to operate within river trade limits but not equipped with the prescribed appliances, the owner shall, according to the condition stated in Note(4) of Table 4 of Schedule 3 to the Survey Regulation, declare by a specified form that the vessel is at all times accompanied by another local vessel (e.g. a tug) equipped with appliances sufficient for complements of both vessels.

- 2.3 Radiocommunications equipment shall have a licence issued be of a type approved by the Communications Authority (CA), Hong Kong.
- 2.4 One lifebuoy must be able to support two adult persons.
- 2.5 Each of the buoyant lifeline, self-igniting light and self-activating smoke signal required by the Survey Regulation shall be attached to a lifebuoy and be placed in proximity of the vessel's both sides.
- 2.6 Lifebuoys shall be marked on both sides with the name (as that shown on the hull of vessel) or Certificate of Ownership number of the vessel on which they are carried.
- 2.7 On vessels sailing in waters beyond Hong Kong, the lifejackets and lifebuoys shall be fitted with the following:
  - (a) for lifejacket: whistle and retro-reflective tape
  - (b) for lifebuoy: retro-reflective tape

2.8 Donning instructions shall be posted in the appropriate areas in the vessel.

## **3** Replacement of Life-Saving Appliances

Any item of life-saving equipment marked with an expiry date shall be replaced on or before that date.

#### 4 Operational Readiness, Maintenance, Inspections and Servicing

- 4.1 Whenever a local vessel is being used or operated, every life-saving appliance carried on board the vessel shall be
  - (a) in working order;
  - (b) ready for immediate use; and
  - (c) placed in an easily accessible position.
- 4.2 Falls used for launching shall be turned end for end at intervals of not more than 30 months and be renewed when necessary due to deterioration of the falls or at intervals of not more than 5 years, whichever is the earlier. Stainless steel falls shall be turned end for end at intervals of not more than 30 months but need not be renewed provided that on inspection, there are no signs of mechanical damage or other possible defects.
- 4.3 Lifeboat disengaging gears shall be overhauled at intervals not exceeding 5 years.
- 4.4 Every inflatable liferaft and hydrostatic release unit shall be serviced at a service station accepted by the Director at intervals not exceeding 12 months or a period as permitted by the Director.

## 5 Survival Craft Muster and Embarkation Arrangements

- 5.1 Survival craft shall be stowed as close to accommodation and service areas as possible.
- Muster and embarkation stations of survival craft shall be readily accessible from accommodation and work areas.

5.3 Alleyways, internal and external stairways and exits giving access to the muster and embarkation stations of survival craft shall be lighted.

#### **6** Stowage of Survival Craft and Buoyant Apparatus

- 6.1 Each survival craft shall be stowed
  - (a) in a way that neither the survival craft nor its stowage arrangements will interfere with the operation of any other survival craft at any other launching station;
  - (b) as near to the water surface as possible provided that it is safe and practicable; in serious situations where a fully loaded survival craft has an angle of trim or heel up to 20° or the weather deck starts to be flooded, etc., the embarkation point should be at least 2 m above the waterline;
  - (c) in a state of continuous readiness so that two crew members can carry out preparations for embarkation and launching in less than 5 minutes;
  - (d) in a fully-equipped manner;
  - (e) in a secure and sheltered area as far as practicable to prevent any damages that may be caused by fire and explosions.
- 6.2 Lifeboats shall be stowed together with the launching appliances.
- 6.3 Liferafts shall be so stowed as to permit manual release from their securing arrangements.
- 6.4 Liferafts shall be so stowed as to be readily transferable for launching on either side of the vessel unless liferafts are stowed on each side of the vessel.
- 6.5 Every liferaft shall be stowed with its painter permanently attached to the vessel and with a float-free arrangement so that the liferaft can float free and, if inflatable, can inflate automatically when the vessel sinks.
- 6.6 Each buoyant apparatus shall be stowed -

- (a) as to be readily transferable for launching on either side of the vessel;
- (b) with a float-free arrangement so that the apparatus can float free when the vessel sinks.

#### 7 Launching Stations

Launching stations shall be in such positions as to ensure safe launching having particular regard to the clearance from the propeller and steeply overhanging portions of the hull with the object of ensuring that so far as practicable, the survival craft can be launched down on the straight side of the vessel.

## 8 Survival Craft Launching Arrangements

- 8.1 Each lifeboat shall be provided with an appliance which is capable of launching and recovering the lifeboat.
- 8.2 Means shall be available to prevent any discharge of water onto the survival craft during abandonment.

## 9 Stowage of Lifebuoys

- 9.1 Lifebuoys shall be so distributed as to be readily available on both sides of the vessel and as far as practicable on all open decks extending to the vessel's side. At least one lifebuoy shall be placed in the vicinity of the stern.
- 9.2 Lifebuoys shall be so stowed as to be capable of being rapidly cast loose, and not permanently secured in any way to allow float free.
- 9.3 Except as otherwise provided, one lifebuoy shall be fitted on each side of the vessel with a buoyant lifeline attached.
- 9.4 Except as otherwise provided, lifebuoys with self-igniting lights and those with self-igniting lights and self-activating smoke signals shall be equally distributed on both sides of the vessel and shall not be the lifebuoys provided with buoyant lifeline.

#### 10 Stowage of Lifejackets

- 10.1 Lifejackets shall be so placed as to be readily accessible and their positions shall be plainly indicated.
- The additional lifejackets, when provided, shall be stowed in conspicuous places on deck or at muster stations.
- 10.3 If a lifejacket is individually stored in a plastic bag, and
  - (a) where the plastic bag is completely transparent, the plastic bag shall be easily ripped open; and
  - (b) where the plastic bag is opaque or is not completely transparent
    - (i) the plastic bag shall be easily ripped open; and
    - (ii) there shall be clear indication at a conspicuous place on the outside of the plastic bag that the plastic bag contains a lifejacket.
- If one or more lifejackets are stored in an enclosed space (for example: a cabinet, a bag) which is opaque or is not completely transparent, there shall be a clear indication at a conspicuous place on the outside of the enclosed space that the enclosed space contains a lifejacket.

## 11 Stowage and Packing of Pyrotechnic Distress Signals

- 11.1 Pyrotechnic distress signals provided for use on board a vessel shall be stowed on or near the navigating bridge.
- All pyrotechnic distress signals provided for use on board vessels or lifeboats shall be packed in water-resistant casings when stowed.

## Operating Instructions for Survival Craft and their Launching Controls

Posters and signs provided on or in the vicinity of survival craft and their launching controls shall illustrate the purpose of controls and the procedures for operating the appliance and give relevant instructions.

## 13 Manning of Survival Craft

There shall be a sufficient number of crew members to operate the survival craft and launching arrangements for abandonment by all the people on board. The crew should be acquainted with their duties.

#### Annex Z-1

## <u>Former Requirements of Life-Saving Equipment</u> including Their Types and Quantity on Board Class II Vessels

For former requirements of life-saving requirements including their types and quantity, reference should be made to Schedule 3 (Tables 3, 4 and 5) to the former Merchant Shipping (Local Vessels) (Safety and Survey) Regulation (Survey Regulation). The requirements are as follows:

Table 3
Class II vessels that operate within waters in Hong Kong

Operation Life-saving area appliances	Specified sheltered waters		Anywhere within waters of Hong Kong
lifejacket <sup>(1)</sup>	any number <sup>(2)</sup>	Total 100% <sup>(3)</sup> and (4)	100% adult lifejacket + <5% children lifejacket>(3), (4) and (5)
lifebuoy <sup>(1)</sup>	any number		minimum number per Table 5
buoyant lifeline <sup>(4) and (6)</sup>	1 for vessel (L)<12 m 2 for vessel (L)≥12 m		
<pre><self-igniting (for="" (l)≥37="" light="" m)="" vessel=""><sup>(5)</sup></self-igniting></pre>	2		

#### Notes:

- (1) (a) For a transportation sampan that falls within paragraph (b) of Schedule 2, at least 1 lifejacket for every person on board and 1 lifebuoy are required.
  - (b) For a work boat that falls within paragraph (b) of Schedule 2, at least 1 lifebuoy is required.
- (2) Lifejacket is not required for—
  - (a) a landing platform;

- (b) a landing pontoon; and
- (c) a stationary vessel that is a separation barge.
- (3) Where the required quantity of life-saving appliances is expressed as a percentage, it means the percentage of the total number of persons on board.
- (4) Special requirements for a floating dock—
  - (a) 100% lifejacket is required only when any of the tropical cyclone warning signals commonly referred to as No. 8NW, 8SW, 8NE, 8SE, 9 or 10 is in force and any person is staying on board;
  - (b) the total number of lifebuoy provided shall not be less than that required in Table 5, or 1 lifebuoy for every 26 m or part thereof of each of the side wall, whichever is the greater;
  - (c) 4 buoyant lifelines shall be provided and placed at each corner of the dock; and
  - (d) if the dock is not attached to the shore, 1 or more launches shall be provided to carry the workmen to shore.
- (5) Requirements in angle brackets ("< >") are for new vessels only.
- (6) The minimum length of buoyant lifeline is 30 m.

Table 4
Class II vessels that operate within river trade limits

Life-saving appliances	Oil carrier having cargoes with flash point not exceeding 60°C (closed cup test)	Other vessels
lifejacket	100%(1)	
lifebuoy	minimum	
	number per	
	Table 5	
line throwing appliance	1(2)	
buoyant apparatus		100%(1), (3) and (4)
inflatable liferaft	100%(1)	100%(1) and (3)
<motor lifeboat=""><sup>(5)</sup></motor>	100% <sup>(1) and (6)</sup>	
VHF (very high frequency) radio installation	1	1 <sup>(4)</sup>
buoyant lifeline <sup>(7)</sup>	2	
self-igniting light	2	
rocket parachute flare(4)	6	

#### Notes:

- (1) Where the required quantity of life-saving appliances is expressed as a percentage, it means the percentage of the total number of persons on board.
- (2) This only applies to—
  - (a) a dangerous goods carrier, dry cargo vessel, edible oil carrier, noxious liquid substance carrier, oil carrier, special purpose vessel or water boat that—
    - (i) is of 500 gross tonnage or above;
    - (ii) is fitted with any propulsion engine; and
    - (iii) operates within the river trade limits; or

- (b) a tug that operates within the river trade limits.
- (3) Buoyant apparatus is not required if the inflatable liferaft is transferable to either side of the vessel.
- (4) For a dumb lighter or hopper barge, the prescribed appliances may be waived if it is at all times accompanied by another local vessel (e.g. a tug) equipped with appliances sufficient for complements of both vessels.
- (5) Requirements in angle brackets ("< >") are for new vessels only.
- (6) (a) An oil carrier of 37 m or more in length shall be provided with a motor lifeboat which may be of rigid top open type.
  - (b) For an oil carrier of less than 37 m in length, such motor lifeboat may be substituted by an additional 100% inflatable liferaft.
- (7) The minimum length of buoyant lifeline is 30 m.

Table 5
Minimum number of lifebuoys as required in Tables 3 and 4

Vessel length (L) (m)	Number of lifebuoys
(L)<12	1
12≤(L)<24	2
24≤(L)<37	4
(L)≥37	6

## Chapter VII Life-Saving Appliances and Arrangements

#### 1 Definitions

- "Survival craft" means lifeboat and liferaft.
- "LSA Code" means the International Life-Saving Appliance ("LSA") Code adopted by the Maritime Safety Committee of the International Maritime Organization by its resolution MSC.48(66) or its amended version.
- "SOLAS A Pack Liferafts" are the liferafts provided with normal equipment prescribed by the abovementioned LSA Code. "Y" type inflatable liferafts approved by the Bureau of Fishing Vessel Inspection may also be accepted in lieu of SOLAS A Pack Liferafts.
- "SOLAS B Pack Liferafts" are the liferafts provided with normal equipment prescribed by the LSA Code less the following equipment:
- (a) half number of rocket parachute flares, hand flares and buoyant smoke signals;
- (b) tin openers;
- (c) fishing tackle;
- (d) food ration;
- (e) water tank; and
- (f) graduated drinking vessels.

## **2** General Requirements

Life-saving appliances (other than lifejackets) must be of the approved types. Appliances conforming to the LSA Code and approved by a maritime administration of a jurisdiction to which the International Convention for the Safety of Life at Sea, 1974 is applicable or a classification society are acceptable.

### 2.1A Lifejacket

2.1A.1 New requirements (in Part A below) regarding the life-saving appliances for Class III vessels come into effect on [23 December 2019]. The new legislation includes a transitional arrangement stipulating that within 24 months from the commencement date of the new legislation (i.e. [23 December 2019 – 22 December 2021]), former requirements (in Part B below) including lifejackets shall remain valid.

Part A - New Requirements (Sections 2.1A.2 to 2.1A.8) (Effective on [23 December 2019])

2.1A.2 Under the new Survey Regulation, unless otherwise specified<sup>1</sup>, a Class III vessel shall provide every person on board with a suitable lifejacket (refer to 2.1A.4), the total number of which not less than the maximum number of persons to be carried as specified in the operating licence.

#### 2.1A.3 Lifejacket Standard

The lifejackets required to be provided on board a local vessel under section 32 of and Schedule 3 to the new Survey Regulation must –

- (a) at least comply with the performance standards and requirements set out in
  - (i) for a vessel which is permitted to sail within river trade limits
    - (A) section 2.2.1 or 2.2.2 of the LSA Code; or
    - (B) ISO 12402-3:2006 (Personal floatation devices Part 3: Lifejackets, performance level 150 Safety requirements) issued by the International Organization for Standardization (ISO); and
  - (ii) for a vessel which is permitted to sail solely in the waters of Hong Kong
    - (A) section 2.2.1 or 2.2.2 of the LSA Code; or
    - (B) ISO 12402-4:2006 (Personal floatation devices Part 4: Lifejackets, performance level 100 Safety requirements) issued by the ISO; and
- (b) be of a type approved by a maritime administration of a jurisdiction to which the International Convention for the Safety of Life at Sea, 1974 is applicable or a classification society or the European Union.

With respect to Class III vessels, this covers outboard open sampan and fishing sampan which comply with Schedule 2 to the Regulation.

#### 2.1A.4 Suitable Lifejacket

A suitable lifejacket means a lifejacket that is designed and manufactured in accordance with <2.1A.3> above, and fit for the intended wearer. A lifejacket complying with such standard is designed with a normal size range, differentiated by the weight and/or height of the intended wearer. Such a range of sizes would be marked on the label of lifejacket for reference:

	SOLAS	ISO
Adult	≥43kg, ≥155cm	≥40kg
"Common Lifejacket"	N.A.	15-120kg
(refer to <2.1A.6>)		

2.1A.5 To avoid confusion, the lifejackets placed on board should as far as practicable not to be of mixed standards.

#### 2.1A.6 "Common Lifejacket"

A lifejacket suitable for both adults and children (Common Lifejacket) complies with ISO performance level 100 and so is only suitable to be used by vessels sailing within Hong Kong waters. For details of the Common Lifejacket accepted by MD and the information of the manufacturers, please refer to the Marine Department Notice No. 69 of 2019.

The Common Lifejacket should have a Radio Frequency Identification (RFID) electronic tag attached with a unique identification serial number. The electronic tag should fulfill the following specification requirements:

Material	Silicon (or equivalent).	
Dimension	56 x 12 x 1.8 mm ( +/- 10% on each dimension).	
Frequency band	Within the 860 to 960 MHz band of the UHF spectrum,	
	and shall be readable within the frequency range 865 -	
	868MHz and/or 920 – 925MHz allocated by the Office	
	of the Communications Authority (OFCA) of the Hong	
	Kong Special Administrative Region.	
Protocol	EPC global ISO 18000-6C (or equivalent).	
IC	Higgs 3 (or equivalent).	
EPC memory	96 bits (or above).	
User memory	512 bits (or above).	
Write cycles	100 000 (or above).	
Storage	-40°C to +90°C (or wider range).	
environment		
Wet clean	85°C (up to 60 minutes) (or equivalent).	
	120°C (up to 10 minutes) (or equivalent).	
Iron	200°C (up to 10 seconds with press cloth) (or equivalent).	
Security features	1. The tags shall be compatible with the security scheme	
	for product authentication.	
	2. Each tag shall be assigned a unique ID in EPC memory	
	bank. Structure of the encoding and numbering	
	scheme shall make reference to * with details to be	
	provided and confirmed by the Marine Department.	
	3. Each tag shall be protected by a locked access password	
	to avoid unauthorised access (32 bits).	
	4. Each tag shall be protected by a locked kill password to	
	avoid unauthorised access (32 bits).	
	5. Each tag shall be assigned an authentication code (96	
	bits) in user memory bank which will be updated during	
	authentication process.	
	6. Data content of the security scheme for tag	
	initialization.	
*Structure of the	1. The code is AA99-99999, of which each "A"	
encoding in the	represents an alphabetic character from A to Z and each	
UHF RFID tag (for	"9" represents a digit from 0 to 9.	
reference)	2. The hyphen is fixed.	
	3. The prefix "MD" will be used in the RFID provided by	
	the Marine Department. The RFID of other Common	
	Lifejackets shall not use "MD" in the encoding.	

# 2.1A7 Oversized or Overweight Personnel on Board

With reference to the LSA Code, restraining straps should be provided on board to assist overweight or oversized personnel in securing their lifejackets as they are unable to don the standard-compliant lifejackets.

2.1A.8 The life-saving appliances and radiocommunications equipment including their types and quantity should be provided according to the new Survey Regulation Schedule 3. The electronic version is available at the URL below:

https://www.elegislation.gov.hk/hk/cap548G!en-zh-Hant-HK/sch3

In determining the number of Common Lifejackets required to be provided on board according to the new regulation, the number of lifejackets shall be rounded up if the calculation results are decimal numbers.

Part B – Former Requirements (Sections 2.1A.9 to 2.1A.10) (Transitional Arrangements until 22 December 2021)

- 2.1A.9 The lifejackets required to be provided on board a local vessel under section 32 of and <u>Schedule 3</u> to the <u>former Survey Regulation must</u>
  - (a) at least comply with the performance standards and requirements set out in
    - (i) for a local Class III vessel which is permitted to sail outside the waters of Hong Kong
      - (A) section 2.2.1 or 2.2.2 of the LSA Code; or
      - (B) ISO 12402-3:2006 (Personal floatation devices Part 3: Lifejackets, performance level 150 Safety requirements) issued by the ISO; and
    - (ii) for a local vessel which is permitted to sail solely in the waters of Hong Kong
      - (A) section 2.2.1 or 2.2.2 of the LSA Code; or
      - (B) ISO 12402-4:2006 (Personal floatation devices Part

- 4: Lifejackets, performance level 100 Safety requirements) issued by the ISO; and
- (b) be of a type approved by a maritime administration of a jurisdiction to which the International Convention for the Safety of Life at Sea, 1974 is applicable or a classification society.

Vessels operating within river trade limits shall be equipped with SOLAS B Pack liferafts.

For existing vessels, life-saving appliances which have been approved by the national maritime authority of their country of manufacture in accordance with the national standard or have been approved by MD are also considered acceptable. (Moved to 2.2A)

- 2.1.A.10 For the former life-saving appliances and radiocommunications equipment as well as their types and quantity, please refer to Annex AA-1.
- 2.2 For Class III vessel, the life-saving appliances and radiocommunications equipment including their types and quantity must be provided according to Schedule 3, Table 6 of the Survey Regulation. The electronic version is available at the URL

http://www.legislation.gov.hk/blis\_pdf.nsf/6799165D2FEE3FA948257 55E0033E532/4B0D89C173F9FB2F482575EF0018F44D/\$FILE/CA P\_548G\_e\_b5.pdf Repeal

2.2A Vessels operating within river trade limits shall be equipped with SOLAS B Pack liferafts.

For existing vessels, life-saving appliances which have been approved by the national maritime authority of their country of manufacture in accordance with the national standard or have been approved by MD are also considered acceptable.

- 2.3 Radiocommunications equipment must have a licence issued be of a type approved by the Communications Authority (CA), Hong Kong.
- 2.4 One lifebuoy must be able to support two adult persons.
- 2.5 Each of the buoyant lifeline, self-igniting light and self-activating

smoke signal required by the Survey Regulation shall be attached to a lifebuoy and be placed in proximity of the vessel's both sides.

- 2.6 Lifebuoys shall be marked on both sides with the name (as that shown on the hull of vessel) or Certificate of Ownership number of the vessel on which they are carried.
- 2.7 On vessels sailing in waters beyond Hong Kong, the lifejackets and lifebuoys shall be fitted with the following:
  - (a) for lifejacket: lifejacket light, whistle and retro-reflective tape
  - (b) for lifebuoy: retro-reflective tape
- 2.8 Donning instructions shall be posted in the appropriate areas in the vessel.

#### **3** Replacement of Life-Saving Appliances

Any item of life-saving equipment marked with an expiry date shall be replaced on or before that date.

#### 4 Operational Readiness, Maintenance, Inspections and Servicing

- 4.1 Whenever a local vessel is being used or operated, every life-saving appliance carried on board the vessel shall be
  - (a) in working order;
  - (b) ready for immediate use; and
  - (c) placed in an easily accessible position.
- 4.2 Every inflatable liferaft and hydrostatic release unit shall be serviced at a service station accepted by the Director at intervals not exceeding 12 months or a period as permitted by the Director.

# 5 Survival Craft Muster and Embarkation Arrangements

5.1 Survival craft shall be stowed as close to accommodation and service areas as possible.

- 5.2 Muster and embarkation stations of survival craft shall be readily accessible from accommodation and work areas.
- 5.3 Alleyways, internal and external stairways and exits giving access to the muster and embarkation stations of survival craft shall be lighted.

#### **6** Stowage of Survival Craft and Buoyant Apparatus

- 6.1 Each survival craft shall be stowed
  - (a) in a way that neither the survival craft nor its stowage arrangements will interfere with the operation of any other survival craft at any other launching station;
  - (b) as near to the water surface as possible provided that it is safe and practicable; in serious situations where a fully loaded survival craft has an angle of trim or heel up to 20° or the weather deck starts to be flooded, etc., the embarkation point should be at least 2 m above the waterline;
  - (c) in a state of continuous readiness so that two crew members can carry out preparations for embarkation and launching in less than 5 minutes;
  - (d) in a fully-equipped manner;
  - (e) in a secure and sheltered area as far as practicable to prevent any damages that may be caused by fire and explosions.
- 6.2 Liferafts shall be so stowed as to permit manual release from their securing arrangements.
- 6.3 Liferafts shall be so stowed as to be readily transferable for launching on either side of the vessel unless liferafts are stowed on each side of the vessel.
- Every liferaft shall be stowed with its painter permanently attached to the vessel and with a float-free arrangement so that the liferaft can float free and, if inflatable, can inflate automatically when the vessel sinks.
- 6.5 Each buoyant apparatus shall be stowed -

- (a) as to be readily transferable for launching on either side of the vessel;
- (b) with a float-free arrangement so that the apparatus can float free when the vessel sinks.

#### 7 Launching Stations

Launching stations shall be in such positions as to ensure safe launching having particular regard to the clearance from the propeller and steeply overhanging portions of the hull with the object of ensuring that so far as practicable, the survival craft can be launched down on the straight side of the vessel.

#### 8 Survival Craft Launching Arrangements

8.1 Means shall be available to prevent any discharge of water onto the survival craft during abandonment.

#### 9 Stowage of Lifebuoys

- 9.1 Lifebuoys shall be so distributed as to be readily available on both sides of the vessel and as far as practicable on all open decks extending to the vessel's side. At least one lifebuoy shall be placed in the vicinity of the stern.
- 9.2 Lifebuoys shall be so stowed as to be capable of being rapidly cast loose, and not permanently secured in any way so as to allow float free.
- 9.3 Except as otherwise provided, one lifebuoy shall be fitted on each side of the vessel with a buoyant lifeline attached.
- 9.4 Except as otherwise provided, lifebuoys with self-igniting lights and those with self-igniting lights and self-activating smoke signals shall be equally distributed on both sides of the vessel and shall not be the lifebuoys provided with buoyant lifeline.

# 10 Stowage of Lifejackets

10.1 Lifejackets shall be so placed as to be readily accessible and their

positions shall be plainly indicated.

- The additional lifejackets, when provided, shall be stowed in conspicuous places on deck or at muster stations.
- 10.3 If a lifejacket is individually stored in a plastic bag, and
  - (a) where the plastic bag is completely transparent, the plastic bag shall be easily ripped open; and
  - (b) where the plastic bag is opaque or is not completely transparent
    - (i) the plastic bag shall be easily ripped open; and
    - (ii) there shall be clear indication at a conspicuous place on the outside of the plastic bag that the plastic bag contains a lifejacket.
- If one or more lifejackets are stored in an enclosed space (for example: a cabinet, a bag) which is opaque or is not completely transparent, there shall be a clear indication at a conspicuous place on the outside of the enclosed space that the enclosed space contains a lifejacket.

### 11 Stowage and Packing of Pyrotechnic Distress Signals

- 11.1 Pyrotechnic distress signals provided for use on board a vessel shall be stowed on or near the navigating bridge.
- All pyrotechnic distress signals provided for use on board vessels or lifeboats shall be packed in water-resistant casings when stowed.

# Operating Instructions for Survival Craft and their Launching Controls

Posters and signs provided on or in the vicinity of survival craft and their launching controls shall illustrate the purpose of controls and the procedures for operating the appliance and give relevant instructions.

# 13 Manning of Survival Craft

There shall be a sufficient number of crew members to operate the

survival craft and launching arrangements for abandonment by all the people on board. The crew should be acquainted with their duties.

# 14 Requirements of Inflatable Liferafts for Category A Fishing Vessels

Vessel Length (L) (m)	L < 24	$24 \le L < 45^{(1)}$
Inflatable Liferaft (2)(5)	100% SOLAS B Pack inflatable liferaft <sup>(4)</sup>	100% SOLAS A Pack inflatable liferaft 100% SOLAS B Pack inflatable liferaft <sup>(3)</sup>

#### Notes:

- (1) The requirements for a vessel of 45 m or more in length shall be specified by the Director on a case-by-case basis.
- Where the required quantity of life-saving appliances is expressed as a percentage, it means the percentage of life-saving appliances to the total number of persons on board.
- (3) For fishing vessels intend to operate in waters not more than 200 nautical miles away from the coast, they may use SOLAS B Pack inflatable liferafts for at least 80% of the total persons onboard, and use buoyant apparatus for the remaining persons.
- (4) For vessels of less than 20 m in length and intend to operate in waters not more than 120 nautical miles away from the coast, they may use SOLAS B Pack inflatable liferafts for at least 60% of the total persons onboard, and use buoyant apparatus for the remaining persons.
- (5) (a) Applicable to a Class III vessel that holds a valid port clearance;
  - (b) Required equipment for a Class III leader fishing vessel or individual operating fishing vessel which is exempted under section 69(1) of the Ordinance from complying with section 28(1) of the Ordinance, and will have an endorsement on the licence or certificate.

# 15 Requirements of Radiocommunications Equipment for Class III Vessels

Radiocomm.	Vessel Category		A	_	В
Equipment	Vessel Length (L) (m)	L < 24	$24 \le L < 45^{(1)}$	L < 24	$24 \le L < 45^{(1)}$
VHF (Very High Frequency) Radio (5)					1 (2)
Single Side Band Radio (5)(7)			1		1 (3)(6)
Citizen Band Transceiver			1		1 (4)

#### Notes:

- (1) The requirements for a vessel of 45 m or more in length shall be specified by the Director on a case-by-case basis.
- (2) Required equipment for a Class III vessel that holds a valid port clearance; or a GRP fishing sampan that is exempted under section 69(1) of the Ordinance from complying with section 28(1) of the Ordinance and will have an endorsement on the licence or certificate.
- (3) Required equipment for a Class III vessel that holds a valid port clearance; or a leader fishing vessel or an individual fishing vessel that is exempted under section 69(1) of the Ordinance from complying with section 28(1) of the Ordinance and will have an endorsement on the licence or certificate.
- (4) A fishing sampan of less than 8 m in length and Class III vessel that holds a valid port clearance; except for a GRP fishing sampan that is exempted under section 69(1) of the Ordinance from complying with section 28(1) of the Ordinance.
- (5) The effective date of fitting with DSC and GPS function shall be determined and announced by the relevant authority.
- (6) An individual operating fishing vessel which intends to operate in waters not more than 25 nautical miles away from the coast may have the equipment substituted by a VHF Radio plus a 406MHz EPIRB. EPIRB shall be registered and annually checked.
- (7) May be substituted by an INMARSAT Ship Earth Station.

### Licensing, Operation, Operating Condition and Maintenance of Radiocommunications Equipment for Fishing Vessels

- According to the Telecommunications Ordinance (Cap. 106) of the laws of Hong Kong, the model or type of radiocommunications equipment for fishing vessels must be approved or accepted by the Communications Authority (CA) and hold a licence of radio equipment issued by the CA.
- The Ordinance requires equipment operators to receive appropriate training and obtain an operator certificate issued by the CA. Operator certificates issued by the Mainland or other countries are also acceptable.
- The general condition of radiocommunications equipment shall be efficiently maintained. While a vessel is in operation, the certified operator or the ship master shall frequently carry out operation tests or inspections and keep record of the result.
- When the radiocommunications equipment is licensed or installed for the first time, the vessel owner must submit a test and inspection report issued by the supplier or a suitable radio service company.

#### Annex AA-1

# <u>Former Requirements of Life-Saving Equipment</u> including Their Types and Quantity on Board Class III Vessels

For former requirements of life-saving requirements including their types and quantity, reference should be made to Schedule 3 (Table 6) to the former Merchant Shipping (Local Vessels) (Safety and Survey) Regulation (Survey Regulation). The requirements are as follows:

Table 6 Class III Vessels

		Class III			
Life—	Category of vessel	A	A	1	В
saving appliances	Vessel length (L) (m)	(L)<24	24≤(L)<45 <sup>(1)</sup>	(L)<24	24≤(L)<45 <sup>(1)</sup>
lifejacket		100	%(2)	100%(2)	
lifebuoy		2	4	2 <sup>(3)</sup> and (4)	2 or <4>(5)
buoyant ap (for vessel		_	100%(2)	-	_
inflatable liferaft		100% <sup>(2)</sup> (type, equipment, location and arrangement of liferaft shall be in accordance with the relevant plans approved under Part 3 of this Regulation)			
buoyant life	eline <sup>(6)</sup>	2		2	(3)
<self-activating smoke&gt;<sup>(5)</sup></self-activating 		1(7)		1	(7)
self-igniting	g light	1 <sup>(7)</sup>	2 <sup>(7)</sup>	1 <sup>(7)</sup>	2 <sup>(7)</sup>
<rocket parachute<br="">flare&gt;<sup>(5)</sup></rocket>		4 <sup>(7)</sup>		4	(7)
<radar transponder</radar 	>(5)	1 <sup>(7)</sup>		1	(7)

radiocommunications equipment	description, quantity, type, function and location of equipment shall be in	_
	accordance with the relevant plans	
	approved under Part 3 of this Regulation	

#### Notes:

- (1) The requirements for a Class III vessel of 45 m or more in length shall be specified by the Director on a case-by-case basis.
- Where the required quantity of life-saving appliances is expressed as a percentage, it means the percentage of the total number of persons on board.
- (3) 1 lifebuoy with 30 m buoyant lifeline is sufficient for—
  - (a) a fishing sampan—
    - (i) made of glass reinforced plastic; and
    - (ii) of less than 15 m in length;
  - (b) a fishing sampan—
    - (i) of wooden construction; and
    - (ii) of less than 8 m in length; and
  - (c) a fishing vessel—
    - (i) of wooden construction; and
    - (ii) of less than 12 m in length.
- (4) For a fishing sampan that falls within paragraph (b) of Schedule 2, the minimum requirement for life-saving appliance is 1 lifebuoy.
- (5) Requirements in angle brackets ("< >") are for new vessels only.
- (6) The minimum length of buoyant lifeline is 30 m.
- (7) Applicable to a Class III vessel that—

- (a) holds a valid port clearance; or
- (b) is exempted under section 69(1) of the Ordinance from complying with section 28(1) of the Ordinance.

#### **Chapter VI**

#### **Life-Saving Appliances and Arrangements**

#### 1 General Requirements

All life-saving appliances (other than lifejackets) shall be of the approved type. Appliances conforming to the International Life-Saving Appliance ("LSA") Code adopted by the Maritime Safety Committee of the International Maritime Organization by its resolution MSC.48(66), and approved by a maritime administration of a jurisdiction to which the International Convention for the Safety of Life at Sea, 1974 is applicable or a classification society, or equivalent, are acceptable.

(Amended G.N. 3790 of 2015)

#### 1.1A Lifejacket

1.1A.1 New requirements (in Part A below) regarding the life-saving appliances for Class IV vessels come into effect on [23 December 2019]. The new legislation includes a transitional arrangement stipulating that within 24 months from the commencement date of the new legislation (i.e. [23 December 2019 – 22 December 2021]), former requirements (in Part B below) including lifejackets shall remain valid.

Part A - New Requirements (Sections 1.1A.2 to 1.1A.7) (Effective on [22 December 2019])

1.1A.2 Under the new Survey Regulation, unless otherwise specified, a Class IV vessel shall provide every person (regardless of whether he/she is a child or an adult) on board with a suitable lifejacket (refer to 1.1A.4), the total number of which not less than the maximum number of persons to be carried (i.e. including crew members) as specified in the operating licence. Also, Class IV vessels which are let for hire or reward and carrying more than 12 passengers shall provide infant lifejackets in a number not less than 2.5% of the maximum number of passengers to be carried (excluding crew members) as specified in the operating licence.

#### 1.1A.3 Lifejacket Standard

The lifejackets required to be provided on board a local vessel under section 32 of and Schedule 3 to the new Survey Regulation must –

- (a) at least comply with the performance standards and requirements set out in
  - for a local vessel which is permitted to ply solely in the waters of Hong Kong –
  - (A) section 2.2.1 or 2.2.2 of the LSA Code; or
  - (B) ISO 12402-4:2006 (Personal floatation devices Part 4: Lifejackets, performance level 100 Safety requirements) issued by the International Organization for Standardization (ISO); and
- (b) be of a type approved by a maritime administration of a jurisdiction to which the International Convention for the Safety of Life at Sea, 1974 is applicable or a classification society or the European Union.

#### 1.1A.4 Suitable Lifejacket

A suitable lifejacket means a lifejacket that is designed and manufactured in accordance with 1.1A.3 above, and fit for the intended wearer. A lifejacket complying with such standard is designed with a normal size range, differentiated by the weight and/or height of the intended wearer. Such a range of sizes would be marked on the label of lifejacket for reference:

	SOLAS	ISO
Adult	≥43kg, ≥155cm	≥40kg
Child	15-43kg,100-155cm	15-40kg
Infant	<15kg, <100cm	<15kg
"Common	N.A.	15-120kg
Lifejacket"		
(refer to <1.1A.6>		

- 1.1A.5 To avoid confusion, the lifejackets (except infant lifejackets) placed on board should as far as practicable not to be of mixed standards.
- 1.1A.6 "Common Lifejacket"

A lifejacket suitable for both adults and children (Common Lifejacket) complies with ISO performance level 100 and so is only suitable to be used by vessels sailing within Hong Kong waters. For details of the Common Lifejacket accepted by MD and the information of the manufacturers, please refer to the Marine Department Notice No. 69 of

2019.

The Common Lifejacket should have a Radio Frequency Identification (RFID) electronic tag attached with a unique identification serial number. The electronic tag should fulfill the following specification requirements:

Material	Silicon (or equivalent).
Dimension	56 x 12 x 1.8 mm ( +/- 10% on each dimension).
Frequency band	Within the 860 to 960 MHz band of the UHF spectrum,
	and shall be readable within the frequency range 865 –
	868MHz and/or 920 – 925MHz allocated by the Office of
	the Communications Authority (OFCA) of the Hong Kong
	Special Administrative Region.
Protocol	EPC global ISO 18000-6C (or equivalent).
IC	Higgs 3 (or equivalent).
EPC memory	96 bits (or above).
User memory	512 bits (or above).
Write cycles	100 000 (or above).
Storage	-40°C to +90°C (or wider range).
environment	
Wet clean	85°C (up to 60 minutes) (or equivalent).
	120°C (up to 10 minutes) (or equivalent).
Iron	200°C (up to 10 seconds with press cloth) (or equivalent).
Security features	1. The tags shall be compatible with the security scheme
	for product authentication.
	2. Each tag shall be assigned a unique ID in EPC memory
	bank. Structure of the encoding and numbering scheme
	shall make reference to * with details to be provided
	and confirmed by the Marine Department.
	3. Each tag shall be protected by a locked access password
	to avoid unauthorised access (32 bits).
	4. Each tag shall be protected by a locked kill password to avoid unauthorised access (32 bits).
	` '
	5. Each tag shall be assigned an authentication code (96 bits) in user memory bank which will be undeted during
	bits) in user memory bank which will be updated during authentication process.
	<ul><li>6. Data content of the security scheme for tag</li></ul>
	initialization.
*Structure of the	
encoding in the	
UHF RFID tag (for	1
om Krib tag (101	7 represents a digit from 0 to 3.

reference)	2. The hyphen is fixed.
	3. The prefix "MD" will be used in the RFID provided by
	the Marine Department. The RFID of other Common
	Lifejackets shall not use "MD" in the encoding.

1.1A7 Oversized or Overweight Passengers/Personnel On Board With reference to the LSA Code, restraining straps should be provided on board to assist overweight or oversized passengers/personnel in securing their lifejackets as they are unable to don the standard-compliant lifejackets.

# Part B – Former Requirements (Section 1.1B) (Transitional Arrangements until 22 December 2021)

- 1.1AB The lifejackets required to be provided on board a local vessel under section 32 of and Schedule 3 to the former Survey Regulation must
  - (a) at least comply with the performance standards and requirements set out in
    - (i) for a local vessel which is permitted to leave the waters of Hong Kong
      - (A) section 2.2.1 or 2.2.2 of the LSA Code; or
      - (B) ISO 12402-3:2006 (Personal floatation devices Part
         3: Lifejackets, performance level 150 Safety requirements) issued by the ISO;
    - (ii) for a local vessel which is permitted to sail solely in the waters of Hong Kong
      - (A) section 2.2.1 or 2.2.2 of the LSA Code; or
      - (B) ISO 12402-4:2006 (Personal floatation devices Part 4: Lifejackets, performance level 100 Safety requirements) issued by the ISO; and
  - (b) be of a type approved by a maritime administration of a jurisdiction to which the International Convention for the Safety of Life at Sea, 1974 is applicable or a classification society.

(Added G.N. 3790 of 2015)

1.2 Very high frequency (VHF) radio equipment shall obtain the Ship Station Licence issued be of a type approved by the Communications Authority (CA), Hong Kong.

(Amended G.N. 1134 of 2017)

- One lifebuoy must be able to support two adult persons. One lifebuoy of 760 mm diameter is deemed to support two persons.
- 1.4 The buoyant lifeline shall be attached to a lifebuoy and be placed in the proximity of the ship's side.
- 1.5 Lifebuoys shall be marked on both sides with the name or certificate of ownership number of the vessel on which they are carried.

#### 2. Stowage of Appliances

- 2.1 Whenever a local vessel is being used or operated, every life-saving appliance carried on board the vessel shall be
  - (a) in working order;
  - (b) ready for immediate use; and
  - (c) placed in an easily accessible position.
- 2.2 Lifebuoys shall be distributed on both sides of the vessel. They are to be placed in racks unsecured to allow them to float-free as necessary.
- 2.3 Lifejackets shall be stowed in racks or under seats and be clearly marked. They shall be evenly distributed according to the disposition of persons on board.
- 2.4 If a lifejacket is individually stored in a plastic bag, and
  - (a) where the plastic bag is completely transparent, the plastic bag shall be easily ripped open; and
  - (b) where the plastic bag is opaque or is not completely transparent
    - (i) the plastic bag shall be easily ripped open; and
    - (ii) there shall be a clear indication at a conspicuous place on

the outside of the plastic bag that the plastic bag contains a lifejacket.

(Added G.N. 4986 of 2016)

2.5 If one or more lifejackets are stored in an enclosed space (for example: a cabinet, a bag) which is opaque or is not completely transparent, there shall be a clear indication at a conspicuous place on the outside of the enclosed space that the enclosed space contains a lifejacket.

(Added G.N. 4986 of 2016)

2.6 Crew, passengers and persons on board open cruisers or similar type of vessels, where the risk of falling overboard is high, are recommended to wear lifejackets at all times.

(Added G.N. 1134 of 2017)

#### 3. Safety Briefing

When a Class IV vessel is engaged in chartering, the coxswain shall ensure that all persons on board are briefed for safety as per Annex 1.

#### 4. Scale of Life-Saving Appliances

4.1 The requirements of life-saving appliances for Class IV vessels are prescribed in the new Survey Regulation Schedule 3, the electronic version of which is available at the URL below—
https://www.elegislation.gov.hk/hk/cap548G!en-zh-Hant-HK?INDEX\_CS=N&xpid=ID\_1438403421387\_001

(Amended G.N. 1134 of 2017)

4.2 For former requirements Provisions of life-saving appliances including their types and quantity, reference can be made to the former Survey Regulation Schedule 3 (Table 7). The following parts are quoted below for reference:

Table 7

Class IV vessels that are licensed to carry not more than 60 passengers and are not let for hire or reward and operate within waters of Hong Kong

Life-saving appliances	Quantity	
lifejacket	100% <sup>(1)</sup>	
lifebuoy	Vessel length (L)(m)	Number
	(L) < 12	1
	$12 \le (L) < 21$	2

	21 ≤ (L) < 37	4
	(L) ≥ 37	6
buoyant lifeline <sup>(2)</sup>	1	

#### Notes:

- (1) Where the required quantity of life-saving appliances is expressed as a percentage, it means the percentage of the total number of persons on board.
- (2) The minimum length of buoyant lifeline is:

For (L) < 21 m 18 m For (L)  $\ge 21 \text{ m}$  27.3 m

4.3 For former requirements Provisions of life-saving appliances including their types and quantity, reference can be made to the former Survey Regulation Schedule 3 (Table 1 and Table 2). The following parts are quoted below for reference:

#### Table 1

- (ii) Class IV vessels that are licensed to carry more than 60 passengers
- 5. Class IV vessels that are licensed to carry 13 to 60 passengers but are let for hire or reward

Operation area Life-saving appliances	Specified sheltered waters	Anywhere within waters of Hong Kong	
lifejacket	any number ) Total	100% adult lifejacket + 5% children lifejacket	
lifebuoy	minimum ) 100% <sup>(1)</sup> number per ) Table 2 )	minimum number per Table 2	
buoyant lifeline <sup>(2)</sup>	1 for vessel (L)<12 m 2 for vessel (L)≥12 m		
self-igniting light <sup>(3)</sup>	2		

#### Notes:

(1) Where the required quantity of life-saving appliances is expressed as a percentage, it means the percentage of the total number of persons on board.

(2) The minimum length of buoyant lifeline for a Class IV vessel that is licensed to carry more than 60 passengers is 30 m.

The minimum length of buoyant lifeline for a Class IV vessel that is

licensed to carry not more than 60 passengers is:

For (L) 
$$< 21 \text{ m}$$
 18 m  
For (L)  $\ge 21 \text{ m}$  27.3 m

(3) Required for a Class IV vessel that carries more than 100 passengers.

Table 2
Minimum number of lifebuoys as required in Table 1

Vessel length (L)(m)	Number of lifebuoys
(L) < 12	2
$12 \le (L) < 15$	4
$15 \le (L) < 18$	6
18 ≤ (L) < 21	8
21 ≤ (L) < 24	10
(L) ≥ 24	12

4.4 For former requirements Provisions of life-saving appliances including their types and quantity, reference can be made to the former Survey Regulation Schedule 3 (Table 3 and Table 5). The following parts are quoted below for reference:

Table 3
(ii) Class IV vessels that are licensed to carry not more than 12 passengers but are let for hire or reward

Operation area Life-saving appliances	Specified Sheltered Waters	Anywhere within waters of Hong Kong
lifejacket	any number )	100% adult lifejacket +
	) Total	<5% children lifejacket> (1) (2)
lifebuoy	any number ) 100% <sup>(1)</sup>	minimum number per Table 5
buoyant lifeline <sup>(3)</sup>	1 for vessel (L) < 12 m 2 for vessel (L) $\geq$ 12 m	

<pre><self-igniting (for="" (l)="" <math="" light="" vessel="">\geq 37 m)&gt; (2)</self-igniting></pre>	2

#### Notes:

- (1) Where the required quantity of life-saving appliances is expressed as a percentage, it means the percentage of the total number of persons on board.
- (2) Requirements in angle brackets ("<  $\square>$ ") are for new vessels only.
- (3) The minimum length of buoyant lifeline is 30 m.

**Table 5**Minimum number of lifebuoys as required in Table 3

Vessel length (L)(m)	Number of lifebuoys
(L) < 12	1
12 ≤ (L) < 24	2
24 ≤ (L) < 37	4
(L) ≥ 37	6

Note: For jetski, one lifejacket for each person to be provided onboard.