CODE OF PRACTICE ----

Safety Standards for Class II Vessels

(issued under Section 8 of the Merchant Shipping (Local Vessels) Ordinance, Cap 548)

Local Vessels Safety Section
Marine Department, HKSAR

(November 2020 Edition)

Record on Updating and Amendments

This code of practice is issued under section 8 of the Merchant Shipping (Local Vessels) Ordinance, (Cap. 548). This code was first notified in the Gazette Notice on 29 December 2006 to take effect on 2 January 2007. Subsequent updating and amendments would be notified to the industry through further notice in the Gazette from time to time. This record sheet is intended for good record keeping of the amendment history of this code.

Amend. No.	Gazette No.	Gazette Date	Effective Date	Topic Areas / Pages
1	G.N.7136	29 November 2013	29 November 2013	revision of sections 7.2 and 8.2 of Chapter I / Page 17
2	G.N.7136	29 November 2013	29 May 2014	addition of new item 13 to "(A) GENERAL AND SAFETY" in the table under section 5 of Chapter II/ Page 5& 9
3	G.N.7136	29 November 2013	29 May 2014	addition of new sections 6.4 and 6.5 to Chapter II / Page 9
4	G.N.7136	29 November 2013	29 May 2014	addition of new section 2.7 to Chapter IIIA / Page 2
5	G.N.7136	29 November 2013	First annual survey after 1 March 2014	addition of new section 15 to Chapter VII / Page 5&6
6	G.N.7136	29 November 2013	section 10.2.1(i) and (ii) –first annual survey after 29 November 2014. section 10.2.1(iii) and section 10.2.2 – 29 November 2014.	addition of new section 10 to Chapter XII / Page 4&5
7	G.N.7136	29 November 2013	First annual survey after 1 March 2014	revision of section 1 of Annex U-5/Page 1
8	G.N.6640	21 November 2014	29 November 2014	revision of section 3.1 of Chapter I for – (i) addition of a new definition of "authorized organization" and "classification society"; (ii) repeal of the definition of "classification societies"; and (iii) addition of a new definition of "margin line"
9	G.N.6640	21 November 2014	29 November 2014	revision of sections 4.2, 4.3 and 6.1 of Chapter II;

Amend. No.	Gazette No.	Gazette Date	Effective Date	Topic Areas / Pages
10	G.N.6640	21 November 2014	29 November 2014	revision of the heading of section 5 of Chapter II
11	G.N.6640	21 November 2014	29 November 2014	addition of a new provision on high risk vessel to section 5 of Chapter II
12	G.N.6640	21 November 2014	29 November 2014	revision of items 1, 8, 10 and 12 under "(A) GENERAL AND SAFETY" in the table under section 5 of Chapter II
13	G.N.6640	21 November 2014	29 November 2014	revision of items 1, 2 and 3 under "(B) HULL" in the table under section 5 of Chapter II
14	G.N.6640	21 November 2014	29 November 2014	revision of items 3, 4(a), 4(b), 5, 6 and 7 under "(C) MACHINERY INSTALLATION" in the table under section 5 of Chapter II
15	G.N.6640	21 November 2014	29 November 2014	revision of item 1 under "(D)ELECTRICAL INSTALLATION (including Emergency Power System)" in the table under section 5 of Chapter II
16	G.N.6640	21 November 2014	29 November 2014	revision of remark *7 on the table under section 5 of Chapter II
17	G.N.6640	21 November 2014	29 November 2014	repeal of remark *12 on the table under section 5 of Chapter II
18	G.N.6640	21 November 2014	29 November 2014	omission of remark *13 on the table under section 5 of Chapter II
19	G.N.6640	21 November 2014	29 November 2014	addition of a new section 6.1A to Chapter II
20	G.N.6640	21 November 2014	29 November 2014	omission of the remarks on sections 6.4 and 6.5 of Chapter II
21	G.N.6640	21 November 2014	29 November 2014	revision of items 1 and 12 under "(A) GENERAL AND SAFETY MEASUREMENT" in Table 1 under section 7 of Chapter II
22	G.N.6640	21 November 2014	29 November 2014	revision of remark *11 on Table 2 under section 7 of Chapter II
23	G.N.6640	21 November 2014	29 November 2014	revision of item 6 under "(A&B) GENERAL, HULL & SAFETY EQUIPMENT" in Table 3 under section 7 of Chapter II
24	G.N.6640	21 November 2014	29 November 2014	addition of a new item 6A under "(A&B) GENERAL, HULL & SAFETY EQUIPMENT" in Table 3 under section 7 of Chapter II
25	G.N.6640	21 November 2014	29 November 2014	addition of a new item 9A under "(C&D) MACHINERY AND ELECTRICAL INSTALLATION" in Table 3 under section 7 of Chapter II

Amend. No.	Gazette No.	Gazette Date	Effective Date	Topic Areas / Pages
26	G.N.6640	21 November 2014	29 November 2014	addition of a new remark *5A on Table 3 under section 7 of Chapter II
27	G.N.6640	21 November 2014	29 November 2014	omission of the remarks on section 2.7 of Chapter IIIA
28	G.N.6640	21 November 2014	29 November 2014	revision of the English text of section 3.5 of Chapter IIIA
29	G.N.6640	21 November 2014	29 November 2014	revision of section 10.2 of Chapter IIIA
30	G.N.6640	21 November 2014	29 November 2014	addition of new sections 21.5A and 21.5B to Chapter IIIA
31	G.N.6640	21 November 2014	29 November 2014	revision of sections 6.1, 9.1 and 9.2 of Chapter IV
32	G.N.6640	21 November 2014	29 November 2014	revision of sections 1.1(c), 3.1(a), 3.2, 3.4, 3.5, 7.1 and 7.2 of Chapter V
33	G.N.6640	21 November 2014	29 November 2014	addition of new sections 1.5, 3.6, 3.7, 3.8, 3.9 and 7.1A to Chapter V
34	G.N.6640	21 November 2014	29 November 2014	revision of section 10.1(a) of Chapter VI
35	G.N.6640	21 November 2014	29 November 2014	repeal of section 13.5.2 of Chapter VI
36	G.N.6640	21 November 2014	29 November 2014	revision of section 3.1 of Chapter XI
37	G.N.6640	21 November 2014	29 November 2014	revision of section 10 of Chapter XII
38	G.N.6640	21 November 2014	29 November 2014	addition of a new section 11 to Chapter XII;
39	G.N.6640	21 November 2014	29 November 2014	omission of paragraph 1 of Annex U-5
40	G.N.6640	21 November 2014	29 November 2014	revision of paragraph 2 of Annex U-5
41	G.N.6640	21 November 2014	29 November 2014	addition of a new Annex U-6
42	G.N.6824	28 November 2014	29 November 2014	revision of section 11.2 of Chapter XII
43	G.N.3790	29 May 2015	29 May 2015	revision of sections 1.2 and 2.1 of Chapter VII
44	G.N.4986	2 September 2016	2 September 2016	addition of new requirements to section 1.3 of Chapter III B
45	G.N.4986	2 September 2016	2 September 2016	omission of section 1.3(c) of Chapter III B

Amend. No.	Gazette No.	Gazette Date	Effective Date	Topic Areas / Pages
46	G.N.4986	2 September 2016	2 September 2016	addition of new section 1.4 to Chapter IIIB
47	G.N.4986	2 September 2016	2 September 2016	revision of section 1.1 of Chapter IV
48	G.N.4986	2 September 2016	2 September 2016	revision of section 1.5 of Chapter V
49	G.N.4986	2 September 2016	2 September 2016	revision of section 1.6 of Chapter V
50	G.N.4986	2 September 2016	2 September 2016	revision of section 2.8 of Chapter VII
51	G.N.4986	2 September 2016	2 September 2016	addition of sections 10.3 and 10.4 to Chapter VII
52	G.N.4986	2 September 2016	2 September 2016	revision of sections 4.1 to 4.4 and 5.1[Note(F)] of Chapter VIII
53	G.N.4986	2 September 2016	2 September 2016	revision of Annex I-10
54	G.N.4986	2 September 2016	2 September 2016	addition of Annex K-2
55	G.N.4986	2 September 2016	2 September 2016	revision of Annex L
56	G.N.4986	2 September 2016	2 September 2016	addition of new requirements to Annex N-4B
57	G.N.4986	2 September 2016	2 September 2016	addition of new requirements to Annex N-4C
58	G.N.1134	3 March 2017	3 March 2017	the code is rewritten and partitioned into 3 volumes; namely Code of Practice – Safety Standards for Class I Vessels, Code of Practice – Safety Standards for Class II Vessels and Code of Practice – Safety Standards for Class III Vessels; and contents are comprehensively amended
59	G.N.5924	11 August 2017	11 August 2017	Chapter II amended: in the table of Guide on Periodical Survey Cycle for Class II Vessel, revision of items (1), (2),(3),(6),(7),(9),(10), (11A),(12A) and (13); in Table 5-1, omission of remark *9; revision of items (A)(1), (B)(1); addition of items (K)(1)~(3) and remarks *10, *11 and *12; in Table 7-1, revision of item (A)(2) and remark *1; in Table 7-2, revision of items (C)(4),(11) and (12); in Table 7-3, revision of items (D)(3), (F)(6), Remarks *7,*12
60	G.N.5924	11 August 2017	11 August 2017	In Chapter IIIA: revision of section 7.3 (English version only)
61	G.N.5924	11 August 2017	11 August 2017	In Chapter IIIB: revision of section 2.3

Amend. No.	Gazette No.	Gazette Date	Effective Date	Topic Areas / Pages
62	G.N.5924	11 August 2017	11 August 2017	In Chapter VIII: revision of section 4.7
63	G.N.500	26 January 2018	26 January 2018	In Chapter V, revision of section 3.1(a) and addition of new paragraphs at end
64	G.N.500	26 January 2018	26 January 2018	Addition of new Annex W
65	G.N.6489	31 August 2018	31 August 2018	In Chapter II, Table 5-1, add in item (C)(8a) and remark *12; Table 7-1, add in item (D)(11) and remark *11; Table 7-2, add in item (B)(7) and remark *17; Table 7-3, amend remark *10
66	G.N.6489	31 August 2018	31 August 2018	In Chapter IV, add in subsection 7.2
67	G.N.6489	31 August 2018	31 August 2018	Addition of new Annex Y
68	G.N.8215	20 December 2019	20 December 2019	Chapter VII Section 1 –definition of "LSA Code" revised; Section 2 –paragraph 2.1 and 2.3 revised; paragraph 2.2 repealed and new paragraph 2.1A and 2.2 inserted to specify the new and former lifejacket requirements
69	G.N.8215	20 December 2019	20 December 2019	New Annex AA added to specify the requirements of former regulations
70	G.N.6256	2 November 2020	2 November 2020	Chapter II: Section 2 – paragraph 2.2 and 2.3 revised; Remarks in Table 7-3 – remark *4 repealed

FOREWORD

(1) The Merchant Shipping (Local Vessels) Ordinance, Cap 548 (here below refers as "the Ordinance"), is to provide for the regulation and control of local vessels in Hong Kong and for other matters affecting local vessels, including their navigation and safety at sea (whether within or beyond the waters of Hong Kong).

(2) This Code of Practice is approved and issued by the Director in pursuant to section 8 of the Ordinance for the purpose of ensuring acceptable technical and safety standards in the design, construction, maintenance and inspection of local vessels in conjunction with the condition required or the standards prescribed by the Director under Merchant Shipping (Local Vessels)(Safety and Survey) Regulation. This Code also provides necessary practical guidance on operational safety practices in conjunction with the relevant requirements in the Merchant Shipping (Local Vessels)(Certification and Licensing) Regulation.

(3) Section 9 of the Ordinance explains the use of approved codes of practice in proceeding .

(4) The owner, agent and the coxswain of any Class II and III vessel when engaged in operations outside the waters of Hong Kong are required -

(a) to ensure the compliance with relevant safety requirements specified by the Director. These requirements are promulgated in the Marine Department notices from time to time, and

(b) to observe any relevant requirement required by local Authority of those waters.

CODE OF PRACTICE -

SAFETY STANDARDS FOR CLASS II VESSELS

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CHAPTER I
GENERAL

1 Introduction

1.1 The legislation relating to the control, licensing and regulation of local vessels in Hong Kong is contained in the Merchant Shipping (Local Vessels) Ordinance, Cap. 548 (the Ordinance) and its subsidiary legislations. This Code of Practice is issued under section 8 of the Ordinance.

1.2 This "Code of Practice – Safety Standard for Class II Vessels" has been developed by the Hong Kong Marine Department in consultation with the local maritime industry through representation in relevant working groups and committees.

1.3 The primary aim in developing the Code has been to set standards of safety and protection for all passengers and crew on board. The Code relates especially to the construction of a vessel, its machinery, equipment and stability and to the proper operation of the vessel so that safety standards are maintained. In accordance with the legal status prescribed in section 9 of the Ordinance, requirements set out in this Code shall be followed.

1.4 The legislative requirements quoted in this Code should be subject to authentic provisions of the legislative instrument and its latest amended. These requirements are mandatory and must be complied with.

1.5 The builder, repairer or owner/managing agent of a vessel, as appropriate shall take all reasonable measures to ensure that a material or appliance fitted in accordance with the requirements of the Code is suitable for the purpose intended having regard to its location in the vessel, the area of operation and the weather conditions which may be encountered.

2 Statutory Legislation and Standards

2.1 This Code must be construed in the light of the following statutory provisions and their amendments from time to time (if any) as appropriate:

(a) Merchant Shipping (Local Vessels) Ordinance, Cap. 548 (hereafter referred to as “the Ordinance”)

(b) Merchant Shipping (Local Vessels) (General) Regulation, Cap. 548 sub. leg.

(c) Merchant Shipping (Local Vessels) (Certification and Licensing) Regulation, Cap. 548 sub. leg.

(d) Merchant Shipping (Local Vessels) (Fees) Regulation, Cap. 548 sub. leg.

(e) Merchant Shipping (Local Vessels) (Safety and Survey) Regulation, Cap. 548 sub. leg. (hereafter to be referred as "Survey Regulation")

(f) Merchant Shipping (Local Vessels) (Works) Regulation, Cap. 548 sub. leg.

(g) Merchant Shipping (Local Vessels)(Compulsory Third Party Risks Insurance) Regulation, Cap. 548 Sub. leg.

(h) Merchant Shipping (Safety) (Signals of Distress and Prevention of Collisions) Regulations, Cap. 369 sub. leg.

(i) Merchant Shipping (Safety) (Use of Signals of Distress) Regulations, Cap. 369 sub. leg.

(j) Merchant Shipping (Prevention of Oil Pollution) Regulations, Cap. 413 sub. leg.

(k) Merchant Shipping (Control of Pollution by Noxious Liquid Substances in Bulk) Regulations, Cap. 413 sub. leg.

(l) Dangerous Goods Ordinance, Cap. 295

(m) Dangerous Goods (Application and Exemption) Regulations, Cap. 295 sub. leg.

(n) Dangerous Goods (General) Regulations, Cap. 295 sub. leg.

(o) Dangerous Goods (Shipping) Regulations, Cap. 295 sub. leg.

(p) Merchant Shipping (Prevention of Air Pollution) Regulations, Cap. 413 sub. leg.

(q) Merchant Shipping (Prevention of Pollution by Garbage) Regulations, Cap. 413 sub. leg.

(r) Merchant Shipping (Control of Harmful Anti-Fouling Systems on Ships) Regulation, Cap. 413 sub. leg.

2.2 Other Standards

The vessel's strength, structure, arrangements, materials, scantlings, main and auxiliary machinery, boilers and pressure vessels, electrical installations, etc. shall be so designed and installed as to ensure that the vessel is fit for the service for which it is intended. Apart from the requirements in this Code, present rules and standards of classification societies recognized by Marine Department or other equivalent standards may be used as assessment standards.

3 Definitions

3.1 In this Code-

"approved", in relation to equipment, appliances, machinery, any other fittings or materials, means approved by the Director;

"authorized organization (AO)" means the classification society authorized (by means of authorization document) by the Director to carry out statutory survey work for local vessels;

"authorized surveyor", as defined in section 2 of the Ordinance;

"carrying xx passengers" means vessel's permissible number of passengers that can be carried throughout the text of this Code;

"chemical carrier" means any vessel constructed or adapted and used for the carriage in bulk of any liquid product listed in chapter 17 of the IBC Code;

"certificate" means a Certificate of Survey, a Record of Safety Equipment, a Freeboard Assignment Certificate, a Hong Kong Load Line Certificate or a Declaration of Fitness for the Carriage of Dangerous Goods issued by the Director under the Survey Regulation; and a Hong Kong Oil Pollution Prevention Certificate, a Hong Kong Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk, a Hong Kong Air Pollution Prevention Certificate issued under Merchant Shipping (Prevention and Control of Pollution) Ordinance, Cap. 413;

"classification society (CS)" means an organization approved under section 8 of the Merchant Shipping (Safety) Ordinance (Cap 369)

(a) American Bureau of Shipping (ABS);

(b) Bureau Veritas (BV);

(c) China Classification Society (CCS);

(d) DNV GL;

(e) Korean Register of Shipping (KR);

(f) Lloyd's Register (LR);

(g) Nippon Kaiji Kyokai (NK);

(h) RINA S.p.A. (RINA); or

(i) Russian Maritime Register of Shipping (RS)

"Code" means this Code;

"dangerous goods carrier" means a vessel, other than an oil carrier, certificated for the carriage of dangerous goods;

"Declaration" means Declaration of Survey;

"existing vessel" means a vessel which is not a new vessel defined in section 2 of the Survey Regulation

"extreme breadth", in relation to a local vessel, means the athwartship distance between the extremity of the outermost permanent structure (including fenders of any kind, bulwark, hand rails, etc.) on the port side and the extremity of the outermost permanent structure on the starboard side of the vessel;

"favourable weather" means weather, when the visibility is good and when the combined effects of wind, sea or swell, upon the ship under consideration are never greater than those which would cause moderate rolling or pitching, or result in the shipping of green seas onto the main deck (in the case of open boats, over the gunwale);

"final inspection" means the last or final visit for the purpose of survey or inspection, usually carried out on safety equipment items and functional trials in an initial survey or a periodical survey for a vessel;

"gross tonnage", a measurement figure for a local vessel of which the details and calculation can be referred to Chapter IX of this Code;

"high risk vessel" means an Oil Carrier, a Dangerous Goods Carrier, a Noxious Liquid Substances Carrier or any Class II vessel intended for carrying cargoes of hazardous nature;

"IBC Code" means the 1998 edition of the IMO International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk, as may be amended by the IMO from time to time;

"IMDG Code" means the International Maritime Dangerous Goods Code, published by the IMO as amended from time to time by IMO;

"IMO" means the International Maritime Organization;

"initial survey" in connection with anyone of the certificates mentioned in Part 3 and Part 4, in so far as applicable, of Survey Regulation means the survey (including its final inspection) to be completed for a new vessel for the first issue of the concerned certificate;

“length” or the symbol “(L)”, as defined in section 2 of the Survey Regulation;

“length overall”, as defined in section 2 of the Ordinance;

“low risk vessel” means a vessel of other than high risk vessel;

“main engine” means the propulsion engine(s) of vessel;

“moulded breadth” is measured at amidship and is the maximum breadth over the frames in respect of vessels built of steel or aluminium; and is the maximum breadth over the outside surface of hull planking in respect of vessels built of wood or composite materials;.

“moulded depth” , as defined in section 2 of the Survey Regulation;

“multi-purposes vessel’ means a local vessel or launch which can carry more than 12 passengers and can be used with other purposes;

“new vessel”, unless indicated otherwise, as defined in section 2 of the Survey Regulation;

"noxious liquid substance carrier" means a mechanized, or a non-mechanized vessel, constructed or adapted for the carriage in bulk of any substance listed in column (a) of the table in Chapter 17 and/or 18 of the IBC Code (being a substance falling into category X, Y or Z) and any other liquid substance which is provisionally listed or class-approved as a category X, Y or Z substance;

“oil carrier” means a motor tanker, or a dumb barge, constructed or adapted for the carriage in bulk of liquid cargoes of a flammable nature (including sludge oil);

“Ordinance” or “LVO” means the Merchant Shipping (Local Vessels) Ordinance (Cap 548).

“owner” , as defined in section 2 of the Ordinance;

“passenger”, as defined in section 2 of the Ordinance;

“periodical survey” in connection with anyone of the certificates mentioned in Part 4, in so far as applicable, of Survey Regulation means the survey (including its final inspection) to be completed for an existing vessel for the renewal survey, annual endorsement survey or intermediate survey for the issue of the concerned certificate;

“Recognized Authority (RA)”, as defined in section 2 of the Survey Regulation;

"river trade limits", as defined in section 2 of the Survey Regulation;

“sister vessels” or “series of vessels” means vessels constructed of the same design (i.e. the same hull form with identical length, breadth, depth and arrangement) in the same shipyard;

“waters of Hong Kong ” means waters of Hong Kong within the meaning of Schedule 2 of the Interpretation and General Clauses Ordinance (Cap. 1).

"watertight", as defined in regulation 1 of the Merchant Shipping (Safety) (Passenger Ship Construction And Survey) (Ships Built On Or After 1 September 1984) Regulations;

"weathertight", as defined in regulation 1 of the Merchant Shipping (Safety) (Passenger Ship Construction And Survey) (Ships Built On Or After 1 September 1984) Regulations.

4 Application

4.1 Subject to section 4.2, this Code will apply to Class II vessels of all types of construction.

4.2 Chapter XI will apply to dynamically supported craft, and vessels which are designed and built to the requirements of rules and regulations applicable to high speed craft issued by a classification society as listed in Annex A of this Code.

4.3 Existing vessels shall comply with the requirements previously applicable to these vessels unless otherwise expressly specified in the Survey Regulation or in this Code. The approval and/or exemption of construction and equipment, if any, given to the existing vessels shall remain valid unless otherwise repealed.

4.4 Requirement in pair of angle brackets < > appeared in the other chapters in this Code are applicable to new vessels only; i.e. the new vessels as on or after 2 January 2007.

5 Category of Vessel

Every vessel shall be categorised into Category A or B as indicated in the following table:

Class and Type of Vessel (6)	**Vessel Category**	**A**		**B**	
	Material	**Steel/Al/GRP/Wooden**		**Wooden**	**Steel/Al/ GRP/ Wooden**
	Propulsion	**with Main Engine**	**No Main Engine**	**with Main Engine**	**No Main Engine**
Dangerous Goods Carrier		*	*	* (1)	* (1)
Noxious Liquid Substances Carrier		*	*		
Oil Carrier		*	*		
Edible Oil Carrier		*	*		
Dry Cargo Vessel		*		*(2)	
Dumb Lighter (incl. Flat Top Cargo Barge)					*
Dredger		*			
Hopper Barge					*
Water Boat		*(3)		*	
Tug		*			
Transportation Boat		*			
Transportation Sampan				*	*(4)
Pilot Boat		*		* (1)	
Floating Dock			*		
Floating Workshop (incl. Repair Barge, Welding Barge)		*	*	*(1)	*(1)
Crane Barge			*		*(1)
Work Boat		*	*	*(1)	*(1)

Class and Type of Vessel (6)	Vessel Category	A		B	
	Material	Steel/Al/GRP/Wooden		Wooden	Steel/Al/ GRP/ Wooden
	Propulsion	with Main Engine	No Main Engine	with Main Engine	No Main Engine
Flat Top Work Barge			*(3)		*
Landing Pontoon					*
Landing Platform					*
Special Purpose Vessel		*	*		
Stationary Vessel (Including Separation Barge, Kitchen Boat, Ice Barge, Fish Drying Barge, Waste Water Treatment Barge, Fish Storage Barge)			* (5)		*

(Asterisk* means applicable)

Abbreviations in Table

Al : Aluminium

GRP : Glass reinforced plastic

Remarks in Table

(1) Existing vessels only.

(2) Wooden cargo vessels (including wooden trading boats) operating solely within Hong Kong waters.

(3) Vessels other than wooden construction.

(4) Refer to Ch. II/1.4.

(5) New vessels that are kitchen boats only

(6) Any other type of vessel not included in the table will be specially considered.

6 Equivalent

Under section 83 of the Survey Regulation Marine Department may grant permission for providing on board any other fitting, material, appliance or apparatus, or type thereof, or other facilities that are different from those required in this Code if the department is satisfied by testing or other methods that their effectiveness is equivalent to that required in this Code; supported by necessary survey and test reports.

CHAPTER II

SURVEY / INSPECTION, ISSUANCE OF CERTIFICATE AND PLAN APPROVAL

1 Survey / Inspection for Issue or Endorsement of Certificate

1.1 Any local vessel to which sections 7(1) and (3) of Survey Regulation apply when applying for an initial licence is subject to the approval of plans per items (appropriate according to category and type of vessel) indicated in Table 5-1.

1.2 Any local vessel to which Part 4 of Survey Regulation applies when applying for an initial licence is subject to the initial survey per items (appropriate according to category and type of vessel) indicated in Tables 7-1 and 7-3; and after licencing the periodical survey per items indicated in Tables 7-2 and 7-3.

1.3 Any licensed vessel of the above sections 1.1 or 1.2 intended for alteration shall be subject to the approval of plans (if section 1.1 is applicable) and survey relating to the alteration under section 76(5) of the Survey Regulation.

1.4 Vessels of the types referred to in the table below, which are not fitted with propulsion engine and not fitted with any internal combustion engine onboard, and with the product Length overall x extreme breadth[Note] not exceeding 25 are not subject to any survey:

Class	Types	Material of construction	Minimum requirements for life-saving appliances and fire-fighting apparatus
II	Transportation Sampan	any material	(a) 1 lifejacket for every person on board; (b) 1 lifebuoy; and (c) 1 fire bucket with lanyard
II	Work Boat	other than metal	(a) 1 lifebuoy; and (b) 1 fire bucket with lanyard

Note

The terms "Length overall" and "extreme breadth" are defined in Ch. I/3.1.

1.5 A laid-up vessel (which is granted with a permission for laid-up) shall be subject to survey when returning to service if the Certificate of Survey previously issued has expired. If the expiry is not exceeding 2 years, the survey shall cover items due in the past 2 years as the vessel was not laid up.

1.6 Any vessel having its Certificate of Survey expired for more than 2 year but less than 8 years, the surveys shall follow the quadrennial survey programme prescribed in Table 7-2.

1.7 Any vessel having its Certificate of Survey expired for more than 8 years, it shall be subject to thorough inspection according to items of Table 7-1. If alterations had been carried out on board vessel plans relating to the alterations shall be submitted for approval. The survey and plan approval are to comply with standards applicable to existing vessels, and the amended (if any).

1.8 When deemed necessary or at his discretion, the attending surveyor/inspector may request any other item to be presented for inspection

2 Statutory Surveys and Application

2.1 Subject to the below section 2.2 officers delegated by the Director are responsible for the statutory plan approval and survey of vessel.

2.2 The Director may delegate some or all of the statutory plan approval and surveys of Class II vessel specified in this Code to Authorized Surveyor (AS)/authorized surveyor employed by Authorized Organization (AO)/Recognized Authority (RA)(see definition in Ch. I/3.1) as indicated in the authorization/recognition document. List of AS/AO/RA will be promulgated in the Marine Department Notice issued from time to time. Vessel owner or agent, when required, may also apply to Marine Department for plan approval and surveys. (Amended G.N. 6256 of 2020)

2.3 The approval of plans and data (Table 5-1 refers) and surveys (Tables 7-1 ~ 7-3 refer) shall be undertaken by the relevant authority/person according to the following:

Type of Vessel	Classed/Not Classed	Plan Approval/Inspection Body
Low Risk Vessel (refer to definition at I/3.1)	Classed	AO
	Not classed	AS/AO/RA
High Risk Vessel (refer to definition at I/3.1)	Classed	AO (except items marked with 'MD') (Amended G.N. 6256 of 2020)
	Not classed	

2.4 Upon satisfactory completion of statutory surveys or assessment, the following relevant statutory certificates or record document would be issued by Marine Department or AO as specified in the following table. Annex V-4 also lists the other certificates and documents that a local vessel might require, as appropriate:

No.	Certificates / Records	Applicable Vessels	Issuing Authority/Person
(1)	Certificate of Survey (*1)	All	MD
(2)	Survey Record of Safety Equipment	(i) Any dry cargo vessel of L≥24m operating within RTL (ii) Any vessel of L≥24m operating within HKW or RTL: high risk vessel (as defined in Ch. I/1.3) or special purpose vessel	MD/AO (*2)
(3)	Hong Kong Load Line Certificate / Freeboard Assignment Certificate	Part 1 of Schedule 5 of Survey Regulation refers	MD/AO (*2)
(4)	Declaration of Fitness for the Carriage of Dangerous Goods	Any vessel that is used or to be used for carrying any dangerous goods	MD
(5)	Exemption Certificate / Permit for alternative material, fitting or equipment	when applicable	MD
(6)	Certification of Lifting Appliances and Lifting Gear	Any vessel fitted with crane or derrick used for works including cargo handling, etc.	CE

Legend

HKW = waters of Hong Kong

RTL = river trade limits

MD = Marine Department

CE = Competent examiner appointed under Merchant Shipping (Local Vessels) (Works) Regulation

Note

*1 For a pilot boat, transportation boat or tug the Certificate of Survey and relevant remarks must be displayed in a conspicuous location on board under section 30 of the Survey Regulation.

*2 For a vessel classed with an AO, international convention certificates may be issued by AO directly to the owner in lieu, together with survey records in accordance with the requirements of the relevant Convention. A copy of such certificate and record is required to be submitted to Marine Department.

2.5 If the owner or agent wishes his vessel to be surveyed by an authorized organization or authorized organization or recognized authority, he shall provide the Department an "Engagement Form":

(a) prior to the survey - the name of the authorized organization or authorized organization or recognized authority, the place and date of the intended survey; and

(b) on completion of survey - a survey report and a declaration duly signed and issued by the authorized organization or authorized organization or recognized authority. The survey report may be furnished to the attending surveyor during final inspection (item No. F-4 in Table 7-3 refers).

3 Validity of Certificates and Endorsement

3.1 The expiry date of the certificate or endorsement for vessels of the type nos. (1) to (10) and (15) in the table "Guide on Periodical Survey Cycle for Class II Vessel" (hereafter referred as "guide table") shall be determined as follows:

No.	Date of Final Inspection		Expiry Date of Certificate/Endorsement to be issued
(a)	New vessel		FID + 12 months(*1)
(b)	Re-commissioned laid-up vessel(*2)		FID + 12 months
(c)	Existing vessel		
	(i)	within two months before CED	CED + 12 months
	(ii)	after CED	FID + 12 months
	(iii)	more than two months before CED	FID + 12 months

Abbreviations

CED = expiry date of existing certificate/endorsement

FID= final inspection date

Remark

*1 For a new vessel required to be surveyed on slip (or in dry-dock), the validity of certificate to be issued should in no case exceed 14 months counted from the last hull bottom survey date or the final inspection date plus 12 months, whichever is the earlier.

*2 Sections 1.5~1.7 refers.

3.2 The validity of Certificate of Survey for vessels of the types no. (11) ~ (13) listed in the guide table will normally be 24 months from the date of completion of the survey, or the

expiry date of the existing certificates if the existing certificates have not expired on the date of completion of the survey, whichever is the later, but in no circumstance be more than 26 months. (Note: The owner's Declaration shall be made at the 1st anniversary date of the Certificate of Survey).

3.3 For vessels of the type no. (14) listed in the guide table, the validity of Certificate of Survey will normally be, as reference to section 3.2, 36 months in place of 24 months; and 38 months in place of 26 months. (Note: The owner's Declaration shall be made at the 1st and 2nd anniversary date of the Certificate of Survey).

4 Submission of Plans and Data

4.1 Plans and data shall be submitted, to the relevant authority/person indicated in section 2.3, according to Table 5-1 (as marked with "✓"). Additional plans and data will be required when deemed necessary. The required plans and data may be combined into one plan (or plans) according to the size of vessel and complexities of the data.

4.2 Except for any vessel classed with a classification society; and otherwise indicated in the table (items marked with 'MD'), the plans and data may be submitted to any of the AS/AO/RA for approval at the discretion of the owner. For any vessel classed with a classification society, plans and data shall be submitted to the relevant classification society for approval.

4.3 For plans and data to be submitted for Marine Department's approval, 3 copies of each shall be submitted of the 1st vessel of a series and 2 copies for the subsequent vessels.

4.4 One copy of such plans and data approved by AS/AO/RA shall be submitted to Marine Department for record. Supplementary plans and data may be required should any survey be undertaken by Marine Department.

4.5 Plans of General Arrangement, vessel construction and relevant plans shall be drawn in appropriate scale of legibly quality.

5 Plans and Data required to be submitted [Survey Regulation, section 9 refers]

Table 5-1 Plans and Data

"✓" means applicable

Table 5-1 No.	VESSEL CATEGORY / PLANS AND DATA	A	B (L≥8m)	B (L<8m)
(A)	**GENERAL ARRANGEMENTS, ACCOMMODATION LAYOUTS, PASSENGER SPACE, SEATING ARRANGEMENTS, NUMBER OF PASSENGERS AND ESCAPE ROUTES**			
(1)	General Arrangement (*8)	✓	✓ (*1)	✓
(2)	Passenger Space (shelter)/Seating Arrangement (Ch. V refers)(passenger carrying vessel only)	✓		
(3)	Passengers and Crew Accommodation Requirements (incl. handrail, seats, etc.) (Ch. V refers) (passenger carrying vessel only)	✓		
(B)	**SAFETY EQUIPMENT INCLUDING LIFE-SAVING APPLIANCES, FIRE-FIGHTING APPARATUS, LIGHTS, SHAPES AND SOUND SIGNALS ; EMERGENCY CONTROLS, STRUCTURAL FIRE PROTECTION**			
(1)	Safety Plan showing arrangement of - (a) life saving appliances,	✓	✓ (*1)	✓

Table 5-1 **No.**	**VESSEL CATEGORY** **PLANS AND DATA**	**A**	**B** (L≥8m)	**B** (L<8m)
	(b) fire fighting apparatus	✓	✓ (*1)	✓
	(c) structural fire protection arrangement	✓		
	(d) light and sound signals	✓	✓ (*1)	✓
	(e) means of escape, escape installation and arrangement, etc. (passenger carrying vessel only)	✓		
(2)	Structural Fire Protection Arrangement	✓		
(C)	**STABILITY, FREEBOARD CALCULATIONS, ARRANGEMENTS RELATING TO WATERTIGHTNESS, WEATHERTIGHTNESS, BULKHEADS, HATCHWAYS, COAMINGS, SIDE SCUTTLES, AIR VENTS, FREEING PORTS, SCUPPERS, INLETS AND DISCHARGES**			
(1)	Lines Plan and Offsets Table (for record)	✓	✓ (*2)	
(2)	Hydrostatic Curves	✓	✓ (*2)	
(3)	Cross Curves of Stability	✓	✓ (*2)	
(4)	Preliminary Intact Stability Information (for oil carrier, noxious liquid substance carrier)	✓		
(5)	Estimated Damage Stability Information (Ch. IV/2 refers) (for oil carrier, noxious liquid substance carrier)	✓		
(6)	Inclining Experiment Report/Lightweight Survey Report (Ch. IV/4 refers)	✓	✓ (*3)	
(7)	Simple Inclining Test Report			✓
(8)	Stability Information Booklet (after inclining experiment)	✓	✓ (*3)	
(8a)	Permanent Ballast Weights Arrangement (if designed) (*12) (Added G.N. 6489 of 2018)	✓	✓ (*3)	
(9)	Damage Stability Calculation (after inclining experiment) (Ch. IV/2 refers)	✓		
(10)	Draft Marks	✓		
(11)	Load Line freeboard calculation and conditions of assignment	✓		
(12)	Arrangements relating to Watertightness, Weathertightness, Bulkheads, Hatchways, Coamings, Side Scuttles, Air Vents, Freeing Ports, Scuppers, Inlets and Discharges, etc.	✓	✓ (*2)	
(D)	**TONNAGE MEASUREMENTS AND CALCULATIONS**			
(1)	Tonnage Measurement and Calculation (*4) (for Hong Kong registered vessel)	✓		
(E)	**STRUCTURES AND SCANTLINGS**			
(1)	Midship Sections	✓	✓ (*2)	
(2)	Scantling Calculation	✓	✓ (*2)	

Table 5-1 No.	VESSEL CATEGORY PLANS AND DATA	A	B (L≥8m)	B (L<8m)
(3)	Profile, Decks and Bulkheads (incl. Hull and Superstructure decks)	✓	✓ (*2)	✓
(4)	Shell Expansion	✓	✓ (*2)	
(5)	Rudder/Kort Nozzle, Rudder Stock, Skeg and Sole Piece	✓	✓ (*2)	
(6)	Mooring Arrangement and Equipment Number Calculation (for oil carrier , DG carriers and L>75m dumb steel lighters)	✓		
(F)	**FUEL, MACHINERY, SHAFTING**			
(1)	Engine Room Arrangement	✓	✓	
(2)	Pump Room Arrangement (for oil carrier)	✓		
(3)	Propeller Shafting, Stern Tube and Coupling	✓	✓	✓
(4)	Main Engine and Gear Box Certificates (*5)	✓		
(5)	Aux. Diesel Engine Certificates (*5)	✓		
(6)	Fuel Oil System (incl. tanks, piping)	✓	✓	
(7)	Fire-fighting Piping Arrangement (incl. fire main, fixed fire extinguishing system,etc)	✓	✓	
(8)	Bilge Pumping Arrangement	✓	✓	
(9)	Compressed Air Piping System (for pressure ≥ 10 bar)	✓	✓	
(10)	Air Receiver (Ch. IIIA/15 refers)	✓	✓	
(11)	Steering Gear Hydraulic Piping System	✓	✓	
(12)	Fresh Water System (incl. tank construction, piping) (for water boat)	✓		
(13)	Cargo Tank Venting System (for oil carrier)	✓		
(14)	Filling, Sounding and Air Vent System	✓	✓ (*6)	
(G)	**ELECTRICAL SYSTEMS (including Emergency Power System)**			
(1)	Electrical System Line diagram	✓	✓ (*7)	✓
(2)	Wiring Diagram of Main Switchboard	✓	✓ (*7)	
(3)	Layout of Main Switchboard	✓	✓ (*7)	
(4)	Electrical Arrangement	✓	✓ (*7)	
(5)	Wiring Diagram of Distribution Boxes	✓	✓ (*7)	
(H)	**PREVENTION AND CONTROL OF POLLUTION**			
(1)	Prevention of Oil Pollution Installation (Ch. IIIA/19.2 refers)	MD/AO	MD/AO	

Table 5-1 **No.**	**VESSEL CATEGORY** **PLANS AND DATA**	**A**	**B** (L≥8m)	**B** (L<8m)
(2)	Prevention of Air Pollution Installation (Annex I-10 refers)	MD/AO	MD/AO	
(I)	**NAVIGATIONAL AND COMMUNICATION EQUIPMENT**			
(1)	Radio Communication equipment and arrangement	✓		
(2)	Navigational equipment and arrangement	✓		
(3)	Visibility Calculation (for oil carriers)	✓		
(J)	**MEASURES AGAINST POTENTIAL HAZARDS TO THE SAFETY OF THE VESSEL AND ANY PERSON OR PROPERTY ON BOARD THE VESSEL**			
(1)	Supplementary information/data and list of inspection, testing & trial requirements relating to the type of vessel	✓	✓	
(2)	Additional Items for Oil Carriers having cargoes ≤ 60°C (Ch.VI refers)	✓	✓	
(3)	Additional Items for DG or NLS Carrier (Ch.VI refers)	✓	✓	
(4)	Domestic LPG Installation (Annex U-1 refers)	✓	✓	
(K)	**LIFTING APPLIANCES** (including derrick cranes, extensible jib cranes and fixed-jib crane etc.)			
(1)	Strength calculations for the stress members (*9)	Competent Examiner (*10) (*11)		
(2)	Rigging diagrams			
(3)	As fitted drawings			

Remarks in Table 5-1

*1 Applicable to the following Category B vessels: dumb lighter, hopper barge, water boat, flat top work barge, landing pontoon, stationary vessel.

*2 Applicable to dumb lighter and hopper barge.

*3 For any dumb lighter required to be submitted with heavy lifting stability calculations and hopper barge.

*4 International Tonnage Certificate issued by an administration (or classification society on her behalf) may be acceptable to Marine Department.

*5 For new vessels, engine maker or classification societies approved certificates / information and document as appropriate required in Ch. IIIA or IIIB and Annex I-10 of this Code or MARPOL Annex VI.

*6 Applicable to vessels of other than wooden construction.

*7 Applicable to the following Category B vessels fitted with A.C. generator: dumb lighter, other barge, landing pontoon, stationary vessel, but not applicable to vessels of wooden construction.

*8 Amended plan to be submitted should there be any change from the arrangement of vessel shown on the original General Arrangement Plan.

*9 Recognised manufacturer's loading tables indicated essential information are acceptable

instead of detailed strength calculations.

*10 The competent examiner shall ascertain that the structures of the vessel can withstand the loadings of the derrick crane operation at all times and it complies with the licensing conditions of the vessel.

*11 The document/drawing shall be certified by a competent examiner. One copy of the certified document shall be submitted to Marine Department for record.

*12 Applicable to new vessels [Note 2] after the enforcement of this Code. The plan shall include information on the positions, quantity, materials, unit weights and serial number markings (which can be colour painted) as well as relevant photos (12 megapixels or above and hard copy prints in 1200 x 1200 dpi or above) of the permanent ballast weights.

6 Plans to be retained on board

<6.1 Every Class II vessel shall be provided on board one copy of the plan(s) approved by the relevant authority, person or organisation at least with the following information indicated thereon :

(a) general arrangement of vessel with seating arrangement and escape routes if passengers are carried;

(b) types and dispositions of life saving appliance, fire-fighting appliance, light, shape, sound signals and radiocommunications equipment(if fitted).

6.2 For every Class II vessel which has been modified or altered in a way that would change the escape routes or dispositions of life saving appliance or fire-fighting apparatus, all plans and documentation carried or displayed on board shall be modified to reflect those changes and approved by the relevant authority, person or organisation.

6.3 Stability/loading & unloading information where applicable shall be provided on board. >

6.4 An emergency drill shall be practised by crewmembers at least once every two months. Records of emergency drills are to be kept onboard for at least one year for inspections by a Marine Department officer.

7 Survey / Inspection Items and Survey / Inspection Programmes

Table 7-1 Initial Survey

"✓" means applicable

Table 7-1 No.	Survey Item \ Category and Vessel Length (m)	A (All Lengths)	B (L ⩾ 8 m)	B (L < 8 m)
(A)	**CONSTRUCTION – GENERAL, SHIP STABILITY**			
(1)	Draft Marks – verification	✓	✓	
(2)	Measurement of Principal Dimensions	✓ (*1)	✓	✓
(3)	Inclining Experiment (*2)	✓	✓ (*4)	
(4)	Lightship Verification (*3)	✓	✓ (*4)	
(5)	Rolling Period Test (for Category B dry cargo vessel)		✓	

[Note 2] Applicable to a vessel which is a new vessel under section 2 of the Survey Regulation when the reference to "the commencement date" in the definition of "new vessel" is substituted by "31.8.2018"

Table 7-1 No.	Category and Vessel Length (m) Survey Item	A (All Lengths)	B (L ⩾ 8 m)	B (L < 8 m)
(6)	Simple Inclining Test			✓
(B)	**FIRE-FIGHTING APPARATUS, STRUCTURAL FIRE PROTECTION, APPLIANCES FOR PREVENTION OF COLLISION**			
(1)	CO_2 Pipe - inspection, hydraulic test and blowing test	✓	✓ (*8)	
(2)	Fire Main - inspection and hydraulic test	✓		
(3)	Structural Fire Protection (Ch. VI/13 refers) - inspection	✓		
(4)	Position of Navigational Light and its Foundation – verification	✓	✓	
(C)	**CARRIAGE OF PASSENGERS**			
(1)	Measurement of Passenger Space / Seating (for transportation boat and transportation sampan)	✓		✓
(2)	Means of Escape in Accommodation Space and Machinery Spaces - inspection	✓	✓	
(D)	**CONSTRUCTION – HULL; CONDITIONS OF ASSIGNMENT, LOAD LINES / FREEBOARD MARK**			
(1)	Material test - Steel Plate/Aluminium Plate (*5) /GRP Polyester Resin	✓	✓ (*6)	
(2)	- Propeller Shaft, Coupling, Rudder Stock (*5) (*7)	✓	✓ (*8)	
(3)	Hull Scantlings - verification	✓	✓ (*6)	✓
(4)	Welding / GRP Lamination and Finishing - inspection	✓	✓ (*6)	✓
(5)	Below Main Deck W.T. bulkhead and W.T. door fitted thereon - Hose test (*9)	✓	✓ (*4)	
(6)	Structural and Independent Tanks - internal inspection	✓	✓ (*6)	
(7)	- hydraulic test/air test (*9)	✓	✓ (*4)	
(8)	Watertight / Weathertight Appliances - inspection	✓	✓ (*6)	
(9)	- hose test (*9)	✓	✓ (*4)	
(10)	Load Line /Freeboard Assignment Certificate Items incl. Freeboard Marks -inspection	✓	✓	
(11)	Permanent Ballast Weights - inspection(*11) (Added G.N. 6489 of 2018)	✓	✓	
(E)	**CONSTRUCTION - FUEL, MACHINERY, SHAFTING, ELECTRICAL SYSTEMS**			
(1)	Main Engine, Gear Box - Type Approval Certificate (*10) - inspection	✓	✓ (*8)	✓
(2)	Generator Diesel Engine Certificate (*10) / inspection	✓	✓ (*8)	
(3)	Tail Shafts and Coupling - verification of dimensions	✓	✓ (*8)	
(4)	- taper bedding test	✓	✓ (*8)	
(5)	Stern Tube - verification of dimension and hydraulic test	✓	✓ (*8)	

Table 7-1 No.	Category and Vessel Length (m) Survey Item	A (All Lengths)	B (L ⩾ 8 m)	B (L < 8 m)
(6)	Independent Fuel Oil Tanks - internal inspection and hydraulic test (*9)	✓	✓ (*8)	
(7)	Verification of no. and volume of fuel oil tanks (incl. structural and independent tanks)	✓	✓ (*8)	✓
(8)	Bilge Line - inspection and hydraulic test	✓	✓ (*8)	
(9)	Sea Suction valve – inspection and hydraulic test	✓	✓ (*8)	
(10)	Steering System Hydraulic Line - inspection and hydraulic test	✓	✓ (*8)	
(11)	Fuel Oil Line - inspection and hydraulic test	✓	✓ (*8)	
(12)	Compressed Air Pipe - hydraulic test (for P > 17.2 bar)	✓	✓	
(13)	Air Receiver / Cement Tank - verification of wall thickness/ dimensions	✓	✓	
(14)	- hydraulic test (*9)	✓	✓	
(15)	Main Engine Alarm System and FMEA items - function test (Applicable to vessels of the type stated in Ch. I/4.2)	MD	✓	
(16)	Electrical Wiring/installation - inspection	✓	✓	
(F)	**PREVENTION AND CONTROL OF POLLUTION**			
(1)	Prevention of Oil Pollution Installation - Inspection	MD/AO	MD/AO	
(2)	- hydraulic test of independent bilge water / sludge holding tank	✓	✓	
(G)	**STRUCTURES, EQUIPMENTS AND ARRANGEMENTS FOR CARRYING DANGEROUS GOODS**			
(1)	Supplementary information/data and list of inspection, testing & trial requirements relating to the type of vessel	✓	✓	
(2)	Additional Items for Oil Carriers having cargoes ≤ 60°C (Ch. VI refers) - inspection and test	✓	✓	
(3)	Additional Items for DG or NLS Carrier (Ch. VI refers) - inspection and test	✓	✓	

Remarks in Table 7-1

*1 The measurement record shall be submitted to Marine Department for verification.

*2 Applicable to the 1st vessel of a series of four vessels.

*3 Applicable to the 2nd, 3rd and 4th of a series of four vessels.

*4 For hopper barge only.

*5 In lieu of the material test, mill sheet issued/endorsed by a classification society is acceptable.

*6 Applicable to any vessel to be issued with Freeboard Assignment Certificate (e.g. dumb lighter, hopper barge, etc.).

*7 Ch. IIIA/9 and IIIA/17.4 refer.

*8 For visual inspection and operational test at either initial or final inspection only.

*9 Annex M refers. Hose test for door fitted on watertight bulkhead may be replaced by a chalk test if a prototype test (with pressure corresponding at least to the head required for the intended location)

has been carried out and certificated.

*10 Ch. IIIA/7.1 refers. For diesel engine of new vessels, engine maker or classification societies approved certificates/information and document as appropriate required in Ch. IIIA or IIIB and Annex I-10 of this Code or MARPOL Annex VI.

*11 Applicable to new vessels [Note 2] after the enforcement of this Code. The inspection shall be carried out in the vessel's initial survey, or when alterations or repairs resulting in the removal/modification of permanent ballast weights (PBWs) have been made. The inspection shall be carried out in accordance with the requirements set out in the table below:

Tasks Shipowner/Shipyard Responsible for		**Tasks Inspecting Personnel Responsible for**
Documents Submission	**Inspection Arrangement**	
(1) Declaration (refer to Annex Y of this Code) - which shall include the PBWs information (positions, quantity, materials, unit weights, serial number markings, etc.) designated in the stability booklet of the vessel. (2) Photo records (12 megapixels or above and hard copy prints in 1200 x 1200 dpi or above)- which shall clearly show the following conditions of PBWs stowage: (a) ship structure prior to PBWs being stowed; (b) 50% of PBWs stowed; (c) 100% of PBWs stowed; and (d) fittings used for securing the PBWs.	Stow PBWs according to the information given in item (1) in the left-hand column and carry out the inspection described in the right-hand column in coordination with attending inspecting personnel.	(1) Inspect vessel's structure with regard to PBWs stowage; (2) verify all PBWs; and (3) randomly select at least 10% of PBWs (but no less than one PBW)for inspection. The inspection shall include the PBWs' appearance, markings, weight confirmation, etc.

[Note 2] Applicable to a vessel which is a new vessel under section 2 of the Survey Regulation when the reference to "the commencement date" in the definition of "new vessel" is substituted by "31.8.2018"

Guide on Periodical Survey Cycle for Class II Vessel ("guide table")

No.	Material of Construction	Vessel Type	Vessel Length (L)(m)	Owner Declaration (*1)	Vessel Category and Yearly Interval of Survey on Slip (Table 7-2 refers)	Interval of Survey Afloat (Table 7-3 refers)
Mech. Propelled Vessel						
(1)	Steel / Al.	Cat. A , B	Any Length	-	(Cat. A, B) 2	Annual
(2)	GRP	Cat. A	Any Length	-	(Cat. A) 2	Annual
(3)	GRP	Cat. B	Any Length	-	(Cat. B) 3	Annual
(4)	Wood	Dry Cargo Vessel operating within River Trade Limits -	Any Length	-	(Cat. A) 2	Annual
(5)	Wood	New Vessel	L ≥ 8	-	(Cat. A) 2	Annual
(6)	Wood	Existing Vessel of other than item (4)	L ≥ 24	-	(Cat. B) 4 (full survey)	Annual
(7)	Wood	Existing Vessel	8≤L<24	-	(Cat. A, B) 6 (full survey)	Annual
(8)	Wood	New Vessel Transportation Sampan	L < 8	-	(Cat. B) 4 (*2) (full survey)	Annual
(9)	Wood	New vessel of other than item (8), Existing Vessel	L < 8	-	-	Annual
Non-Mech. Propelled Vessel						
(10)	Steel	Existing - Crane Barge, Work Boat, Flat Top Work Barge	Any Length	-	(Cat. B) 6 (*2) (Cat. B) (full survey) (Cat. A)	Annual
(11)	Steel	Passenger use Landing Pontoon	Any Length	Annual	(Cat. B) 6 (*2) (full survey)	2
(11A)	Any Material	Landing Pontoon of other than item (11)	Any Length	Annual	-	2
(12)	Steel/GRP/ Wood	Landing Platform	Any Length	Annual	-	2
(12A)	Any Material of other than item (12)		Any Length	-		Annual
(13)	Steel/GRP/ Wood	Stationary Vessels other than items (14)	Any Length	Annual	-	2
(14)		Stationary Vessels (except Kitchen Boat) with LXB ≤ 25	Any Length	Annual	-	3
(15)	Steel	Dumb Lighter, Hopper Barge	Any Length	-	(Cat. B) 2	Annual
(16)		Cat. A Vessels other than the above	Any Length		(Cat. A) 2	Annual
(17)		Cat. B Vessels other than the above	Any Length		(Cat. B) 3	Annual

Remark

*1 Owner Declaration: The owner shall inspect and declare the safety and equipment of his vessel within 2 months before the 1st / 2nd anniversary date of the Certificate of Survey, and produce a "Declaration of Safety and Equipment for Class II B or III B Vessels" (which is appendix to MDN 26/2007 and can be downloaded at URL: http://www.mardep.gov.hk/en/notices/pdf/mdn07026.pdf) together with the Certificate of Survey to the Marine Department for the annual renewal of licence.

*2 (a) The first slipping date of vessel is due on the 6th anniversary (for new transportation sampan, the 4th anniversary) of the vessel's initial licensing date counted from 1 July 2017 (1 July inclusive); or at owner's discretion, the date of the upcoming periodical survey.

(b) Shall the vessel be required to slip before 1 July 2018, the slipping may be postponed to a date on or before the next anniversary; or the date of the upcoming periodical survey.

(c) In special case and depending on the particular situation, the slipping due date may be postponed to 30 June 2020 the latest, subject to the results of past periodical surveys were in satisfaction. The postponed slipping shall be carried out simultaneously with the periodical survey. The owner shall, at least 3 months prior to the slipping due date, apply to Marine Department in writing with supporting document giving the reasons for the deferral of vessel's slipping.

(d) From1 July 2020, all vessels shall be slipped according to schedule; with the periodical survey carried out simultaneously.

(e) If the vessel is slipped during the period from the effective date of this Code to 30 June 2017, and surveyed to the satisfaction of Marine Department officer / authorized surveyor, it can be regarded as meeting the requirement of (a), and the next slipping date may be scheduled for 2023 (for L<8 m wooden new transportation sampan, the next slipping date may be scheduled for 2021).

Table 7-2 Periodical Survey "✓" means applicable

Table 7-2 No.	Survey Item	Class/Category/Type of Vessel	Class IIA DG/Oil/NLS Carrier			Class IIA Vessel other than DG/Oil/NLS Carrier			Class IIB Vessel		
		Survey Intervals (*1)(*2)	1	2	4 (full survey)	1	2	4 (full survey)	1	2 or 3	4 or 6 (full survey)
(A)	**LIFE-SAVING APPLIANCES, FIRE-FIGHTING APPARATUS**										
(1)	Fixed Fire Ext. Installation CO_2 system - blowing test Sprinkler System - spraying test			✓				✓			
(2)	- hydraulic test		(*3)								
(3)	Fire Extinguisher, CO_2 Bottle - refill and hydraulic test		✓ (*4)						✓ (*4, *5)		
(4)	Buoyant Apparatus (without buoyant materials filled) - submerging test				✓						
(B)	**CONSTRUCTION – HULL, CONDITIONS OF ASSIGNMENT**										
(1)	Hull - external (incl. ship bottom) inspection			✓ (*1)			✓ (*1)			✓ (*1)	
(2)	- internal (excl. oil, water tanks and void spaces) visual inspection			✓			✓			✓ (*5)	

Table 7-2 No.	Survey Item	Class/Category/Type of Vessel	Class IIA DG/Oil/NLS Carrier			Class IIA Vessel other than DG/Oil/NLS Carrier			Class IIB Vessel		
		Survey Intervals (*1)(*2)	1	2	4 (full survey)	1	2	4 (full survey)	1	2 or 3	4 or 6 (full survey)
(3)	- internal (incl. oil, water tanks and void spaces) inspection (*7)(*8)				✓			✓			✓
(4)	- gauging thickness of deck, shell and bulkhead plating (*8)(*9)				✓			✓			✓
(5)	Sea Suctions, Discharging Valves - stripped down inspection			✓ (*13)	✓		✓ (*13)	✓		✓ (*5,*13)	✓
(6)	Anchors, Cables, Steel Wire Ropes - ranged out for inspection (*8)				✓			✓			✓ (*5)
(7)	Permanent Ballast Weights - inspection (*17) (Added G.N. 6489 of 2018)				✓			✓			✓
(C)	**CONSTRUCTION - FUEL, MACHINERY, SHAFTING, ELECTRICAL SYSTEMS**										
(1)	Main Engine - hydraulic test of coolers (incl. air, lub. oil, cooling water), cylinder head and water jacket				✓			✓			
			(by engine workshop) (*10)								
(2)	- overhaul of fuel oil pump, fuel nozzles				✓			✓			
			(by engine workshop) (*10)								
(3)	Main Engine and Gear Box – stripped down for inspection (*11)				✓			✓			
			(by engine workshop) (*10)								
(4)	Generator engine, auxiliary machinery (incl. windlass, lifting appliance) engine - stripped down for inspection				✓			✓			✓ (*5)
			(by engine workshop) (*10)								
(5)	Main fire pump, emergency fire pump, bilge pump, windlass - stripped down for inspection				✓			✓			
(6)	Air Receiver (P<17.2 bar) - internal inspection				✓			✓			✓
(7)	- hydraulic test (*8)				✓			✓			✓
(8)	Air Receiver (P≥17.2 bar) - internal inspection			✓			✓			✓	
(9)	- hydraulic test (*8)			✓			✓			✓	
(10)	Tail Shaft, Propeller, Rudder and Rudder Stock - drawn out for inspection (*8)				✓			✓			✓ (*15)
(11)	Independent Cement Tank – internal Inspection & thickness gauging							✓			✓
(12)	Independent Cement Tank – external inspection					✓			✓		
(13)	Independent Fuel Oil Tank – internal inspection and hydraulic test (*8)				✓			✓			✓ (*5, *16)
(14)	Independent Water Tank (For Water Boat only) – hydraulic test								✓		

Table 7-2 No.	Survey Item	Class/Category/Type of Vessel	Class IIA DG/Oil/NLS Carrier			Class IIA Vessel other than DG/Oil/NLS Carrier			Class IIB Vessel		
		Survey Intervals (*1)(*2)	1	2	4 (full survey)	1	2	4 (full survey)	1	2 or 3	4 or 6 (full survey)
(D)	**PREVENTION AND CONTROL OF POLLUTION**										
(15)	Oil Pollution Prevention Installation - vessel with HKOPP certificate		(*12)								
(16)	- vessel without HKOPP certificate: - hydraulic test of independent bilge water/sludge holding tank				✓			✓			✓
(E)	**STRUCTURES, EQUIPMENTS AND ARRANGEMENTS FOR CARRYING DANGEROUS GOODS**										
(1)	Pump Room - inspection		✓								
(2)	Cargo Tank Vent Piping System – inspection		✓								
(3)	Cargo Tank Lids - inspection		✓								

Abbreviations

DG Carrier - dangerous goods carrier

NLS Carrier - noxious liquid substances carrier

Remarks in Table 7-2

*1 Survey Intervals: "2" means such item (marked as "✓") to be subjected to survey biennially, "3" triennially, etc. The periodical survey shall be carried out in subsequent order; i.e. a 1st year survey shall be followed by a 2-yearly survey, a 3rd year survey shall be followed by a 4-yearly survey ("full survey"), etc. Refer to "guide table" for applicable types of vessels for survey intervals.

*2 If the hull and machinery installation of a classed vessel are inspected by a surveyor of the classification society, the inspection reports/certificates issued by the classification society shall be submitted to Marine Department for record.

*3 Hydraulic test for CO_2 and sprinkler systems shall begin from the 10th anniversary the system is in service, and thereafter at intervals of 10 years. The hydraulic testing pressure for the CO_2 system high pressure manifold shall not be less than 125 bar.

*4 Inspection for portable and non-portable type fire extinguishers and CO_2 bottles shall be in accordance with the following table. The inspection record shall be retained on board for examination; or each fire extinguisher to be marked by paint or attached with a tag indicating the date and type of test.

ITEM	Water/Foam/Dry Powder Fire Extinguisher		CO_2 Fire Extinguisher, CO_2 Fixed Installation Bottle		
TYPE OF TEST	Refill / Weighting (*a)	Hydraulic (*b)	Weighting	Refill	Hydraulic (*b)
INSPECTION BODY	Owner (*c) /FSIC	FSIC/MD	FSIC/MD	DG Reg. 62	DG Reg. 66

Abbreviation

FSIC: Fire Service Installation Contractors registered in the Fire Service Department or institutions acceptable to the Director

DG Reg. 62: A person holding a Dangerous Goods Licence issued under Reg. 62, Dangerous Goods (General) Regulation

DG Reg. 66: A person approved by Fire Service Department under Reg. 66, Dangerous Goods (General) Regulation

MD : Marine Department officer

Note

(*a) The need for refilling shall be in accordance with the instruction of manufacturer of fire extinguisher.

(*b) Intervals of hydraulic test:

Portable Fire Extinguishers - 5 years

CO_2 bottles/propellant cartridges - 10 years

(*c) MD officers may examine the owner's competence on carrying out the servicing and conduct random checks including function test of the portable fire extinguishers.

*5 Applicable to Cat. B high risk vessels, including dumb lighters used for carrying dangerous goods.

*6 Applicable to vessels issued with Freeboard Assignment Certificate (e.g. dumb lighter, hopper barge, etc.), and new mechanised transportation sampan.

*7 In inner bottom spaces not provided with access holes, at least 5% of area of the inner bottom plate, in at least five sufficiently scattered locations, shall be opened up to facilitate inspection of the inner bottom spaces.

*8 For guidance on machinery and hull wear down or corrosion tolerance limits and other inspection items, refer to Annex M.

*9 Applicable to vessels of age exceeding 8 years. For vessels possessing International Load Line Certificate the gauging inspections may be arranged when in the renewals of the load line certificate.

*10 Inspection record issued by engine workshop shall be submitted for reference.

*11 For a brand new gear box, the strip down inspection shall begin from the fourth anniversary the gear box is in service.

*12 For the renewal of HKOPP certificates, oil pollution prevention installation shall be stripped down for inspection. Independent bilge water holding/sludge tank shall be hydraulic tested.

*13 Applicable to sea water suction valves only.

*14 Length required to be ranged out for inspection: for anchor chains (or classification society accepted alternatives fitting) – the whole length; for steel wire ropes – the whole length or a minimum length of 50m, whichever is the less. More or the whole length to be ranged out for inspection should there be defect found.

*15 Applicable to new mechanised transportation sampan. Tail shaft shall be drawn out for inspection every 4 years. The drawn out inspection may be postponed for a period not exceeding 2 years if the condition is satisfactory.

*16 Applicable to new mechanised transportation sampan. External visual inspection is to be carried out for independent fuel oil tanks. Internal inspection and hydraulic test shall be carried out if the tanks are found in unsatisfactory condition.

*17 Applicable to the first full survey of vessels one year after the enforcement of this Code (i.e. on or after 31.8.2019). The PBWs inspection may be carried out during the final inspection (Table 7-3 items). The inspection shall be carried out in accordance with the requirements set out in the table below:

Item	Survey Year	Tasks Shipowner Responsible for		Tasks Inspecting Personnel Responsible for
		Documents Submission	Inspection/Maintenance Arrangement	
(A)	Full Survey[Note] Note: The PBWs inspections described below shall be carried out in the quadrennial full survey when a vessel has reached 8 years of age, and in every quadrennial full survey thereafter (for a classed vessel, in the special survey when the vessel has reached 10 years of age, and in every special survey thereafter), commencing one year after the enforcement of this code (i.e. on or after 31.8.2019). The first one will be a Grade A inspection, followed by a Grade B inspection, alternating at 4-year intervals (for classed vessels, 5-year intervals, i.e. the special survey). If it is found during a Grade B inspection that the vessel's bottom and internal structural members with regard to PBWs stowage show no excessive corrosion (not exceeding 1/2 or more of the limit set down in Annex M of this Code) and the coating is in good condition with no significant deterioration, MD may consider the shipowner's application for having a Grade B inspection in the subsequent full survey, followed by a Grade A inspection in the next quadrennial full survey (for classed vessels, the next 5-yearly special survey).			
	Grade A Inspection	Submit the same declaration and photo records required for the PBWs inspection in the initial survey (remark *11 of Table 7-1).	(1) Clear the whole area (100%) of vessel bottom used for PBWs stowage. (2) Assist inspecting personnel and provide necessary ventilation, lighting, etc. to facilitate the inspection described in the right-hand column. (3) Carry out repairs when directed by inspecting personnel.	(1) Confirm the area at vessel bottom used for PBWs stowage is clear, and carry out PBWs inspection items (1)~(3) of remark *11 of Table 7-1 of the initial survey. (2) Confirm the following during hull inspection: (i) steel vessel – no large area of damage or heavy rusting of hull material, no abnormal accumulation of water, etc.; protective coating (if any) in good condition. (ii) Aluminium, GRP and wooden vessel - no large area of damage or abnormalities of hull material, no abnormal accumulation of water, etc.; protective coating (if any) in good condition. (iii) gauge plating thickness (if applicable) and submit to MD a copy of the record. (3) If the results of the abovementioned inspection items (2)(i)~(iii) fall short of requirements, the owner shall be instructed to carry out repairs, and re-inspection shall be carried out until satisfactory results are obtained. (4) If the wastage of hull material has reached 3/4 or more of the corrosion limit set down in Annex M of this Code, the owner shall be instructed to renew the hull material

Item	Survey Year	Tasks Shipowner Responsible for		Tasks Inspecting Personnel Responsible for
		Documents Submission	Inspection/Maintenance Arrangement	
				concerned. If it cannot be done, the hull of the part concerned shall be subject to inspection annually thereafter. (5) If heavy wastage of hull material is found, the adjoining cement PBWs (if any) shall be removed to facilitate the hull inspection.
	Grade B Inspection	(1) Declaration (2) Upon the completion of inspection and repair (if applicable), submit to MD a copy of the photo records which shall include: (i) photos showing the condition of the hull structure with PBWs removed to expose at least 25% of the total area of the hull structure covered by PBWs; and (ii) the condition of the PBWs after they are restored to their original positions. (3) If all the PBWs have to be removed, the records required in items (1) and (2) of remark *11 of Table 7-1 for the initial survey shall be re-submitted.	(1) Follow inspecting personnel's instruction (as described in the right-hand column) and remove PBWs to expose at least 25% of the total area of the hull structure covered by PBWs to facilitate inspection. (2) carry out task items (2) and (3) of Grade A inspection.	(1) Instruct the owner to remove PBWs for hull structure inspection. At least 25% Notes (i)&(ii) of the total area of hull structure covered by PBWs in each compartment shall be inspected. Note: (i) The quantity of the randomly checked PBWs shall be based on the number of PBWs removed for inspection. (ii) The positions subject to inspection are normally the parts of the hull that are more vulnerable to corrosion (such as the bottom of the aft part of the vessel for the stowage of PBWs). If individual PBWs cannot be removed for safety reason, the owner shall be instructed to remove all the PBWs to facilitate hull inspection. In such case, the inspection items (1)-(3) of remark *11 of Table 7-1 of the initial survey shall be carried out. (2) Carry out task items (2)~(5) of Grade A inspection. (3) Randomly select at least 10% of PBWs (but no less than one PBWs) for inspection. The inspection shall include the PBWs' appearance, markings, weight confirmation, etc.
(B)	Years other than the full survey year	Declaration required in item (1) of Grade B inspection in (A), or a copy of an endorsed declaration.	Carry out task items (2) and (3) of Grade A inspection in (A) upon receipt of special instructions.	Conduct a visual inspection of the PBWs according to the documents submitted by the owner as mentioned in the left-hand column as and when necessary.

Table 7-3 Final Inspection (*1)

"✓" means applicable

Table 7-3 No.	Survey Item (*2) / Category of Vessel	A	B
(A)	**LIFE-SAVING APPLIANCES, FIRE-FIGHTING APPARATUS, APPLIANCES FOR PREVENTION OF COLLISION**		
(1)	Life Saving Appliances - inspection and function test (*3)	✓	✓
(2)	Fire Fighting apparatus (incl. CO_2 fixed fire extinguishing installation, emergency fire pump, etc) - inspection and function test	✓	✓
(3)	Navigation Lights and Sound Signals - inspection and function test	✓	✓
(4)	Fire Drill, Abandon Ship Drill (*11)	✓	✓
(B)	**CARRIAGE OF PASSENGERS**		
(1)	Passenger Space, Crew Space, Cabin Escape Arrangement, Bulwarks and Rails - general inspection	✓	
(C)	**CONSTRUCTION – HULL, CONDITIONS OF ASSIGNMENT, LOAD LINES / FREEBOARD MARK**		
(1)	Hull External (above waterline part) - General inspection (not required if there is on slip/docking survey during the year)	✓	✓
(2)	Watertight / Weathertight Closing Appliances (incl. door, ventilator, air pipe, etc.) - inspection	✓	✓ (*5)
(3)	Permanent ballast - confirmation of amount and position (*10)	✓	
(4)	Freeboard Mark / Load Line Mark - verification	✓	✓ (*5)
(5)	General condition in Machinery Space (including fuel oil installation) (a) protection from injury of personnel (b) prevention of fire hazard (c) prevention of oil pollution hazard	✓	
(6)	Principal Dimensions, Engine and major machinery particulars - verification	✓	✓
(D)	**CONSTRUCTION - FUEL, MACHINERY, SHAFTING, ELECTRICAL SYSTEMS**		
(1)	Main Engines, Generator Engines, Steering Gears, Windlass(*13) - running test	✓	✓
(2)	Unattended Machinery Space Installation (Ch. IIIA/18 and IIIB/13 refer) - function test	✓	✓
(3)	Air Receiver / Cement Tank Safety Valves - function test	✓	✓
(4)	Bilge and Oily Water Pumping System - function test	✓	✓
(5)	Electrical Circuit - earthing test	✓	✓
(6)	- insulation resistance test	✓	✓ (*7)
(7)	- Main circuit breaker function test (*8)	✓	✓
(8)	Location of emergency source of electrical power shall be outside machinery space and above waterline – verification (*9)	✓	
(9)	Meters on Switchboard - function test	✓	

Table 7-3 No.	Survey Item (*2) / Category of Vessel	A	B
(E)	**PREVENTION AND CONTROL OF POLLUTION**		
(1)	Air Emission Assessment (*6)	✓	✓
(2)	Prevention of Oil Pollution Installation - function test	✓	✓
(F)	**NAVIGATIONAL, COMMUNICATION EQUIPMENTAND OTHERS**		
(1)	Radio Communication Equipment	✓	
(2)	Navigational Equipment	✓	
(3)	Plans and data required to be retained onboard (s 6.1 refers) - confirmation of numbers and contents	✓	
(4)	Survey report issued by MD/AS/AO/RA - verification	✓	
(5)	Inspection of remedial deficiency items in Initial / Periodical Survey	✓	
(6)	Marking of Safe Working Load and Certificate of Lifting Appliances – verification (*12)	✓	✓
(7)	Supplementary information/data and list of inspection, testing & trial requirements relating to the type of vessel	✓	
(8)	Domestic L.P.G. Installation - inspection	✓	✓

Remarks in Table 7-3

*1 For intervals of final inspection with respect to type of vessel, guide table refers.

*2 Where practicable the listed items may be presented for inspection prior to the final inspection.

*3 Random check on the condition of lifejackets is to be according to the following proportions:

Statutorily Required No. of Adult Lifejackets	Random Check	Statutorily Required No. of Children Lifejackets	Random Check
1-10	100%	1-10	100%
11-100	10 pieces	11-50	10 pieces

The counting of the number is to be 100%.

*4 *Repealed* (Amended G.N. 6256 of 2020)

*5 Applicable to dumb lighter and hopper barge.

*6 Air emission requirements to be conducted as per Annex I-10.

*7 Applicable to any vessel other than Category B wooden construction vessel. For vessels other than high risk vessels, a valid EMSD registered electrical contractor (REC) issued electrical system insulation test report (with the test being conducted by an EMSD registered electrical worker (REW) within 2 weeks prior to the final inspection) is acceptable in lieu of the insulation resistance test inspection responsible by MD officer or authorized inspection personnels. A valid electrical system insulation test report shall include the relevant necessary information. A valid electrical system insulation test report issued by an authorized inspection personnel is acceptable.

*8 Applicable to any vessel fitted with generator of each capacity exceeding 50 kW.

*9 Applicable to only a vessel which is still a new vessel when the reference to "the commencement date of the Survey Regulation" in the definition of "new vessel" under Ch. I/3.1 is substituted by "29 November 2014".

*10 Refer to the requirements of remark *11 of Table 7-1 or remark *17 of Table 7-2.

(Amended G.N. 6489 of 2018)

*11 Applicable to any mechanized oil carrier, dangerous goods carrier and noxious liquid substances carrier; and any types of mechanized vessels plying beyond Hong Kong waters.

*12 The following document / certificates certified by competent examiner shall be presented in final inspection for verification of validity:

i) Register of Lifting Appliance & Lifting Gear (Form 1);

ii) Certificate of Test and Examination of Winches, Derricks and their Accessory Gear (Form 2)(if applicable);

iii) Certificate of Test and Examination of Lifting Appliance and their Accessory Gear other than Derricks (Form 3)(if applicable).

*13 For high risk vessels (including dumb lighter used for carrying dangerous goods) inspecting officer will carry out external visual inspection and running test. Owner of vessel shall confirm by writing that the windlass has been properly repaired and maintained.

8 Large Cargo Vessel

8.1 "Large Cargo Vessel": means local licensed cargo vessel of overall length exceeding 75 metres. These vessels are prohibited to enter the typhoon shelter and must be anchored or to leave Hong Kong waters during typhoon period, consequently reinforcement of relevant shipboard equipment and installation as stated in sections 8.2 and 8.3 are required.

8.2 In addition to the requirements as stated in this Code, following equipment and installation are also required:

(a) Non-mechanically propelled vessel: one kind of communication equipment, anchor and windlass;

(b) Mechanically propelled vessel: compass, echo sounder, radar, VHF (Very High Frequency) radio telephone (with licence issued by Communications Authority, Hong Kong), anchor, windlass and inclinator.

8.3 Standard of anchor and anchoring machine must comply with relevant strength and calculation requirements of classification societies or an equivalent Standard.

CHAPTER III A

HULL CONSTRUCTION, MACHINERY, ELECTRICAL INSTALLATIONS AND FITTINGS - CATEGORY A VESSEL

PART 1 GENERAL REQUIREMENTS

(1) Except as otherwise specified, every vessel shall be designed and built to the requirements of rules and regulations of a classification society as listed at Annex A, having regard the size, construction material, and operational services of the vessel. Such rules and regulations shall be complied with in its entirety. However in the case of any inconsistency between this Code and any of the requirements of the classification society rules, the requirements of this Code shall be complied with.

(2) Main propulsion, control, fuel oil, compressed air, electrical and refrigeration systems; generator machinery; air receivers and other pressure equipment; piping and pumping arrangements; steering equipment, shafts and couplings for power transmission shall be designed, constructed and tested to the satisfaction of the surveyor. Suitable means or device shall be provided to machinery, equipment, lifting gear, winches, fish handling and fish processing equipment, etc. so as to reduce to a minimum any danger to persons on board. Special attention shall be paid to moving parts, hot surfaces and other potential dangers.

PART 2 HULL CONSTRUCTION

1 Main Deck Construction

1.1 Every vessel shall be fully decked. Sunken deck intended to be used for passenger cabin shall have scantlings equivalent to those of main deck, and shall be at least 300 mm above the deepest loaded waterline. The sunken deck is not necessarily of watertight construction unless it also serves as a double bottom.

1.2 For a new vessel[Note1], if opening is fitted on main deck leading to spaces below deck the first tier of superstructure on main deck shall be of weathertight construction for the purpose of maintaining the integrity and stability of vessel. The closing appliances fitted on such position shall meet the requirements of section 3 below.

2 Bulkheads

2.1 On any motored vessel, the dispositions and construction of watertight bulkheads shall meet the relevant requirements of classification societies.

2.2 Vessels required complying with the provision of the prevention of pollution regulations, the dispositions and construction of bulkheads in such vessels shall meet the relevant damage stability criteria.

Note1 Applicable to a vessel which is a new vessel when the reference to "the commencement date" in the definition of "new vessel" under section 2 of the Survey Regulation is substituted by "3 March 2017".

2.3 On all vessels other than wooden vessels, and as far as practicable on wooden vessels, bulkheads shall be of watertight construction.

2.4 Access openings fitted in watertight bulkheads shall be equipped with effective watertight closing appliances and meet the requirements stipulated in section 2.5.

2.5 The design of the watertight doors shall comply with the following requirements:

(a) The dimension of the watertight doors shall suit the design of the vessels;

(b) The warning "Door must be kept closed when underway" shall be marked on both sides of the watertight door;

(c) For hinged type watertight door, they shall be opened outward except those doors in high flooding risk spaces shall be opened into the space; and

(d) Watertight doors to be fitted with visual and audio alarms in the wheelhouse to give alerts when watertight doors are open.

3 Closing Appliances, Freeing Ports

3.1 On every vessel, air pipes, ventilators, cargo hatchways, small hatchways, manholes, skylights and doors leading to a space below main deck shall be fitted with weathertight closing appliance and shall have a minimum coaming height as follows:

Plying Limits	Coaming Height (mm)
Hong Kong Waters	230 <300>
River Trade Limits	600

No coaming is required for watertight manholes.

3.2 Special consideration may be given to vessel of a design for a particular operation. Such restriction or condition, if any, would be endorsed on the inspection certificate of the vessel.

3.3 Sidescuttles below main deck shall be of watertight and non-opening type fitted with deadlight.

3.4 Vessels issued with Hong Kong Load Line Certificate (HKLL Certificate) or International Load Line Certificate (ILL certificate) must in addition comply with the relevant requirements on closing appliances prescribed in the load line regulations.

3.5 If bulwark is fitted at the shipside, freeing ports shall be provided in the bulwark with the minimum aggregate area in accordance with the rules of the classification society based on the vessel's size and operational services.

4 Protection of Passengers and Crew

4.1 Bulwark, guardrails or equivalent shall in general be installed near the periphery of weather decks accessible to passengers and crew. Any non-mechanically propelled vessel on which bulwark or guardrails are not fitted at main deck ship side there shall be displayed in a conspicuous location on board a suitable warning plate indicating that no bulwark or guardrails had been fitted at the position. Storm rails or handgrips shall be fitted in passenger standing areas, fixed at deck or at wall.

4.2 Bulwarks and rails shall have a minimum height of 1000 mm above deck. Where it can be shown that higher rails would interfere with the normal operation of the vessel a reduced height may be accepted. Sufficient freeing ports are to be provided on bulwarks. When guardrails are fitted, the opening below the lowest course of the rails shall not exceed 230 mm and the other courses shall not be more than 380 mm apart.

4.3 Vessels issued with HKLL Certificate or ILL Certificate must be in addition comply with relevant requirements on means of protection prescribed in the load line regulations.

5 Flooring

Metallic or wooden flooring, if fitted above bilge, shall be readily removable for cleaning and inspection. A steel inner bottom, if fitted, shall meet the requirements of classification society rules in respect of double bottom. Access openings and air pipes shall be provided for such spaces.

6 Marking of Hull

6.1 The certificate of ownership number of a vessel must be marked in accordance with section 38 of the Merchant Shipping (Local Vessels) (Certification and Licensing) Regulation.

6.2 On every passenger carrying launch the name of vessel (if any, as that shown on vessel's Certificate of Survey) and the total number of persons (passenger and crew) shall be painted on vessel's bows and stern. The minimum size of lettering is 100 mm in height.

6.3 Permanent draft marks shall be provided on port and starboard side of stem and stern of a vessel. The marks shall be measured from the bottom of the keel, with letters and figures being in decimetric heights and at two decimetric intervals.

PART 3 MACHINERY INSTALLATION

7 Main Engine, Auxiliary Engine and Gear Box

7.1 In any -

(a) oil tanker;

(b) noxious liquid substances carrier;

(c) dangerous goods carrier;

(d) tug; or

(e) vessel plying beyond Hong Kong waters

which is not classed with a classification society and has main engine power output exceeding 130 kW, such main engine and its associated gear box shall be of a type approved by a classification society or maritime administration.

7.2 The main engine and the associated gearbox shall be matched at the maximum continuous rating condition. Alternative rating may be accepted subject to proper justification is given.

7.3 New main engines and gear boxes are required to be fitted on new vessels stated in section 7.1. For vessels other than those stated in section 7.1 used engine may be fitted. To facilitate the confirmation of the source of origin and/or the quality of reconditioning of the used engine, proper document from the original engine maker or purchase document from the engine workshop shall be submitted. The data on engine model, type and identification number shall be clear and adequate for accurate assessment of the engine power. The reconditioning reports shall give adequate details similar or same as the items and format given on checklist of engine and gearbox inspection in Annex I-2 and I-3. For new engine requirements, owners are drawn attention to the recommendation in Annex I-10. (Amended G.N. 5924 of 2017)

Vessels built on or after 1 June 2008 but before 1 July 2016 may be fitted with Tier I engine; vessels built on or after 1 July 2016 must be fitted with Tier II engine.

7.4 For main engine and gear box fitted on vessel other than that stated in section 7.1, documentation provided by manufacturer indicating that the main engines are of marine type is sufficient.

7.5 Auxiliary engine(s) on new mechanically propelled vessel shall be 'marine type'; auxiliary engine(s) on existing mechanically propelled vessel shall also be 'marine type' if they are being replaced/renewed.

7.6. Any engine fitted on a vessel shall be properly maintained at all time free from dark smoke emission. In this regard, during the final inspection for initial and periodic survey, engine performance condition check would include smoke emission test using Ringelmann Chart. Shade 2 of the Ringelmann Chart and a continuous period of 3 minutes are the upper limits. The emission beyond this limit is considered as a contravention of the law.

7.7 Any vessel if found or reported emitting excessive dark smoke, owners would be requested to present vessel's engine(s) for special inspection and smoke test to ensure compliance. Any non-compliance will be pursued in accordance with relevant legislation requirement.

7.8 If replacement of main engine, generator set, etc. are required, owner shall refer to the requirements as indicated in Annex I-5A, I-5B and I-5C.

8 Engine Fittings

8.1 Main engine and generator engine shall be provided with effective means of control and indication.

8.2 If remote control of main engine is provided from the wheelhouse, local control shall also be provided at engine side.

< 8.3 Emergency stopping device for main engine shall be provided in wheelhouse. >

8.4 Main engine installed on any

(a) <oil tanker carrying cargo oil having a flash point not exceeding 60^{o}C (closed cup test)>;

(b) <dangerous goods carrier>;

(c) <noxious liquid substances carrier>;

(d) <tug>; or

(e) <Category A vessel that may ply beyond Hong Kong waters>

shall be provided with means of protection due to engine faults as follows:

Engine Fault	**Means of Protection**	
	Audible and Visible Warning Alarm	Automatic Shut-off
Lubrication oil low pressure	✓	
Cooling water high temperature	✓	
Overspeed	✓	✓

8.5 The control for re-setting of main engine shall be fitted at the helmsman's position.

8.6 Engine with cylinder diameter greater than 200 mm or a crankcase volume greater than 0.6 m^3 shall be provided with crankcase explosion relief valves of approved type. Other engines of smaller size shall be fitted with crankcase venting pipe leading to the open deck.

8.7 The engine's exhaust pipe shall be lagged with heat-resistant material unless it is served by a water cooling system. A silencer or expansion chamber shall be fitted on the exhaust pipe.

9 Propeller Shafting

9.1 The diameter of propeller shaft shall meet the minimum requirements of the classification society rules. The owner and/or builder of vessel are suggested to consider an allowance for wear down of the shaft. Repair by machining to eliminate defects of the shaft may be permitted, provided the minimum diameter as required by the classification society rules is maintained.

9.2 Propeller shaft and its coupling shall be physically tested and certificated as follows:

Type of Vessel \ **Shaft Diameter**	**> 75 mm**	**≤ 75 mm**
As stated in section 7.1	MD/CS	manufacturer
Others	manufacturer	manufacturer

MD : Marine Department

CS : classification society

9.3 Propulsion systems including shafting of non-conventional type may be accepted if that are of the types approved by classification society.

10 Engine Room

10.1 Engine room shall be so designed as to provide safe and free access to all machinery and its controls as well as to any other parts which may require servicing.

10.2 Adequate ventilation shall be provided in the engine room of mechanically propelled vessel. If only natural ventilation is provided, at least two cowl ventilators of adequate size shall be fitted. One of the cowl vents shall be led well down into the space to vent out the accumulated vapour in the lower part of the space. Ventilation trunk if passing through other compartments shall be of watertight or gastight construction and structurally protected [Note 1], as appropriate. The ventilator shall be fitted with a fire damper or other means of closing. If a fire damper is fitted, an indicator shall be provided to show whether the damper is in the open or close position. The fire damper may be of manual type and the indicator which could be in written form or other physical means, and be installed locally in the vicinity of fire damper.

10.3 If the vessel is constructed of wooden or GRP of non-oil resistant material, a suitable metal tray which can readily be cleaned shall be fitted under the engine to protect the bilges against saturation by oil.

10.4 Two means of escape including suitable ladders and exits shall be provided for the engine room. One of these means of escape may be waived with regard to the size and disposition of the space. Any vessel permitted to be operated by combined coxswain and engine operator (Ch. XII/3 refers) and of length less than 24 metres, one means of escape can be waived.

If such means of escape is led to passenger space, it shall be clear of any seating.

10.5 Every machinery spaces must be at all times kept clean and free from unnecessary combustible materials and that waste oil is not allowed to accumulate in the bilges.

11 Nature of Fuel

Except otherwise permitted by the Director, marine fuel oil of flash point of less than 60^{o}C (closed cup test) must not be used for engine.

12 Tanks

12.1 The arrangements for filling fuel tanks shall be such that oil will not spill or overflow into any compartment of the vessel. Woodwork surrounding the deck filling mouth shall be covered with metal piece. No loose can/barrel of fuel oil shall be carried on board.

12.2 Fuel tanks shall be substantially constructed of suitable material and securely fixed in position. The tanks and their connections shall be tested per the requirements of Annex M/3.1.

12.3.1 The materials for water tank of water boats shall be of steel, aluminum or glass reinforced fibre (GRP) subject to:

(a) the tanks are watertight;

(b) the tanks do not affect the stability, structure and safety of the vessel;

(c) the shell of water tank shall not be formed as any part of ship hull unless the ship hull is constructed of steel or aluminum;

Note1 Applicable to a vessel which is when the reference to "the commencement date" of the Survey Regulation in the definition of "new vessel" under section 2 of the Survey Regulation is substituted by "3 March 2017".

(d) the physical construction and installation of the water tank, fittings and piping are up to the Director's satisfaction;

(e) the tank coating/paint used shall not cause any health and hygiene risk; and

(f) the requirements from other Department (if any) shall be fulfilled.

12.3.2 If water boat requires ballasting; detail information, drawing and calculation of the ballast tank and ballast system shall be prior approved by the Director.

13 Pumping and Piping Arrangement

13.1 All fuel oil tank, lubrication oil tank and spaces where flammable gas may collect shall be fitted with venting pipes leading to the weather deck. The open end of any oil tank's venting pipe shall be fitted with properly secured metallic wire-gauze.

13.2 Safe and efficient means of ascertaining the amount of fuel oil in any oil tank shall be provided. For sounding pipes, their upper ends shall terminate in safe positions and be fitted with suitable means of closure. Any transparent level gauge shall be of robust construction and of a type acceptable to the Department and fitted with automatic closing valves at both ends. Other means of proven design may be allowed subject to any failure or overfilling of the tank will not permit release of oil from it. Filling pipes shall have suitable screwed cap.

13.3 Fuel oil pipes, their valves and fittings shall be of copper, steel or other equivalent material. Where necessary flexible pipes may be allowed provided such pipes and their end attachments are of adequate strength, made of approved fire-resistant materials or design, to the satisfaction of the surveyor. Pipe joints in general are to be readily accessible. Fuel tank outlet valves shall be readily closed from a position outside the space where the tank is situated. An automatic closing drain valve shall be fitted at a lower position of fuel oil tank.

13.4 Oil pipes, water pipes and engine exhaust pipes shall generally not be fitted above and close to electrical distribution board, switchboard, etc. or any hot surface. Shall it be unavoidable, suitable protection shall be provided. Oil pipes shall not be led through any fresh water tank.

13.5 A suitable metal tray for collection of leaking oil shall be fitted under each valve of oil tanks and filters.

13.6 Independently driven fuel oil pump shall be provided with -

(a) a suitable relief valve at discharge side of the pump;

(b) a means of stop outside of the space where the pump is situated.

14 Bilge Pumping Arrangement

14.1 Every vessel shall be provided with a bilge pumping system for pumping out bilge water from any compartment other than oil tanks and water tanks appropriate to the size of vessel as given by classification society rules.

14.2 A screw-down non-return valve shall be fitted at the following positions in the bilge line:

(a) bilge valve distribution chests;

(b) direct bilge suction; and

(c) bilge pump connections to main bilge line.

14.3 Bilge pipes shall not be led through any fresh water tank. Bilges pipes, if pass through fuel oil, ballast or double bottom tanks, shall be of heavy gauge steel construction.

14.4 Any bilge pipe piercing collision bulkhead shall be fitted with a positive means of closing at the bulkhead with remote control from the working deck with an indicator showing the position of the valve provided that, if the valve is fitted on the after side of the bulkhead and is readily accessible under all service conditions, the remote control may be dispensed with.

15 Compressed Air System

15.1 Suitable pressure-relief arrangements shall be provided to prevent excess pressure in any part of the compressed air systems.

15.2 The starting air arrangements for main engine of a cylinder diameter exceeding 300 mm shall be adequately protected against the effects of back firing and internal explosion in the starting air pipes.

15.3 The discharge pipes from starting air compressor shall be led directly to the starting air receiver. Starting air pipes from air receivers serving main or generator engines shall be entirely separate from other services.

15.4 Provision shall be made to avoid or minimize the entry of oil into the air pressure systems and to drain the oil from the systems.

15.5 (a) Construction of air receivers shall meet the standard of a maritime administration's national standard or a classification society, and be subject to the approval of the Director. The air receivers are classified according to the following table (Note: The highest class prevails if there are different classes worked out from P, S and T):

Class I	Class II	Class III
$P > 39.2$	$39.2 \geq P \geq 17.2$	$P < 17.2$
or $S > 38$	or $38 \geq S \geq 16$	or $S < 16$
or $T > 350$	or $350 \geq T \geq 150$	or $T < 150$

where P = maximum design or working pressure (bar)
S = shell thickness (mm)
T = working temperature (^{o}C)

(b) Air receivers fitted on new vessel [Note 1] shall be built under the survey of one of the abovementioned maritime institutions, and issued with appropriate certificates.

(c) Each air receiver shall be provided with the following fittings:
(i) Stop valve and pressure gauge
(ii) Drain valve

[Note 1] Applicable to a vessel which is when the reference to "the commencement date" of the Survey Regulation in the definition of "new vessel" under section 2 of the Survey Regulation is substituted by "3 March 2017".

(iii) Safety valve

(d) The following information shall be submitted in duplicate for approval:

(i) Air receiver construction (including details of welded connections, attachments, dimensions and supports etc.)

(ii) Construction of pressure parts (cylindrical shell, end plates, etc.)

(iii) Arrangement of mountings and fittings

(iv) Mechanical properties of material

(v) Test pressure.

15.6 Every air receiver shall be tested at pressure according to the following table:

Type of Construction	Maximum Working Pressure (MWP)	Test Pressure
Riveted or Fusion welded	MWP $\leq$ 7 bar	2 × MWP
Riveted	7 bar< MWP $\leq$ 20 bar	1.5 × MWP + 3.5
Riveted	MWP> 20 bar	MWP + 14
Fusion welded	MWP> 7 bar	1.5 × MWP + 3.5

16 Anchors, Cables and Windlass

16.1 The sizes of chain cables and anchors shall be in accordance with classification society rule requirements prescribed for vessels operating in sheltered waters. Where ropes are proposed instead of chain cables, the ropes sizes and strengths shall be equivalent to that of chain cables.

16.2 A windlass for recovering the cables and anchors is recommended.

17 Steering System

17.1 Every motored vessel shall be provided with a main steering gear and an emergency means for actuating the rudder. The main steering gear shall be capable of turning the rudder over from 35^{o} on either side to 30^{o} on the other side in not more than 28 seconds, at vessel's maximum service speed. The emergency means may be of powered or manually operated.

17.2 Pressure relief valve shall be fitted at the hydraulic line.

17.3 The position of rudder, if power operated, shall be indicated in the wheelhouse. The rudder angle indication for power-operated steering gear shall be independent of the steering gear control system.

17.4 Material tests for rudder stocks shall be carried out as that for propeller shafts. Rudder stock assembly shall be enclosed with efficient watertight glands and packing. Suitable stopping devices are to be provided for the rudder to prevent it from excessive angular motion and vertical jumping.

17.5 The steering system of vessels of the type stated in Ch. I/4.2 shall comply with the

relevant requirements specified in Ch. XI.

18 Wheelhouse - Engine Room Communication

18.1 On any vessel with manned engine rooms, a suitable system of communication between wheelhouse and engine room shall be provided.

18.2 Any vessel with length or propulsion power as indicated below, operating in unattended machinery spaces mode shall be provided with the following installation in the proximity of the position of helmsman:

(a) Vessel of L ≤ 37 m or total propulsion power ≤ 1500 kW (2,010HP)

(i) for main engine-

(1) means of start, stop and control of speed

(2) control of gearbox or clutch

(3) lubricating oil pressure gauges

(4) < lubricating oil low pressure alarm>

(5) cooling water pressure gauges (if fitted on the engine)

(6) cooling water temperature gauges

(7) < cooling water high temperature alarm>

(8) exhaust temperature gauges (if fitted on the engine)

(9) a fixed fire detection (operated by fire detectors) and fire alarm system for engine room. (For the purpose of "combined coxswain" operation, vessels of length less than 12 m, except those operating beyond waters of Hong Kong or "high risk" type, if regular surveillance (such as through tale-tell pipe or transparent glass view-hole fittings etc.) can be exercised from outside engine room or control station by the coxswain or a crewmember, these requirements can be waived).

(ii) for generator engine-

means to stop

(iii) for bilge water in engine room-

high level audible alarm.

(b) Vessel with length L >37 m or total propulsion power> 1500 kW(2010HP) would be specially considered.

19 Installation for Prevention of Oil Pollution

19.1 In accordance with Schedule 7 of Survey Regulation, vessels to which the requirements of Merchant Shipping (Prevention of Oil Pollution) Regulations (Cap 413A) applicable, are reproduced in the following table:

Type of vessel	Category of vessel	A		B	
	Propulsion	with Main Engine	No Main Engine	with Main Engine	No Main Engine
		Gross Tonnage	Gross Tonnage	Gross Tonnage	Gross Tonnage
Class II **V**essel					
Dangerous Goods Carrier		≥80	-	≥400	-
Dredger		≥80	-	-	-
Dry Cargo Vessel		≥80	-	≥400	-
Edible Oil Carrier		≥80	-	-	-
Floating Dock		-	≥80	-	-
Floating Workshop (including Repair Pontoon, Welding Barge)		≥80	≥80	≥80	≥80
Noxious Liquid Substance Carrier		≥80	-	-	-
Oil Carrier		any tonnage	any tonnage	-	-
Pilot Boat		≥80	-	≥400	-
Special Purpose Vessel		≥80	-	-	-
Transportation Boat		≥80	-	-	-
Transportation Sampan		-	-	≥400	-
Tug		≥80	-	-	-
Water Boat		≥80	-	≥400	-
Work Boat		≥80	≥80	≥80	≥80

19.2 The installation and documentation required on board, and information required to submit for approval are detailed in the following table:

Type of Vessel	Oil Carrier (incl. Sludge Oil Carrier)		Vessels other than Oil Carrier	
Gross Tonnage (GT)	GT<150	GT≥150	80≤GT<400	GT≥400
Required Installation and Documentation	(c),(f),(n)	(a),(b),(c), (d),(e),(n)	(c),(f)	(a),(b), (c),(d),(e)
Information to be submitted	(i),(k), (l),(m)	(g),(h),(j),(k), (l),(m),(o)	(i)	(g),(h),(j)

Legend

(a) An approved type oily water separator designed to produce effluent not more than 15 ppm of oil.

(b) Tank (sludge tank) for oil residue in engine room.

The minimum sludge tank capacity (V_1) shall be determined by the following formula:

$V_1 = 0.005CD$ (m^3)

where

C = daily fuel oil consumption (m^3); and

D = maximum no. of days when sludge can be discharged ashore.

Oil residue (sludge) may be disposed of directly from the oil residue (sludge) tank(s) through the standard discharge connection, or any other approved means of disposal. The oil residue (sludge) tank(s) shall be provided with a designated pump for disposal that is capable of taking suction from the oil residue (sludge) tank(s); and shall have no discharge connections to the bilge system, oily bilge water holding tank(s), tank top or oily water separators except that the tank(s) may be fitted with drains, with manually operated self-closing valves and arrangements for subsequent visual monitoring of the settled water, that lead to an oily bilge water holding tank or bilge well, or an alternative arrangement, provided such arrangement does not connect directly to the bilge piping system.

(c) Standard discharge connection.

(d) For oil carrier (including sludge oil carrier) ≥150 GRT or vessels other than oil carrier ≥400 GRT, Hong Kong Oil Pollution Prevention Certificate and Supplement issued/endorsed by the Director or International Oil Pollution Prevention Certificate and Supplement issued/endorsed by a classification society.

(e) Oil record book (Part I and Part II); Vessels other than oil carriers require Part I.

(f) Bilge water holding tank.

The minimum capacity (V) of the tank is to be determined by the following formula:

$V = 0.9\ P + 50$ litres

where P = total horsepower of main engine(s), in kW.

The above formula is for an interval of discharge of 18 hours. For alternate intervals of discharge, the capacity shall be adjusted accordingly.

(g) Installation plans for oily-water separator consist of:

(i) piping arrangements, and

(ii) wiring diagram of electrical installation.

(h) Sludge tank and discharge arrangement plans include:

(i) construction, size and location of sludge tank; and

(ii) piping diagram of sludge tank from machinery spaces to reception facility via standard discharge connection.

(i) Bilge water holding tank and discharge arrangement plans include:

(i) construction, size and location of bilge holding tank; and

(ii) piping diagram of bilge water holding tank from machinery spaces to reception facility via standard discharge connection.

(j) Shipboard oil pollution emergency plan (not required for sludge oil carriers).

(k) Cargo oil pump room bilge pumping arrangements.

(l) Brief description of scheme for cleaning cargo oil tanks.

(m) Damage stability calculations.

(n) Stability instrument (Ch. IV/11 refers)

(o) STS operation plan (applicable to tankers engaged in the transfer of oil cargo at sea)

19.3 Vessels shall maintain a valid certificate relevant to prevention of oil pollution as required by Merchant Shipping (Prevention of Oil Pollution) Regulations (Cap 413 sub.

leg A) for the intended purpose of the vessel.

19.4 Provisions for discharge prohibition for oil pollution prevention as stipulated in Cap 313, Cap 413 and Cap 548 must be complied with for all vessels, including those vessels not mandatory required to provide with the physical arrangements/ equipment/document on board as indicated in sections 19.1 and 19.2.

20 Pollution Prevention for Vessels carrying Noxious Liquid Substances in bulk

Every vessel carrying noxious liquid substance, including unassessed liquid substances, in bulk shall comply with the relevant requirements of the Merchant Shipping (Control of Pollution by Noxious Liquid Substances in Bulk) Regulations, Cap 413B and maintain a valid certificate as appropriate for the intended purpose of the vessel.

PART 4 ELECTRICAL INSTALLATION

21 Electrical Power Source

21.1 Nominal voltage of electrical system is recommended to be 380V for generation and power circuits, 220V for lighting and distribution circuits and 24V D.C. for low voltage circuits.

21.2 The hull return system shall not be used for power or lighting.

21.3 An earthed distribution system shall not be used on an oil carrier carrying petroleum products or other types of vessel with flammable cargo.

21.4 Where electrical power constitutes the only means of driving the lubrication oil pump and cooling water pump for the main engine, a main source of electrical power shall be provided which shall include at least two generating sets, one of which shall be driven by internal combustion engine.

21.5 The vessel’s emergency lighting, fixed fire extinguishing system, fire detection and alarm system, public address system; and navigation lights for vessels of length exceeding 24 metres shall be provided with emergency power supply of sufficient capacity.

21.6 For vessels built on or after 29 November 2014 the emergency source of power shall not be located below the full-load waterline of the vessel.

21.7 Ventilation fans serving machinery or cargo spaces, engines' oil fuel pumps and other similar oil pumps shall be capable to be stopped outside of the space where the appliance is situated.

21.8 Each navigation light shall be connected separately to the distribution board served for this purpose.

<21.9 In every electric or electro-hydraulic power steering gear system on vessel:

(a) the steering gear shall have two independent sets of supply cables connecting direct to main switchboard;

(b) the supply circuits of steering gear control system shall be provided with short circuit protection only;

(c) the steering gear motors shall have an overload alarm instead of overload protection. The short circuit protection shall be not less than twice the total rated current of the motor in the circuit protected.

This subsection is not applicable to vessels fitted with a separate power-operated means of steering.>

22 Precautions against Shock, Fire and Other Hazards of Electrical Origin

22.1 (a) Exposed permanently fixed metal parts of electrical machines or equipment which are not intended to be "live", but which are liable under fault conditions to become "live" shall be earthed unless they are supplied at a voltage not exceeding 50 volts.

(b) Electrical apparatus shall be so constructed and so installed that it shall not cause injury to person when handled or touched in the normal manner.

22.2 Main and emergency switchboards shall be so arranged as to give easy access as may be needed to apparatus and equipment, without danger to attendants. The sides and backs and, where necessary, the fronts of switchboards, shall be suitably guarded. Exposed "live" parts having voltages exceeding 50 volts shall not be installed on the front of such switchboards. There shall be non-conducting mats or gratings at the front and rear, where necessary.

22.3 The distribution system if exceeds 50V, whether primary or secondary, for power or lighting, with no connection to earth is used, a device capable of monitoring the insulation level to earth shall be provided.

22.4 (a) The voltage rating of any cable shall not be less than the nominal voltage.

(b) Every conductor of a cable, flexible cable or flexible cord shall be capable of carrying the maximum current which will normally flow through it without exceeding the appropriate current rating as specified by manufacturer of the cable.

(c) Cable runs shall be selected so as to avoid action from condensed moisture or drip. Cables shall, as far as possible, be remote from sources of heat, such as hot pipes, resistors, etc.

(d) Cables shall be prevented from mechanical damage. When necessary cables shall be enclosed in suitable conduits or casings, or armoured cables shall be used.

22.5 (a) Circuits shall be protected against short circuit and overload.

(b) The current rating of circuit breaker shall not exceed the current rating of the smallest size of cable in the circuit protected by the circuit breaker.

22.6 Lighting fittings shall be arranged to prevent temperature rises which could damage the wiring and to prevent surrounding material from becoming excessively hot.

22.7 In spaces where flammable gas mixtures are liable to collect and in any compartment assigned principally to the containment of an accumulator battery, the electrical fittings shall be of explosionproof type.

22.8 (a) The housing of accumulator batteries shall be properly stowed in a locker which shall be well ventilated.

(b) Accumulator batteries shall not be located in the crew or passenger spaces.

<22.9 A lightning conductor is recommended to be fitted for a vessel which hull or mast is constructed of nonconductive materials. The lightning conductor might be connected to a copper plate fixed to the vessel's hull well below the lightship waterline. >

22.10 When any work to be carried out on electrical appliances a signboard showing "Work in Progress" shall be displayed at prominent position of the electrical panel to prohibit anyone from operating the panel.

PART 5 REFRIGERATION INSTALLATION

23 Refrigerating Chamber and Refrigerating Machinery

23.1 Refrigerating Chamber

23.1.1 The insulation layer shall be intact and properly fixed.

23.1.2 Effective drainage arrangement shall be provided for the refrigerating chamber and evaporator.

23.1.3 All accessories of the system including the thermometer, pressure gauge shall be properly maintained to indicate the correct parameters.

23.1.4 Door alarm or manual call point, if provided, shall be properly maintained and routine testing is necessary to ensure their correct functioning.

23.1.5 The chamber shall be well lit and evaporator fan, if provided, shall be fitted with protective guard.

23.2 Refrigerating Machinery

23.2.1 All the accessories including the thermometer, pressure gauge, relief valve, liquid indicator shall be properly maintained.

23.2.2 The relief valves and bursting disc shall not be blanked and damaged. Blow test would be required if the stamp seal has been damaged.

23.2.3 The high pressure (discharge) and low pressure (suction) cut-out of the refrigerating compressor shall be properly maintained. Periodic testing is necessary to ensure their normal functioning.

23.2.4 Insulation resistance of the electrical supply of the system shall not be less than 1 mega ohms.

23.2.5 Safety protective device of switchgear shall be properly maintained and tested to ensure their normal functioning.

23.2.6 Control and safety cut-out of the system shall be properly maintained and tested to ensure their normal functioning.

CHAPTER III B
HULL CONSTRUCTION, MACHINERY, ELECTRICAL INSTALLATIONS AND FITTINGS - CATEGORY B VESSEL

PART 1 GENERAL REQUIREMENTS

(1) Dumb lighter, hopper barge and any vessel required to possess a Hong Kong Load Line Certificate or a Freeboard Assignment Certificate; shall be designed and built to the requirements of the relevant rules and regulations as listed at Annex A, having regard the size, construction material and operational services of the vessel. Such rules and regulations shall be complied with in its entirety. However in the case of any inconsistency between this Code and the requirements of the classification society rules, this Code shall be complied with.

(2) Suitable means or device shall be provided to machinery, equipment, lifting gear and winch, etc. so as to reduce to a minimum any danger to persons on board. Special attention shall be paid to moving parts, hot surfaces and other potential dangers.

PART 2 HULL CONSTRUCTION

1 Hull and Bulkheads

1.1 Any motor vessel shall be fitted with:

< (a) a collision bulkhead (for vessels of other than wooden vessels and of length (L) exceeding 8 m); >

(b) engine room fore bulkhead; and

(c) engine room aft bulkhead, unless the machinery space is situated at aft end of the vessel.

1.2 For vessels of other than wooden construction, the bulkheads shall be of watertight construction. Bulkheads in vessels of wooden construction shall be as far as practicable of watertight construction. Openings fitted on bulkhead for the passing of pipes, cables, etc. shall be accordingly constructed.

1.3 < Access opening fitted in a watertight bulkhead shall be equipped with effective watertight closing appliance. No opening is to be fitted in collision bulkhead on vessels other than wooden construction. >

2 Closing Appliances, Freeing Ports

2.1 The air pipes, ventilators, cargo hatchways, small hatchways, manholes and doors which are leading to a space below main deck shall be fitted with weathertight closing appliance and have a minimum coaming height of 230 or <300> mm on any -

(a) vessel of other than wooden vessel not in possession of a Freeboard Assignment Certificate; or

< (b) wooden vessel plying beyond Hong Kong waters >

2.2 No coaming is required for watertight manholes.

2.3 If bulwark is fitted at the shipside on vessels operating outside the Specified Sheltered Waters, freeing ports shall be provided in both sides of the bulwark with the minimum

aggregate area (in m^2) indicated in the following table. For vessels operating beyond Hong Kong Waters, the aggregate area shall be twice of that indicated in the tables.

Length (L) (m)	Aggregate Freeing Port Area (m^2)
L ≦ 12	0.0115 L
12 < L < 24	(0.00146 L-0.006) L
L ≧ 24	0.029 L

3 Protection of Passengers and Crew

Ch.IIIA/4 refer.

4 Flooring

Ch.IIIA/5 refers.

5 Marking of Hull

5.1 For vessels of all kinds of construction, Ch.IIIA/6.1 refers.

<5.2 Every vessel assigned with a freeboard in compliance with requirement of Ch.IV/1.1 shall provide with draft marks per requirements of Ch.III A/6.3>.

PART 3 MACHINERY INSTALLATION

6 Main Engine and Engine Fitting

The engine's exhaust pipe shall be lagged with heat-resistant material unless it is served by a water cooling system. A silencer or expansion chamber shall be fitted on the exhaust pipe. <Main engine crankcase shall be fitted with venting pipe leading to the open deck>.

7 Engine Room

7.1 Adequate ventilation shall be provided in engine room of mechanically propelled vessel. If only natural ventilation is provided, at least two cowl ventilators of adequate size shall be fitted.

7.2 If the vessel is of wooden construction or GRP of non-oil resistant material, a metal tray, which can readily be cleaned, shall be fitted under the engine to protect the bilges against saturation by oil.

7.3 Every machinery spaces shall be at all times kept clean and free from unnecessary combustible materials and that waste oil is not allowed to accumulate in the bilges.

8 Nature of Fuel

Ch.IIIA/11 refers.

9 Tanks

9.1 The arrangements for filling fuel tanks are to be such that oil will not spill or overflow into any compartment of the vessel. Woodwork surrounding deck-filling mouth shall be covered with sheet metal. No loose can/barrel of fuel oil is to be carried on board.

9.2 Fuel tanks shall be substantially constructed of suitable material and securely fixed in position.

9.3.1 The materials for water tank of water boats shall be of steel, aluminum or glass reinforced fibre (GRP) subject to:

(a) the tanks are watertight;

(b) the tanks do not affect the stability, structure and safety of the vessel;

(c) the shell of water tank shall not be formed as any part of ship hull unless the ship hull is constructed of steel or aluminum;

(d) the physical construction and installation of the water tank, fittings and piping are up to the Director's satisfaction;

(e) the tank coating / paint used shall not cause any health and hygiene risk; and

(f) the requirements from other Department (if any) shall be fulfilled.

9.3.2 If water boat requires ballasting, detail information, drawing and calculation of the ballast tank and ballast system shall be prior approved by the Director.

10 Pumping and Piping Arrangement

Ch.IIIA/13 refers.

11 Bilge Pumping Arrangement

A hand or electrical operated bilge pump of sufficient capacity shall be fitted for pumping out water in the bilge. On dumb lighters, a portable type submerged pump is accepted for the purpose.

12 Compressed Air System

Ch.IIIA/15 refers.

13 Wheelhouse - Engine room Communication

Ch.IIIA/18 refers

Note
For the purpose of "combined coxswain" operation, any existing vessel of length less than 24m, total power not more than 750 kW (1,000 HP), and operating within waters of Hong Kong, fittings of a fixed fire detection (operated by smoke detectors) and fire alarm system for engine room can be waived, provided regular surveillance (such as through tale-tell pipe or transparent glass view-hole fittings etc.) can be exercised from outside engine room or control station by the coxswain or a crewmember.

14 Installation for Prevention of Oil Pollution

Ch.IIIA/19 refers.

15 Electrical Installations

Ch.IIIA/Part 4 refers.

CHAPTER IV
FREEBOARD AND STABILITY

1 Freeboard Assignment, Certification, Intact Stability

1.1 The freeboard assignment, certification and intact stability requirements for a vessel shall be according to the following table, unless an International Load Line Certificate has been issued to the vessel:

Vessel Type and Plying Limits	Length (L)	L ≥ 24 m		L < 24 m	
	Requirement	Freeboard, Certification	Intact Stability	Freeboard, Certification	Intact Stability
Class II Vessel					
Dangerous Goods Carrier) Noxious Liquid Substance) Carrier) Oil Carrier)					
Motor					
HKW		HKLLC	IMO	FAC	IMO
RTL		HKLLC	IMO	not permitted	-
Dumb					
HKW		FAC	IMO	FAC	IMO
RTL		FAC	IMO	not permitted	-
Motor) Category A Dry Cargo Vessel) Dredger) Edible Oil Carrier)					
HKW		HKLLC	IMO	FAC	≤ GM ≥ 0.3m (*1)
RTL		HKLLC	IMO	not permitted	not permitted
Category A Water Boat		HKLLC	IMO	FAC	GM ≥ 0.3m (*1)
Category B Water Boat		HKLLC		FAC (RTL not permitted)	
Category B Dry Cargo Vessel					
HKW		FAC	GM≥ 0.3m (*1)	FAC	GM ≥0.3m (*1)
RTL		HKLLC	IMO	not permitted	not permitted
Dumb Lighter (incl. Flat Top Cargo Barge)					
HKW		FAC	H Wt	FAC	H Wt
RTL (*2)		FAC	H Wt	not permitted	-
Dumb Edible Oil Carrier					
HKW		FAC	IMO	FAC	IMO
RTL (*2)		FAC	IMO	not permitted	--

Vessel Type and Plying Limits	Length (L)	L ≥ 24 m		L < 24 m	
	Requirement	Freeboard, Certification	Intact Stability	Freeboard, Certification	Intact Stability
Hopper Barge HKW RTL (*2)		FAC FAC	Spill Spill	FAC not permitted	Spill --
Tug HKW) RTL)		L&FV	Tow + IMO	L&FV	Tow + IMO
Category A Transportation Boat,) Pilot Boat,) Category A Work Boat Note1) operating solely within HKW		L&FV	IMO	L&FV	IMO
Floating Dock operating solely within HKW		HKLLC	(*3)		
Crane Barge operating solely within HKW (*2)		CB FB	H Wt	CB FB	H Wt

Legend

HKW = waters of Hong Kong

RTL = river trade limits

Remark

*1 To be determined by a rolling period test (Annex E, Part 2 refers) in the anticipated worst loading condition.

*2 Operate in favourable weather conditions only.

*3 Requirements in respect of stability of floating docks contained in one of the rules and regulations listed in Annex A.

Legend

1.2 Freeboard Requirements

L&FV A freeboard assigned appropriate to the length of vessel according to the following table:

Length (L) (m)	L ≤ 6	L = 19	L ≥ 50
Freeboard (mm)	380	760	1100

Freeboard of intermediate length shall be obtained by interpolation.

HKLLC The freeboard assignment and stability requirements shall be in accordance with Merchant Shipping (Safety)(Load Line) Regulations 1991, and the amended.

Upon the prescribed requirements are complied with the vessel shall be issued with a Hong Kong Load Line Certificate.

Note1 Applicable to a vessel which is when the reference to "the commencement date" of the Survey Regulation in the definition of "new vessel" under section 2 of the Survey Regulation is substituted by "17 February 2017".

FAC Assignment of following minimum freeboard, appropriate to the length of vessel (L) as follows -

Vessel length (L)(m)	Freeboard (mm) (*1)	
	Hopper barge (*2) and oil carrier (*3)	Other vessels
L ≤ 30	380	530
L ≤ 40	500	650
L ≤ 50	660	710
L ≤ 60	850	1000
L ≤ 70	1080	1230
L ≤ 80	1330	1480
L ≤ 90	1600	1750

Freeboard of intermediate lengths shall be obtained by interpolation.

Notes:

(*1) Where the height of coaming for openings leading to below deck space is less than 600 mm, the above freeboard shall be increased by 12.5 mm for each 25 mm that is below 600 mm in height. The coaming height shall in no case be less than 300 mm.

(*2) Vessels with bottom door which can be opened to the sea.

(*3) This includes vessels having cargo tanks with small openings closed by steel watertight cover.

Freeboard marks shall be marked in accordance with Annex B of this code.

Upon the prescribed requirements are complied with the vessel shall be issued with a Freeboard Assignment Certificate.

CB FB For crane barge, the freeboard fore and aft throughout the lifting operations (whether with or without counter ballasting capability) shall not be less than 0.5 m.

1.3 Intact stability requirements in all probable loading conditions of vessel

GM ≥0.3m the initial transverse metacentric height (GM_T) shall not be less than 300 mm.

IMO IMO Recommended Stability Criteria

(1) the initial GM_T shall not be less than 0.15 metres

(2) the area under the curve of the righting levers (GZ curves) shall not be less than:-

(i) 0.055 m-rad up to an angle of 30^o;

(ii) 0.090 m-rad up to an angle of either 40^o or the angle at which the lower edges of any openings in the hull, superstructures or deckhouses, being openings which cannot be closed weathertight, are immersed if that angle be less;

(iii) 0.030 m-rad between the angles of heel of 30^o and 40^o or such referred to in ii) above;

(3) the righting lever (GZ) shall be at least 0.20 metres at an angle of heel equal to or greater than 30^o; and

(4) the maximum righting lever (GZ_{max}) shall occur at an angle of heel not less than 25^o but preferably over 30^o.

Vessels of the type stated in Ch. I/4.2 shall comply with the relevant requirements specified in Chapter XI.

Tow Towing Stability

A vessel permitted to tow shall conform to one of the following criterion:

(1) Rec. No. 24 published by International Association of Classification Societies (IACS); or

(2) Requirements in respect of stability of towing vessels contained in one of the rules and regulations listed in Annex A, appropriate for vessel's intended plying limits and operations.

Spill Spill out' Method

Requirements in respect of stability of dredgers contained in one of the rules and regulations listed in Annex A, appropriate for vessel's intended plying limits and operations.

H Wt Stability when lifting and/or carrying containers

(a) A vessel equipped with lifting appliances to lift cargo or other heavy objects, during lifting operations if a maximum heeling moment due to the total hook load(s) is equal to or greater than -

$0.21 \times \Delta \times GM_T \times F / B$ (m-t)

where

Δ = displacement (tonnes)
GM_T = metacentric height (m)
F = freeboard (m)
B = maximum breadth (m)

(Note: the values of Δ, GM_T and F shall be taken at the condition the vessel has the maximum hook load)

is expected, shall comply with the criteria prescribed in Annex D; or requirements in respect of stability of heavy lifting contained in one of the rules and regulations listed in Annex A, appropriate for vessel's intended plying limits and operations.

The operation of lifting very heavy loads shall be carried out only in favourable weather conditions.

(b) A dumb lighter shall have a GM_T of not less than 300 mm when carrying containers onboard.

1.4 Determination of minimum freeboard

A vessel shall meet the relevant stability criteria for the draught corresponding to the freeboard assigned.

1.5 Equivalent freeboard and stability criteria

Where it is not practical for any particular vessel, due to its geometric characteristics (e.g. the ratio of beam / depth is exceeding 2.5) or operating condition, to fully comply with the stipulated freeboard or stability criteria, the Department may permit the application of equivalent criteria which are at least as effective as that so specified.

2 Damage Stability

2.1 Every oil carrier or noxious liquid substance carrier shall meet the maximum compartment length and damage stability criteria prescribed in the relevant prevention of pollution regulations.

3 Inclining Test

3.1 With the exception of a vessel which stability is to be determined by a rolling period test, every vessel which stability information is required as stated in section 1 shall be inclined to confirm the vessel's displacement, vertical centre of gravity (VCG) and longitudinal centre of gravity (LCG) in lightship condition when on completion or close to completion of construction (new vessels) or modification (existing vessels). Inclining test report shall be submitted for approval.

3.2 Dispensation with conducting an inclining test may be given to -

(a) a vessel being similar in all respects to the sister ship for which a satisfactory inclining experiment report is available; and having been carried out a lightweight survey (see section 4 below) the result of which indicates that the deviations from –

(i) lightship displacement is not exceeding 2% for ships of $L \leq 50$ m; 1% for ships of $L > 160$ m (for intermediate *L*, by linear interpolation), and

(ii) lightship LCG is not exceeding 0.5% L.

(b) a vessel in which an accurate result cannot be obtained due to the particular design of hull form (e.g. a dumb lighter with extreme beam or multi-hulled vessel), provided a detailed assessment of vessel's displacement and VCG in lightship condition to be submitted.

(c) the addition/replacement of engine(s) and/or minor modification, Annex I-5C refers.

4 Lightweight Survey

4.1 A lightweight survey report including the calculation of the lightship displacement and LCG of the vessel shall be submitted for approval.

4.2 If the results of the lightweight survey are found not acceptable, an inclining test shall be conducted.

5 Determination of Deadweight and Its Effects

5.1 The deadweight shall comprise the following items:

(a) full number of passengers and crew;

(b) full load of cargo;

(c) fuel tanks (96% full) and fresh water tanks (100% full); and

(d) consumable stores.

5.2 The following information shall be used for the consideration of the effects of passenger and crew weight:

(a) the distribution of passengers is 4 persons per square metre;

(b) each person has a mass of 68 kg or <75 kg>;

(c) VCG of seated persons is 0.3 m above seat;

(d) VCG of standing persons is 1.0 m above deck;

(e) persons and luggage shall be considered to be in the space normally at their disposal.

6 Stability Information Booklet

6.1 After inclining test or lightweight survey, a stability information booklet (for each vessel) shall be submitted to the authority, person or organisation specified under Ch. II/2.1 or 2.2 for approval.

6.2 The booklet shall include the vessel's following particulars:

(a) vessel’s name, principal dimensions, fully loaded displacement;

(b) general arrangement showing names of all compartments, tanks, machinery spaces, storerooms, crew and passenger accommodation spaces;

(c) the capacity and the VCG and LCG of every compartment available for the carriage of cargo, fuel, water, water ballast, etc.;

(d) the effect on stability of free surface in each tank in which liquids may be carried;

(e) the estimated total weight of (i) passengers and their effects and (ii) crew and their effects, and the VCG and LCG of each such total weight. In assessing such centres of gravity passengers and crew shall be assumed to be distributed about the ship in the spaces they will normally occupy, including the highest decks to which either or both have access.

(f) the estimated weight and the disposition and centre of gravity of deck cargo;

(g) hydrostatic particulars, cross curves particulars;

(h) calculation of loading and righting levers (GZ) curves of -

(i) light condition,

(ii) fully loaded (to the assigned freeboard) condition,

(iii) service loaded conditions,

(iv) probable worst conditions.

Conditions (ii)~(iv) shall be calculated on both departure and arrival condition.

6.3 The approved stability booklet shall be placed on board the vessel for the reference of the coxswain.

7 Permanent Ballast

7.1 When ballast is required to improve stability of the vessel, the correct quantity of ballast shall at all times be fixed (or so stowed as not allowing movable when at sea) at the specified position. Such quantity and position of permanent ballast shall be endorsed in the Certificate of Survey.

7.2 The permanent ballast shall be of regular shapes (such as cuboid or of other recognized shapes), the materials shall be of the types not vulnerable to damage (such as cast iron or cement block), and every piece of permanent ballast shall have its weight and serial number engraved or permanently painted on its surface. The weight shall be in kg.

(Added G.N. 6489 of 2018)

8 Lashing of Cargo

In cargo hold and cargo space on deck, appropriate lashing gear and fittings shall be provided to prevent the cargo from sliding or tipping. These gear and fittings shall be regularly maintained and inspected.

9 Modification onboard

9.1 Before a vessel is to undergo any modification, application shall be submitted specifying the nature of the proposed modification. Estimates of the effects of the modification, i.e. the changes in vessel's lightship weight, VCG and LCG shall be submitted to the Marine Department for approval.

9.2 If the change due to modification, or the finding of lightweight survey is exceeding 2%, an inclining test is to be conducted. The vessel's intact stability information, and damage stability information if applicable, shall be revised and submitted for approval.

9.3 If a vessel is to undergo any temporary modification (e.g. the fitting of heavy machinery used for work, etc.), the owner shall submit information regarding the weight and centre of gravity of such modification; and the estimated impact on vessel's stability due to the modification.

9.4 No local vessel is allowed to construct or alter to have false bottom or secret compartment.

10 Towing

No vessel under towing is permitted to carry passengers.

11 Stability Instrument

All oil tankers shall be fitted with stability instrument capable of verifying compliance with intact and damage stability requirements. Oil tankers constructed before 1 January 2016 shall comply with the requirement at the first scheduled renewal survey of the ship after 1 January 2016 but not later than 1 January 2021. The Director may waive the requirements of stability instrument for the following oil tankers if loaded in accordance with the conditions approved by the Director as follows:

(a) oil tankers which are on a dedicated service, with a limited number of permutations of loading such that all anticipated conditions have been approved in the stability information provided to the master;

(b) oil tankers which are loaded within an approved range of loading conditions; or

(c) oil tankers constructed before 1 January 2016 provided with approved limiting KG/GM curves covering all applicable intact and damage stability requirements.

CHAPTER V

PASSENGER AND CREW ACCOMMODATION

Note

This chapter shall apply to Class II vessels.

1 General Requirements

1.1 In every vessel the spaces allocated for passengers and crew shall be -

(a) constructed properly;

(b) protected from sea and weather;

(c) minimum 1.85 metres clear headroom above deck covering or stair tread;

(d) well lighted and ventilated ; and

(e) maintained in a clean and habitable condition.

1.2 Any deck or bulkhead, or part of a deck or bulkhead, which separates a passenger or crew space from any engine room, machinery space, paint room, galley, or spaces used for the storage of flammable oils, shall be of gastight construction. There shall not be manhole or air pipe opening of oil fuel bunker fitted in the passenger spaces.

1.3 Toughened safety glass shall be used for window, the thickness shall meet the requirements of a classification society rules.

1.4 Glass or mirror shall be made of materials which will not break into dangerous fragments if fractured (such as BS6206 or equivalent).

2 Deck Areas Disallowed as Passengers Spaces

2.1 The following spaces shall not be used as passenger space:

(a) any compartment below main deck except on a sunken deck meeting the requirements of Ch. IIIA/1;

(b) the areas on main deck forward of collision bulkhead. Bulwark or guardrails meeting the requirements of Ch. IIIA/4 shall be installed near the periphery of weather decks if the area abaft rudder stock is used as passenger space;

(c) the areas forward of the wheelhouse on the same deck, and the portion of a compartment or of a deck used for the purpose of navigation;

(d) within one metre (1 m) distance of deck machinery (such as windlass);

(e) machinery compartments, casings and skylights;

(f) decks or part of a deck set apart exclusively for the carriage of motor vehicles, luggage, etc.;

(g) stairways (including stairway landings), hatchways and ventilators;

(h) areas permanently occupied by equipment, fittings (such as inflatable liferaft, hatch, ventilation trunking, etc.);

(i) crew spaces;

(j) sanitary spaces, galley/pantry and any other service spaces;

(k) spaces not covered;

2.2 A guidance plan showing areas to be excluded for measuring passenger space is at Annex G.

3 Maximum Carrying Capacity and Seating

The maximum number of passengers and crew which may be carried in any vessel shall be determined having regard to the clear space properly available in such vessels and to the scales as stated in the following paragraphs. In the context L is vessel's length overall, B is extreme breadth; both of which are defined in Ch. I/3.1 and in metric unit. The measurement of passenger seating should be guided by the method given on the plan at Annex G;

3.1 (a) Passenger-carrying mechanically propelled Class II vessels operating in typhoon shelters or specified sheltered waters

Passenger number = the number of fixed passenger seats provided on board;

<Maximum number of passengers = 0.35 x L x B and not greater than 10>;

with a maximum crew allowance of 4 persons.

For existing vessels which have replaced their main engines on board with ones with an increase in output by 10% or more, they may operate with the number of persons originally permitted to carry provided that the following conditions are met:

(1) they only operate under favourable weather (see the definition in Ch. I/3.1 of this Code);

(2) they only operate in the originally specified typhoon shelters or specified sheltered waters (refer to Annex W).

(Added G.N. 500 of 2018)

(b) Mechanically propelled Class II vessels other than the type stated in 3.1(a)

Passengers no. = the number of fixed passenger seats provided onboard.

Note

Refer to the record format in Annex P for determination of maximum number of persons to be carried and / or Survey Certification on installation suitable for "combined coxswain" operation of a Class II vessel.

(c) The maximum crew allowance for Class II vessel is dependent on the factor $A=3.21(L-B)B^2$:

Factor A	Maximum Crew Allowance
$A \leq 120$	4
$150 \geq A > 120$	8
$300 \geq A > 150$	9
$1000 \geq A > 300$	12
$A > 1000$	15

3.2 The form, design and attachments to the deck of passenger seats shall be adequate for the intended service. The seating construction and safety belts on vessels of the type stated in Ch. I/4.2 shall comply with the relevant requirements specified in Ch. XI/4.

3.3 Any one of the following shall be conclusive proof that the attachment of passenger seats fitted on transportation boat, pilot boat is able to withstand a tensile force no less than 2250 newtons –

(a) A type approval certificate issued by a classification society to certify that the attachment of passenger seats is able to withstand a tensile force no less than 2250 newtons;

(b) A tensile force test with a result showing that the attachment of passenger seats is able to withstand a tensile force no less than 2250 newtons as verified by the Marine Department; or

(c) The screws used for the attachment of passenger seats shall be no less than the value(s) calculated in accordance with the formula(e) below, and if passenger seats are attached to a wooden deck, the specific gravity of the wooden deck shall be no less than 0.7:

(i) The shank area of the screws shall be no less than the value calculated in accordance with the formula below:

$$S.A = \frac{16{,}500 * \text{no. of seat}}{\sigma * no.of\ bolt}$$

S.A Shank area of screw (mm^2)

σ Yield strength of screw ; and

(ii) If passenger seats are attached to a wooden deck, the length of the screws shall be no less than the value calculated in accordance with the formula below:

$$L = \frac{73}{D}$$

L Length of screw (mm)

D Diameter of screw (mm) .

3.4 In this section –

"fixed passenger seat" means a passenger seat which is attached to a deck and the attachment of which is able to withstand a tensile force no less than 2250 newtons, but vessels of the type stated in Ch. I/4.2 shall comply with the relevant requirements specified in Ch. XI;

4 Stairway, Passageway, Door and Exit in Passenger Spaces

4.1 Stairways, passageways, doors and exits shall be fitted with sufficient number and of appropriate construction so as to provide sufficient and safe means of escape for passengers.

4.2 The clear width of every door, hinged or sliding, in way of the escape route from an enclosed space, shall be at least as wide as the width of the passageway or stairway.

4.3 The opening direction of doors of enclosed spaces shall be such that it would not obstruct the route of escape. The doors shall not be capable of being locked during the voyage.

5 Ventilation, Lighting, Deck Sheathing and Insulation in Passenger Spaces

5.1.1 Every enclosed space shall be provided with sufficient ventilation. The ventilation system can be of mechanical or natural system.

5.1.2 An emergency stop shall be provided and fitted in the wheelhouse if an air conditioning system is fitted, in order to stop all ventilators served for the spaces.

5.2 All accommodation spaces shall be sufficiently lighted by day and night.

5.3 Every deck in any part of the accommodation space shall have a surface which provides a good foothold and can be easily kept clean. Any deck covering and wooden deck shall be impervious to water and, if the deck is directly over an oil tank, impervious to oil.

5.4 Every deck except wooden deck, which forms the crown of any part of enclosed accommodation spaces and is exposed to the weather shall be -

(a) insulated on its underside with insulation materials which do not readily ignite and are not injurious to health; or

(b) covered on its upper side with wood.

6 Sanitary Apparatus

Sanitary apparatus shall be provided on vessels for the use of passengers where space is available.

7 Marking

Evacuation routes, exits and lifejacket stowage shall be clearly marked.

CHAPTER VI

FIRE PROTECTION AND FIRE-FIGHTING APPARATUS

1 Definitions

““A” Class division” means a division formed by bulkhead or deck which is -

(a) constructed of steel or other equivalent material;

(b) suitably stiffened;

(c) so constructed as to be capable of preventing the passage of smoke and flame to the end of the 60 minutes standard fire test; and

(d) so insulated where necessary with suitable non-combustible materials that if the division is exposed to a standard fire test the average temperature on the unexposed side of the division shall not increase more than 140 ℃ above the initial temperature nor shall the temperature at any one point, including any joint, rise more than 180 ℃ above the initial temperature within the time listed below -

“A-60” standard 60 minutes

“A-30” standard 30 minutes

“A-0” standard 0 minutes;

"accommodation spaces" means public spaces; passageways and lobbies; stairways; lavatories; passenger or crew cabins; offices; pantries not containing cooking appliances; lockers and spaces similar to any of the foregoing and trunks to such spaces allocated to passengers or crew;

““B” Class division” means a division formed by bulkhead or deck which is -

(a) constructed of non-combustible material;

(b) so constructed as to be capable of preventing the passage of flame to end of the first half hour of the standard fire test;

(c) they shall have an insulation value such that the average temperature of the unexposed side will not rise more than 140 ℃ above the original temperature, nor will the temperature at any one point, including any joint, rise more than 225 ℃ above the original temperature within the time listed below -

“B-15” standard 15 minutes

“B-0” standard 0 minutes;

“cargo area” means that part of the vessel which contains -

(a) the cargo tanks, slop tanks and cargo pump rooms; and

(b) the following spaces when they are adjacent to the cargo tanks; namely, pump rooms other than cargo pump rooms, cofferdams, ballast spaces and void spaces, and extends fore and aft between the forward end of the most forward of those tanks or other spaces and the after end of the aftermost of those tanks or other spaces and athwartships over the whole breadth of the vessel; and the deck area over that part of the vessel;

“cargo pump room” means a room in which any pumps used for loading, discharging or transferring cargoes are located;

"cargo spaces" are all spaces used for cargo including cargo oil tanks, slop tanks and trunks to such spaces;

"control stations" are spaces in which radio or main navigating equipment, or the emergency source of power, or the central fire recording equipment, or fire control equipment, or fire extinguishing installations are located or a control room located outside a propulsion machinery space;

"engine room" means a space which contains propulsion machinery and generators;

"machinery space" means a space which contains internal combustion engines, electrical machinery, ventilation and air conditioning machinery and similar spaces;

"non-combustible material" means a material which neither burns nor gives off flammable vapours in sufficient quantity for self-ignition when heated to a temperature of 750^{o}C, and the expression "combustible material" shall be construed accordingly;

"service spaces" include galleys, pantries containing cooking appliances, lockers and store rooms, workshops (other than those forming part of machinery spaces) and similar spaces and trunks to such spaces.

2 Fire-fighting Apparatus, Type and Quantity

2.1 <Fire-fighting apparatus and structural fire protection items shall be of approved types. Apparatus approved by the maritime administration of a convention country or classification society in accordance with the recommendations of the International Maritime Organization are acceptable. >

For existing vessels other than high risk vessels, fire-fighting apparatus which have been approved by the national maritime authority of their country of manufacture in accordance with the national standard or have been approved or accepted by the Department are also considered acceptable.

2.2 Fire-fighting apparatus, type and quantity of Class II vessels must comply with Tables 3 to 6 in Schedule 4 of the Survey Regulation. The electronic version is available at URL - http://www.legislation.gov.hk/blis_pdf.nsf/6799165D2FEE3FA94825755E0033E532/4B0D89C173F9FB2F482575EF0018F44D/$FILE/CAP_548G_e_b5.pdf

Oil carriers operating solely within waters of Hong Kong must comply with the requirements with respect to provision of fire-fighting apparatus prescribed in Marine Department Notice No. 63/2015.

2.3 If a dumb lighter or hopper barge is intended to operate within River Trade Limits but providing the fire-fighting apparatus according to the scale at Table 3, Schedule 4 of the Survey Regulation, the owner shall declare (in designated form) that the vessel is at all times accompanied by another local vessel (e.g. a tug).

2.4 For vessels that are required to install an automatic sprinkler system, fixed CO_2 fire extinguishing system or fire detection system; refer to Schedule 7, 10 and 11 respectively of Merchant Shipping (Safety) (Fire Protection) (Ships Built on or after 1 September 1984) Regulations, which is available at URL:
http://www.legislation.gov.hk/blis_pdf.nsf/6799165D2FEE3FA94825755E0033E532/B8B6A608F92FD694482575EE0076154D/$FILE/CAP_369Y_e_b5.pdf.

3. Fire Pumps

3.1 In a vessel which is required to be provided with fire pumps operated by power, such fire pumps (other than any emergency fire pumps) shall together be capable of delivering for fire

fighting purposes a quantity of water, under the conditions and at the pressure specified in section 4 of not less than that obtained from the following formula -

$Q = cd^2$ m^3/hour

where

c = 5 for vessels required to be provided with more than one fire pump (excluding any emergency fire pump) and

c = 2.5 for vessels required to be provided with only one fire pump

$d = 1 + 0.066 \sqrt{[L(B+D)]}$ to the nearest 0.25

L, B and D are length, moulded breadth and moulded depth of the vessel.

3.2 A fire pump required to be operated by power shall be operated by means other than the vessel's main engines unless specified in the Survey Regulation. Fire pumps may be sanitary, ballast, bilge or general service pumps.

3.3 In a vessel required to be provided with fire pumps operated by power, arrangements shall be made to ensure immediate availability of a water supply from the fire main at the required pressure by suitably placed remote starting of the fire pumps, unless the machinery space is continually manned.

3.4 In a vessel which is required to be provided with more than one fire pump operated by power (other than any emergency pump) every such fire pump shall have a capacity of not less than 80% of the total capacity of the fire pumps required in section 3.1 divided by the number of fire pumps to be provided in the vessel provided that each pump has a capacity of not less than 25 m^3/hour. When more fire pumps are provided in any vessel, the Director may permit the capacity of any such additional fire pumps to be less than 80%.

3.5 A fire pump required which is operated by power shall be capable of producing from any fire hydrant one jet of water, while maintaining the pressure required in section 4.2.

3.6 Relief valves shall be provided in conjunction with all fire pumps if the pumps are capable of developing a pressure exceeding the design pressure of the fire main, water service pipes, hydrants and hoses. Such valves shall be so placed and adjusted as to prevent excessive pressure in any part of the fire main system.

3.7 A centrifugal pump which is connected to the fire main shall be fitted with a non-return valve.

3.8 Any emergency fire pump fitted on vessel shall be situated in a position aft of the vessel's collision bulkhead.

3.9 A manually operated pump shall be capable of producing a jet of water having a throw of not less than 6 m from nozzle.

4 Fire Main, Water Service Pipes and Hydrants

4.1 In a vessel which is required to be provided with fire pumps operated by power, the diameter of the fire main and of the water service pipes connecting the hydrants thereto shall be sufficient for the effective distribution of the maximum discharge from -

(a) where only one pump is required; or

(b) where 2 such pumps are so required, both pumps operating simultaneously.

4.2 Any fire pump shall, when discharging the quantity of water required in section 3.1 through adjacent fire hydrants in any part of the vessel from nozzles of sizes specified in section 5, be capable of maintaining the following pressure at any hydrant –

(a) of vessel's gross tonnage 1000 or vessel's length 60 metres, whichever is the smaller, and upwards : 2.7 bar ($0.27N/mm^2$);

(b) of vessel's gross tonnage under 1000 tons or vessel's length under 60 metres, whichever is the smaller : 2.1 bar ($0.21N/mm^2$)

provided that the maximum pressure at any hydrant shall not exceed that at which the effective control of a fire hose can be demonstrated.

4.3 Where any vessel is required to be provided with appliances capable of producing one jet of water, hydrants sufficient in number shall be so positioned as to enable one jet of water from a single length of hose to reach any part of the vessel.

4.4 (a) The fire main shall have no connections other than those necessary for fire-fighting and washing down. However, fire main may be permitted to have connection to ballast lines, cooling water lines and bilge ejector etc., provided that shut-off valves to these lines are fitted and kept closed at all times when not in use.

(b) Materials readily rendered ineffective by heat shall not be used for fire mains unless adequately protected.

(c) The fire hydrants shall be so placed that the fire hoses may be easily coupled to them except where hoses and nozzles are permanently attached to the fire hydrant.

(d) In vessels which may carry deck cargo the fire hydrants shall be so placed that they are always readily accessible and the pipes shall be arranged as far as practicable to avoid risk of damage by such cargo.

(e) Hydrant valves of the screw lift type shall be fitted in such position that any of the fire hoses may be isolated and removed while the fire pumps are at work.

(f) The water pipes if made of iron or steel shall be galvanised or alternatively the pipe wall thickness shall be increased by a corrosion allowance satisfactory to the Director.

(g) Isolating valves to separate the section of the fire main within the machinery space containing the main fire pump or pumps from the rest of the fire main shall be fitted in a position outside the machinery spaces which shall be easily accessible when there is a fire. The fire main shall be so arranged that when the isolating valves are shut all the hydrants on the vessel, except those in the machinery space referred to above, can be supplied with water by a fire pump not located in this machinery space through pipes which do not enter this space. Exceptionally, the Director may permit short lengths of the emergency fire pump suction and discharge piping to penetrate the machinery space if it is impracticable to route it externally, provided that the integrity of the fire main is maintained by the enclosure of the piping in a substantial steel casing.

(h) In every oil carrier, isolation valves shall be fitted in the fire main at house front in a protected position and on the tank deck at intervals of not more than 40 m to preserve the integrity of the fire main system in case of fire or explosion.

(i) Hydrants shall be positioned as to allow at least one jet of water from a single prescribed length of fire hose to reach any part of the vessel normally accessible during navigation. If only one hydrant is provided for engine room it shall be located outside of the space and near the entrance.

(j) Except otherwise specified, at least one hose and one nozzle shall be provided for every hydrant.

5 Fire Hoses, Nozzles, etc.

5.1 Fire hoses provided shall not exceed 20 metres in length. Such hose shall be made of closely woven flax, canvas or other suitable material; and every other such hose shall be made of non-perishable material.

5.2 Every fire hose together with the tools and fittings necessary for its use, shall be kept in a conspicuous position near the hydrants or connections with which it is intended to be used. Hose diameters shall be not less than 65 mm if unlined or 45 mm if lined.

5.3 Fire hoses so provided shall not be used for any purpose other than for fire-fighting or testing the fire-fighting apparatus.

5.4 (a) A vessel which is required to be provided with fire pumps operated by power shall be provided with nozzles of 12 mm in diameter or as near thereto in diameter as possible.

(b) A vessel provided with manual fire pumps shall be provided with nozzles of 9 mm in diameter or as near thereto in diameter as possible.

6 Location and Arrangement of Water Pumps for Other Fire Extinguishing Systems

Pumps required for the provision of water for other fire extinguishing systems, their sources of power and their controls shall be installed outside the space or spaces protected by such systems and shall be so arranged that a fire in the space or spaces protected will not put any such system out of action.

7 Fire Protection and Fire-Fighting Apparatus/Installation not required by the Survey Regulation

Where fire-fighting apparatus/installation of the type not required by the Survey Regulation (e.g. fire detection system, fixed extinguishing system, etc.) is provided, such apparatus/installation shall be so arranged that a fire in the space or spaces protected will not put any such apparatus/installation out of function; and the owner, agent and coxswain of the vessel shall ensure that the apparatus/installation is properly maintained in good and serviceable condition and be fit for the function intended.

8 Fire Extinguishers

8.1 Each type of fire extinguishers shall have a minimum capacity as shown in the following table:

Media	Capacity	
	Portable Type	Non-Portable Type
Foam	9 litres	45 litres
CO_2	3 kg	16 kg
Dry Powder	4.5 kg	
Water	9 litres	

8.2 Fire extinguishers to be used for switchboard, control panels, batteries, etc. shall be of the type suitable for electrical fires, e.g. dry powder or CO_2 fire extinguisher.

8.3 Fire extinguishers to be used for machinery spaces shall be of the type suitable for oil fires, e.g. foam, dry powder or CO_2 fire extinguisher.

8.4 Portable extinguishers are to be suitably distributed throughout the protected spaces. Normally at least one shall be stowed near the entrance inside that space.

8.5 Portable fire extinguishers provided for use in accommodation or service spaces of any vessel shall so far as practicable have a uniform method of operation.

8.6 The use of CO_2 fire extinguisher in a confined space is not recommended.

8.7 Portable CO_2 extinguishers shall not be located in accommodation spaces. Where such extinguishers are provided in wheel house or any other control station, at switchboards and other similar positions, the volume of any space containing one or more extinguishers shall be such as to limit the concentration of vapour that can occur due to discharge to not more than 5% of the net volume of the space. The volume of CO_2 shall be calculated at 0.56 m^3/ kg.

8.8 Fire extinguishers provided for use in any vessel shall not contain any extinguishing medium which has not been approved by the Director.

8.9 The capacity of a CO_2 extinguisher shall be taken to be the greatest weight of CO_2 which it can safely contain in a tropical climate.

8.10 The capacity of any fire extinguisher, other than a CO_2 fire extinguisher, shall be taken to be the greatest volume or weight of extinguishing medium which it can contain when sufficient space is left to ensure the proper operation of the extinguisher.

8.11 Every fire extinguisher shall be kept fully charged at all times.

8.12 Portable and non-portable fire extinguishers shall be periodically examined and subject to such tests as prescribed in Ch. II/Table 7-2.

9 Firemen's Outfits

9.1 Every fireman's outfit shall consist of -

(a) a breathing apparatus of either air hose type or self-contained compressed air operated type and lifeline complying with the requirements of the appropriate code; and

(b) personal equipment comprising -

(i) a portable self-contained electric battery-operated safety lamp of an approved type capable of functioning efficiently for a period of at least 3 hours;

(ii) a fireman's axe;

(iii) protective clothing of material capable of protecting the skin from the heat radiating from the fire and from burns and scalding by steam; the outer surface shall be water resistant;

(iv) boots and gloves of rubber or other electrically non-conducting material; and

(v) rigid helmet providing effective protection against impact.

9.2 Firemen's outfits shall be stored in readily accessible positions which are not likely to be cut off in the event of fire and, where more than one such outfit is provided, they shall be stored in widely separated positions.

10 Means for Stopping Machinery, Shutting Off Oil Fuel Suction Pipes and Closing of Openings

10.1 In every vessel there shall be provided -

(a) without limiting Ch. IIIA/21.7, means for stopping ventilation fans serving machinery, accommodation and cargo spaces;

(b) means for closing all skylights, doorways, ventilators and other openings to such spaces; and

(c) means to permit the release of smoke from machinery spaces.

Such means shall be capable of being operated from positions outside the said spaces and which would not be made inaccessible by a fire within such spaces.

10.2 Machinery driving forced and induced draught fans, oil fuel transfer pumps and other similar fuel pumps shall be fitted with remote controls situated outside the spaces in which such machinery or pumps are situated and which would not be made inaccessible by a fire within such spaces. The controls shall be capable of stopping such machinery or pumps in the event of fire in such spaces.

10.3 A pipe connected to any oil fuel or lubricating oil storage, not being a double bottom tank, which if damaged would permit discharge of the contents so as to cause a fire hazard, shall be fitted with a valve or cock which shall be secured to the tank to which it is connected and which shall be capable of being closed from a readily accessible position outside the space in which the tank is situated.

11 Fire Control Plans

11.1 In a vessel required to be provided with fire control plans there shall be permanently exhibited by the owner of the vessel for the guidance of the crew of the vessel, using graphical symbols marked on general arrangement plans showing clearly for each deck –

(a) the position of control stations;

(b) the sections of the vessel which are enclosed by "A" and 'B' class divisions together with particulars of -

(i) fire alarm systems;

(ii) fire detection systems;

(iii) automatic sprinkler systems;

(iv) fixed and portable fire extinguishing apparatus and

(v) firemen's outfits;

(c) the means of access to various compartments and decks in vessel;

(d) the ventilating system including particulars of master fan controls and position of dampers and identification numbers of ventilating fans serving each section of vessel;

(e) location of international shore connection; and

(f) position of all means of control referred to in section 10.

Descriptions in such plans shall be in either Chinese or English.

11.2 The general arrangement plans required by this section shall be kept up-to-date, any alterations to general arrangements being recorded thereon without delay.

12 Availability of Fire-fighting Apparatus

12.1 Fire-fighting apparatus carried in any vessel shall be maintained in good order and shall be kept available for immediate use at all times. All movable fire-fighting apparatus, other than firemen's outfits, carried shall be stowed where they will be readily accessible from the spaces in which they are intended to be used and, in particular, one of the portable fire extinguishers intended for use in any space shall be stowed near the entrance to that space.

12.2 Non-portable fire extinguish required to be fitted in engine room which is limited in space, may be stowed in vicinity of the engine room entrance provided that the jet of the fire

extinguishing media can reach any part of the engine room.

13. Structural Fire Protection

13.1 Application

This section shall apply to new vessels of gross tonnage not exceeding 2000, plying within Hong Kong waters or river trade limits. Vessels beyond this scope will be specially specified by Director.

13.2 Requirements for All Vessels

13.2.1 In all spaces –

(a) paints, varnishes and other finishes used on exposed surfaces shall not contain nitrocellulose or other highly flammable base products and shall not be capable of producing toxic gases or excessive quantities of smoke;

(b) insulating materials shall be of non-combustible materials;

(c) stairways, includes interior stairway, lifts and escalators (other than those wholly contained within the machinery spaces and enclosures) thereto, shall be constructed of steel or material of equivalent fire resistance, and as far as practicable arranged in fore and aft direction;

(d) any means of escape shall be led to open deck; and

13.2.2 In accommodation, service spaces and control stations –

(a) all exposed surfaces in corridors, exposed surfaces of ceilings and surfaces in concealed or inaccessible spaces shall have low flame spread characteristics;

(b) primary deck coverings shall be of a material which will not readily ignite or give rise to toxic or explosive hazards at elevated temperatures;

(c) the doorways and stairways for escape purpose shall be evenly distributed and arranged so as to avoid congestion in any part of a vessel. Such door and hatch cover shall be operable from either side;

(d) dead-end corridor shall not be more than 7 metres in length; and

(e) the width and continuity of the means of escape shall be to the satisfaction of the Director.

13.2.3 [Note1] In vessels constructed of reinforced glass fibre plastic (GRP), fire retarding material shall be applied in the hull, deck and bulkhead structures of engine room boundaries, and is capable to maintain its required strength for a period of 30 min. For hull structures below waterline the insulation shall extend to at least 300 mm below the lightest waterline. In vessels constructed of wood, the engine room boundaries shall be applied with certificated type fire retardant coating or mineral wool insulation.

13.3 Additional Requirements for Category A Vessels

13.3.1 Any deck or bulkhead, or part of a deck or bulkhead, which separates a passenger or crew space from any machinery space, paint room, galley, or spaces used for the storage of flammable oils, shall be of gastight construction.

[Note1] Section 13.2.3 applies to any vessel which is when the reference to "the commencement date" of the Survey Regulation in the definition of "new vessel" under section 2 of the Survey Regulation is substituted by "3 March 2017".

13.3.2 At least two means of escape shall in general be provided for the passenger space and crew space and spaces accessible to them. However, one of the means of escape may be dispensed with in exceptional case having regard to the size and location of the space.

13.4 Additional Requirements for Vessels of the following types of 24 Metres and above in Length -

(a) Dangerous Goods Carriers, Noxious Liquid Substances Carriers, Dry Cargo Vessels, Edible Oil Carrier, Tug, Hopper Barge, Water Boat and Dredgers operating within River Trade Limits; and

(b) Oil Carriers operating within Hong Kong waters or river trade limits.

13.4.1 Structure

The hull, superstructures, structural bulkheads, decks and deck houses shall be constructed of steel or other equivalent material, except that the crowns and casing of engine room shall be of steel construction.

13.4.2 Means of Escape in Accommodation, Service Spaces and Control Stations

(a) At all levels of accommodation at least two widely separated means of escape which may include the normal means of access from each restricted space or group of spaces.

(b) Below the lowest open deck such escapes shall be by means of stairways except that one of these stairways may be replaced by a trunked vertical ladder.

(c) Above the lowest open deck the means of escape shall be stairways or doors to an open deck or a combination thereof.

(d) One of the means of escape may be dispensed with in an exceptional case having regard to the nature and location of the space and to the number of persons who normally might be accommodated or employed there.

13.4.3 Means of Escape in Machinery Space

(a) Machinery spaces shall be provided with two widely separated doors. One of the doors may be substituted by an escape hatch.

(b) From machinery spaces other than engine room, escape routes shall be provided to the satisfaction of the Director having regard to the nature and location of the space and the number of persons normally employed in that space.

13.4.4 Fire Integrity of Bulkheads and Decks Separating Adjacent Spaces

(a) The boundaries of control station and machinery space shall be constructed of A-0 bulkheads.

(b) When openings or penetrations for the passage of electric cables, pipes, etc. are made on ‘A’ or ‘B’ Class divisions, effective arrangements are to be provided to maintain the resistance to fires of the divisions in which they are fitted.

13.4.5 Stairway

Stairways which penetrate only a single deck shall be protected at least at one level by at least "B-0" class divisions and self-closing doors. Stairways which penetrate more than a single deck shall be surrounded by at least "A-0" class divisions and be protected by self-closing doors at all levels. However, the above requirements may be waived if a ladder is fitted outside of the accommodation.

13.4.6 Door in a Casing of Engine Room

The doors shall be gastight and provided with self-closing device. Hold-back hooks shall not be fitted.

13.4.7 For dangerous goods carrier, bulkheads forming boundaries between cargo spaces and machinery spaces shall be insulated to "A-60" standard unless the dangerous goods are stowed at least 3m horizontally away from such bulkheads. Other boundaries between such spaces shall be insulated to "A-60" standard.

13.5 Additional Requirements for Oil Carriers Having Cargoes of Flashpoint of less than 60^{o}C (Closed Cup Test)

13.5.1 Location and Separation of Spaces

(a) Machinery spaces shall be positioned aft of cargo tanks; cargo pump rooms and cofferdams, but not necessarily aft of the oil fuel bunker tanks. Any machinery space shall be isolated from cargo tanks by cofferdams, cargo pump rooms, oil fuel bunker tanks or permanent ballast tanks.

(b) Accommodation spaces, main cargo control stations, control stations and service spaces (excluding isolated cargo handling gear lockers) shall be positioned aft of all cargo tanks, cargo pump rooms and cofferdams which isolate cargo or slop tanks from machinery spaces but not necessarily aft of the oil fuel bunker tanks.

(c) Means shall be provided to keep deck spills away from the accommodation and service areas. This may be accomplished by provision of a permanent continuous coaming of a suitable height extending from side to side.

(d) Exterior boundaries of superstructures and deckhouses enclosing accommodation, including any overhanging decks which support such accommodation, shall be insulated to A-60 standard for the whole of the portions which face the cargo area and for 3 metres aft of the front boundary. In the case of the sides of those superstructures and deckhouses, such insulation shall be carried to a height as considered necessary by the Director.

(e) Entrances, air inlets and openings to accommodation spaces, service spaces and control stations shall not face the cargo area. They shall be located on the transverse bulkhead not facing the cargo area or on the outboard side of the superstructure or deckhouse at a distance of at least 4% of the length of the vessel but not less than 3 metres from the end of the superstructure or deckhouse facing the cargo area; provided that such distance need not exceed 5 metres.

(f) No doors shall be fitted within the limit specified in subsection (e) except that the Director may permit doors to a space within those limits if

(i) that space is a cargo control station, provisions room or store room; and

(ii) that space does not have access to any accommodation space, service space or control station. Where such doors are fitted to a space located aft of the cargo area, the boundaries of the space shall be insulated to A-60 (may be A-15 for vessels of gross tonnage less than 500) standard, with the exception of the boundary facing the cargo area. Bolted plates for removal of machinery may be fitted within the limits specified in subsection (e). Wheelhouse doors and wheelhouse windows may be located within the limits specified in subsection (e) so long as they are designed to ensure that the wheelhouse can be made rapidly and efficiently gastight and vapourtight.

(g) Windows and side scuttles facing the cargo area and on the sides of the superstructures and deckhouses facing the cargo area and on the sides of the superstructures and deckhouses within the limits specified in subsection (e) shall be of the fixed (non-opening) type. Such windows and side scuttles in the first tier on the main deck shall be fitted with inside covers of steel or other equivalent material.

13.5.2 Structure

The exterior boundaries of superstructures and deckhouses which are required to be insulated to A-60 standard shall be constructed only of steel.

13.5.3 Fire Integrity of Bulkheads and Decks Separating Adjacent Spaces

Table 1 Fire integrity of bulkheads separating adjacent spaces

Spaces		(1)	(2)	(3)	(4)	(5)
Control Station	(1)	A-0	A-0	A-60	A-60	A-60
Passageway, Stairway	(2)		A-0	A-0	A-60	A-0
Accommodation Spaces	(3)			A-0	A-60	A-0
Engine Room, Pump Room	(4)				A-0	A-60
Galley and high risk area	(5)					A-0

Table 2 Fire integrity of decks separating adjacent spaces

Spaces above / Spaces below		(1)	(2)	(3)	(4)	(5)
Control Station	(1)	A-0	A-0	A-60	A-60	A-60
Passageway, Stairway	(2)		A-0	A-0	A-60	A-0
Accommodation Spaces	(3)			A-0	A-60	A-0
Engine Room, Pump Room	(4)				A-0	A-60
Galley and high risk area	(5)					A-0

13.5.4 Cargo Tank Venting

An approved venting system consisting of venting line, pressure-vacuum valve and vent outlets for cargo loading, discharging or ballasting shall be provided.

13.5.5 Cargo Tank Purging and/or Gas-freeing

An approved purging and/or gas freeing system shall be provided.

13.5.6 Ventilation

The ventilation system for cargo pump room and accommodation space shall be acceptable to the Director.

13.6 Requirements for Vessels Carrying Cargoes of Additional Fire Hazards

Where liquid cargoes which introduce additional fire hazards are intended to be carried on vessels other than those referred to in sections 13.4 and 13.5, additional safety measures shall be required to the satisfaction of the Director, having due regard to the provisions of the IMO International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk.

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.

"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

2.1 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 whereby 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[1], a Class II vessel shall provide every person (regardless of whether he/she is a child or an adult) on board with a

[1] 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.

suitable lifejacket (refer to 2.1A.4), the total number of which must be not less than the maximum number of persons licensed to be carried (i.e. including crew members) as specified in the operating licence.

2.1A.3 Lifejacket Standards

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 ply 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 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 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 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 Lifejacket" (refer to <2.1A.6>	N.A.	15-120kg

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

2.1A.6 "Common Lifejacket"

A lifejacket suitable for both adults and children (Common Lifejacket) complies with ISO performance level 100. It is only suitable to be used by vessels sailing within the Hong Kong waters. For details of the Common Lifejacket accepted by the Marine Department and the information of the manufacturers, refer to 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:

1	Material	Silicon (or equivalent).
2	Dimension	56 x 12 x 1.8 mm (+/- 10% on each dimension).
3	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.
4	Protocol	EPC global ISO 18000-6C (or equivalent).
5	IC	Higgs 3 (or equivalent).
6	EPC memory	96 bits (or above).
7	User memory	512 bits (or above).
8	Write cycles	100 000 (or above).
9	Storage environment	-40℃ to +90℃ (or wider range).
10	Wet clean	85℃ (up to 60 minutes) (or equivalent). 120℃ (up to 10 minutes) (or equivalent).
11	Iron	200℃ (up to 10 seconds with press cloth) (or equivalent).
12	Security features	(a) The tags shall be compatible with the security scheme for product authentication. (b) Each tag shall be assigned a unique ID in EPC memory bank. Structure of the encoding and numbering scheme shall make reference to Item 13 below with details to be provided and confirmed by the Marine Department. (c) Each tag shall be protected by a locked access password to avoid unauthorised access (32 bits). (d) Each tag shall be protected by a locked kill password to avoid unauthorised access (32 bits). (e) Each tag shall be assigned an authentication code (96 bits) in user memory bank which will be updated during authentication process. (f) Data content of the security scheme for tag initialization.
13	Structure of the encoding in the UHF RFID tag (for	(a) The code is AA99-999999, of which each "A" represents an alphabetic character from A to Z and each

	reference)	"9" represents a digit from 0 to 9. (b) The hyphen is fixed. (c) 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/Personnel on Board

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

2.1A.8 The life-saving appliances including their types and quantity for class II vessels shall 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 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 ply 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 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 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.

2.1.A.10 For the former life-saving appliances as well as their types and quantity for class II vessels, refer to Annex AA.

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 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 the Marine Department are also considered acceptable.

If a dumb lighter or hopper barge is intended to operate within river trade limits but is 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 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.

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 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.

10.2 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.

10.4 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.

11.2 All pyrotechnic distress signals provided for use on board vessels or lifeboats shall be packed in water-resistant casings when stowed.

12 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.

CHAPTER VIII

LIGHTS, SHAPES AND SOUND SIGNALS

1 General

1.1 Unless indicated otherwise, this chapter (including amendments made therein) applies to all vessels with effect from 1 July 2016.

1.2 Lights, shapes and sound signals provided for navigational purpose must be in accordance with the provisions of the Merchant Shipping (Safety) (Signals of Distress and Prevention of Collisions) Regulations, Cap. 369 sub. leg. N, which gives effect to the International Regulations for Preventing Collisions at Sea 1972 (COLREG), as amended.

1.3 All lanterns and sound signals must be of the type approved/certified by the Marine Department, or the Maritime Administration of a convention country.

All lanterns and sound signals fitted on new vessel[Note 1]; or replacement of these lights/signals on existing vessel must be of the type approved/certified by the Marine Department, or the Maritime Administration of a convention country or an authorized organization (definition in Ch. I/3.1 refers). Each navigation light must be accompanied by a type-approval certificate with unique serial number.

1.4 Where applicable special signals as required in the International Code of Signals published by the International Maritime Organization must be exhibited.

1.5 For ease of reference for meeting relevant provisions of the Regulations mentioned in section 1.1, the following sections, tables or diagrams indicate the signal appliances a vessel must exhibit when underway/towing/being towed, of type and length as indicated.

2 Definitions

For the purpose of this chapter, except where the context otherwise requires:

(a) The words "length (L)" and "breadth" of a vessel mean her length overall and extreme breadth (as defined in Ch. I/3.1).

(b) The term "height above the hull" means height above the uppermost continuous deck. This height shall be measured from the position vertically beneath the location of the light.

3 Alternative Lights

3.1 All vessels of $L \geq 24.4$ metres shall carry a complete set of alternative (standby) lanterns for the masthead lights, side lights (P. and S.) and stern light.

3.2 On vessels carrying dangerous goods, all lanterns including alternative lanterns shall be of electric type. On other vessels the alternative lanterns may be either electric or oil type.

3.3 One set of spare bulbs (one per light) shall be carried for the electric lanterns. A set of spare chimneys (one per light) shall be carried for the oil lanterns.

4 Lights and Sound Signals

Note1 Applicable to a vessel which is when the reference to “the commencement date” of the Survey Regulation in the definition of “new vessel” under section 2 of the Survey Regulation is substituted by “3 March 2017”.

4.1 Power Driven Vessels L ≥ 50 m

Item	No. Reqd	Intensity/Size	Remark
Masthead Light	1 fwd 1 aft	visibility 6 n. miles	
Side Light (P&S)	1 set	" 3 n. miles	
Stern Light	1	" 3 n. miles	
Anchor Light	1 fwd 1 aft	" 3 n. miles	all round white
N.U.C. Light	2	" 3 n. miles	all round red
Black Ball	2	0.6 m diameter	
Black Diamond	1	0.6 m diameter, 1.2 m height	
Whistle	1	Audibility range 50 m ≤ L < 75 m 1 n. mile 75 m ≤ L < 200 m 1.5 n. mile	
Bell	1	0.3 m mouth diameter	
Gong	1		for L ≥ 100 m

4.2 Power Driven Vessels 20 m ≤ L < 50 m

Item	No. Reqd	Intensity/Size	Remark
Masthead Light	1	visibility 5 n. miles	
Side Light (P&S)	1 set	" 2 n. miles	
Stern Light	1	" 2 n. miles	
Anchor Light	1	" 2 n. miles	all round white
N.U.C. Light	2	" 2 n. miles	all round red
Black Ball	2	0.6 m diameter	
Black Diamond	1	0.6 m diameter, 1.2 m height	
Whistle	1	audibility range 1 n. mile	
Bell	1	0.3 m mouth diameter	

4.3 Power Driven Vessels 12 m ≤ L < 20 m

Item	No. Reqd	Intensity/Size	Remark
Masthead Light	1	visibility 3 n. miles	
Side Light (P&S)	1 set	" 2 n. miles	may be combined lantern
Stern Light	1	" 2 n. miles	
Anchor Light	1	" 2 n. miles	all round white
N.U.C. Light	2	" 2 n. miles	all round red
Black Ball	2	dimensions commensurate with size of vessel	
Black Diamond	1	ditto	
Whistle	1	audibility range 0.5 n. miles	
Sound Signal	1	means of making efficient sound signal	

4.4 Power Driven Vessels L < 12 m

Item	No. Reqd	Intensity/Size	Remark
Masthead Light	1	visibility 2 n. miles	may exhibit an all-round white light instead [Note A]
Stern Light	1	" 2 n. miles	
Side Light (P&S)	1 set	" 1 n. miles	may be combined lantern
Anchor Light	1	" 2 n. miles	all round white
N.U.C. Light [Note B]	2	" 2 n. miles	all round red
Black Ball [Note B]	2	dimensions commensurate with size of vessel	
Black Diamond [Note B]	1	ditto	
Sound Signal	1	means of making efficient sound signal	

Note

(A) The masthead light or all-round white light may be displaced from the fore and aft centreline of the vessel if centreline fitting is not practicable, provided that the sidelights are combined in one lantern which shall be carried on the fore and aft centreline of the vessel or located as nearly as practicable in the same fore and aft line as the masthead light or the all-round white light.

(B) Except those engaged in diving operations, the subject lights and shapes shall not be required.

4.5 Power driven vessel with L < 7 m and maximum speed not exceeding 7 knots may in lieu of the lights prescribed in 4.4 above, exhibit an all round white light and shall, if practicable, also exhibit sidelights.

4.6 Additional Requirements for Power Driven Vessels engaged in Towing

Item	No. Reqd	Remark
Masthead Light [Note A]	Aft 3	length of tow [Note B] > 200 m) to be arranged in a vertical line
	2	length of tow [Note B] ≤ 200 m)
	Fwd 1	required for L ≥ 50 M
Towing Light (yellow)	1	Visibility L < 50 m 2 n. miles) to be arranged in a vertical line above stern light L ≥ 50 m 3 n. miles)
Black Diamond	1	applicable to length of tow > 200 m, size 0.6 m diameter and 1.2 m height,

Note

(A) See Note (E) of section 5.1.

(B) The length of tow is measured from the stern of the towing vessel to the after end of the tow.

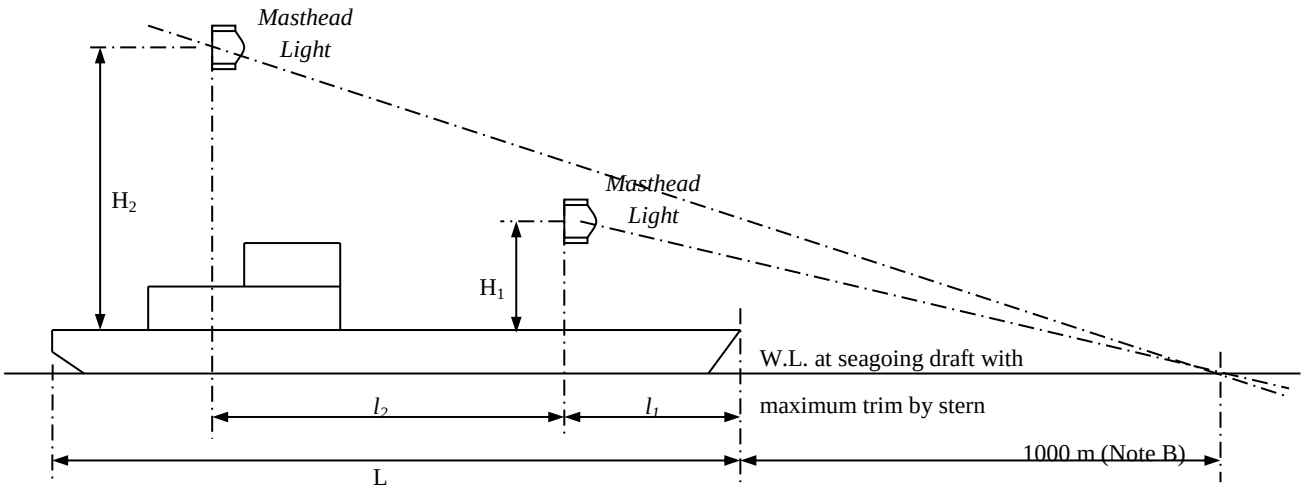
4.7 Dumb Vessels

Shall carry lights, shapes and sound signals prescribed for a power driven vessel of her length except the masthead lights. (Amended G.N. 5924 of 2017)

5 Positioning of Light Signals

Except in special cases, the masthead light, side lights and stern light must be so placed as to be above and clear of all other lights and obstructions.

5.1 Masthead Light



Ship Length L (m)	L < 12 (Note A)	12 ≤ L < 20 (Note A)	20 ≤ L < 50 (Note A)	L ≥ 50
l_1	As far forward as is practicable	As far forward as is practicable	≤ 0.5L	≤ 0.25L
l_2	--	--	--	≥ 0.5 L
H_1	may be < 2.5 m (Note D,F)	≥ 2.5 m (Note C,F)	≥ 6 m or ship's breadth (whichever is greater), but need not > 12 m (Note F)	
H_2	--	--	--	≥ (H_1+4.5) (Note E,F)

Note

(A) On vessels of L < 50 m only one masthead light is required.

(B) The vertical separation of masthead lights of power-driven vessels must be such that in all normal conditions of trim the after light will be seen over and separate from the forward light at a distance of 1000 m from the stem when viewed from sea level.

(C) On vessels of 12 m ≤ L < 20 m the height is measured from gunwale.

(D) Vessels of L <12 m may carry the uppermost light at a height of less than 2.5 m above the gunwale. When however a masthead light is carried in addition to side lights and a stern light or the all-round lights prescribed in the regulation is carried in addition to side lights, then such masthead light or all-round light must be carried at least 1 m higher than the side lights.

(E) One of the two or three masthead lights prescribed for a vessel when engaged in towing or pushing another vessel must be placed in the same position as either the forward masthead light or the after masthead light; provided that, if carried on the after mast, the

lowest after masthead light must be at least 4.5 m vertically higher than the forward masthead light.

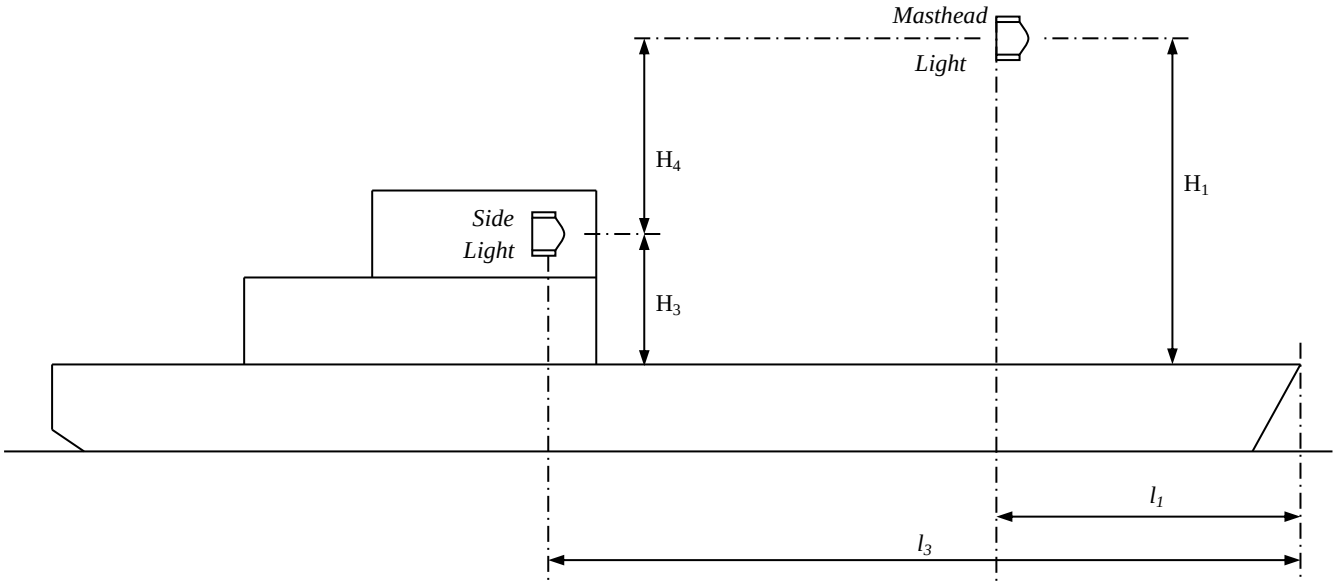
(F) The masthead light of a high speed vessel may be placed at a height related to the breadth of the vessel lower than that prescribed for H_1, provided that the base angle of the isosceles triangles formed by the sidelights and masthead light, when seen in end elevation, is not less than 27^O. For the dimension of vertical separation between foremast and mainmast light on a high speed vessel of L ≥ 50m, paragraph 13 in Annex I of the Schedule to Merchant Shipping (Safety) (Signals of Distress and Prevention of Collisions) Regulations refers.

5.2 Side Light

5.2.1 The side lights of vessels of L ≥ 20 m must be fitted with inboard screens painted matt black and meet the requirements with respect to horizontal sectors. On vessels of L < 20 m the side lights, if necessary to provide with horizontal sectors, must be fitted with inboard matt black screens. With a combined lantern, using a single vertical filament and a very narrow division between the green and red sections, external screens need not be fitted.

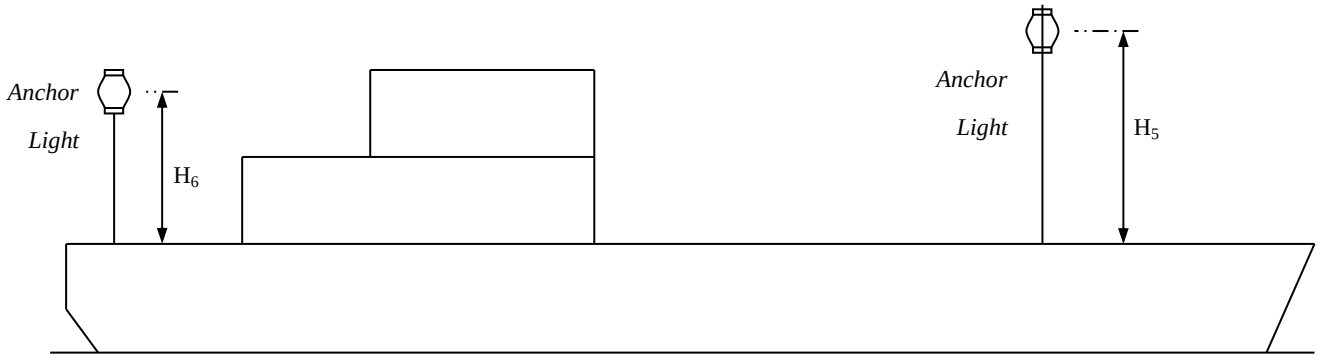
5.2.2 Side lights shall not be so low as to be interfered with by deck lights. They must be placed at or near the side of the vessel (recommended not more than 0.1 ship's breadth from shipside).

5.2.3 The sidelights, if in a combined lantern and carried on a power-driven vessel of less than 20 m in length, must be placed not less than 1 m below the masthead light.



Length (m)	L < 20	20 ≤ L < 50	L ≥ 50
l_3	no requirement	> l_1 (i.e. side light not to be in front of masthead light)	> l_1 (i.e. side light not to be in front of forward masthead light)
H_3	≤ 0.75 H_1		
H_4	in the case of combined lantern, ≥ 1m	--	--

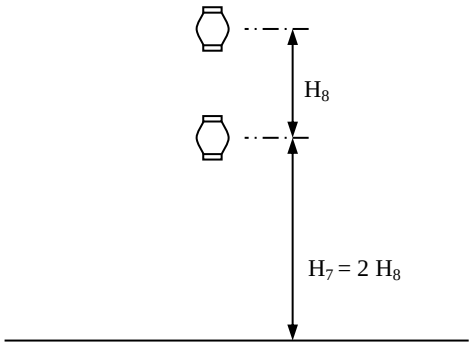
5.3 Anchor Light



Length (m)	L < 50 (Note)	L ≥ 50
H_5	Position can best be seen	≥ 6 m
H_6		≤ (H_5 - 4.5)

Note: On vessels of L < 50 m, only one anchor light is required.

5.4 Vertical Spacing of Lights fitted in a Vertical Line



Length (m)	L < 20	L ≥ 20
H_7	≥ 2 m (except where a towing light is fitted) Note A	≥ 4 m (except where a towing light is fitted) Note A
H_8 Note B	≥ 1 m	≥ 2 m

Note

(A) In the case of after masthead light, H_7 must be at least 4.5 m higher than the forward masthead light.

(B) When 3 lights are carried they must be equally spaced.

5.5 Electric Light Vertical Sectors

The lights must be so positioned such that:

(i) at least the required minimum intensity is maintained at all angles from 5^0 above to 5^0 below the horizontal; and

(ii) at least 60% of the required minimum intensity is maintained from 7.5^0 above to 7.5^0 below the horizontal.

CHAPTER IX

TONNAGE MEASUREMENT

PART 1 General

1 Application

1.1 Subject to section 1.2, this chapter shall apply to –

(a) new vessel (see definition in Ch. I/3.1); and

(b) at the request of the owner for re-measurement of tonnage, an existing vessel[Note1]

1.2 The following vessels are not required to be measured in accordance with this chapter –

(a) any vessel the tonnage of which has been measured in accordance with the Merchant Shipping (Registration)(Tonnage) Regulations and is issued with the relevant tonnage certificate; or

(b) any vessel in possession of International Tonnage Certificate issued in accordance with the International Convention on Tonnage Measurement of Ships, 1969.

2 METHOD OF TONNAGE MEASUREMENT

2.1 The gross and net tonnages shall be determined in accordance with Part 2 of this chapter provided that in the case of novel types of vessel with constructional features which render the application of the provisions of Part 2 unreasonable or impracticable, the gross and net tonnages shall be determined as required by the Director.

2.2 All measurements used in the calculations of volumes shall be taken and expressed in metres to the nearest centimetre.

2.3 Gross and net tonnages shall be expressed as whole numbers, decimals being rounded off downwards.

2.4 All volumes included in the calculation of gross and net tonnages shall be measured, irrespective of the fitting of insulation or the like, to the inner side of the shell (below Main deck) or structural boundary plating (above Main deck) in ships constructed of metal, and to the outer surface of the shell (below Main deck) or to the inner side of the structural boundary surfaces (above Main deck) in ships constructed of any other material.

2.5 The total volume shall include volumes of appendages (e.g. rudder, kort nozzle, skeg, propeller shaft bossings, etc.) but exclude the volumes of spaces open to sea. Volumes within the hulls of ship, such as split-hull barges and dredgers, shall be retained in V and V_c notwithstanding that the space within the hull is temporarily open to the sea when discharging cargo.

Note[1]: Existing vessels which are not to be re-measured, their previous methods of tonnage are still applied and tonnage expression may be in decimals.

2.6 Enclosed spaces above the main deck not exceeding 1 m^3, air trunks having a cross-sectional area not exceeding 1 m^2 are not to be measured.

2.7 Masts, cranes and container support structures, which are completely inaccessible and above the main deck, separated on all their sides from other enclosed spaces are not to be included in the total volume of all enclosed spaces. All mobile cranes are exempted.

PART 2 Ascertainment of Tonnage

3 Vessels of 24 Metres in Length and Above

3.1 The tonnage of vessels of 24 metres in length and above shall be ascertained in accordance with Part II of the Merchant Shipping (Registration)(Tonnage) Regulations..

4 Vessels of Less Than 24 Metres in Length

4.1 All vessels of less than 24 m in length shall be ascertained in accordance with this section.

4.2 Gross tonnage

4.2.1 The gross tonnage (GT) shall be determined by the following formula:

$$GT = K_1 (V_1 + V_2)$$

where: $K_1 = 0.2 + 0.02 \log_{10} V_1$

$V_1 = V_H$, total volume of all enclosed spaces under the main deck, in m^3; which shall be obtained from section 4.2.2 (in catamaran, $V_1 = 2 \times V_H$).

V_2 = total volume of all enclosed spaces above the main deck, in m^3; which shall be obtained from section 4.2.3.

.

4.2.2 V_1 shall be determined by the following formula:

$$V_1 = L_m B D C \quad m^3$$

where: L_m = length of the main deck, m;

B =in vessels of other than wooden construction, the moulded breadth (in catamaran, the moulded breadth of one hull); and in wooden vessels, the breadth measured to the outer planking of the hull, m;

D = moulded depth, m;

C = coefficient obtained from the following table depending on the type of vessel:

Main deck is the deck which form the top of the enclosed space of the hull.

Vessel and Type of Vessel	Propulsion	Basic Hull Form	Hull Form Factor (C)
Class II Vessel			
Dangerous Goods Carrier	No Propulsion engine	box	0.90
Noxious Liquid Substances Carrier	No Propulsion engine	box	0.90
Oil Carrier	No Propulsion engine	box	0.90 (Note)
	with Propulsion engine	ship	0.80 (Note)
Dry Cargo Vessel	With Propulsion engine	junk	0.60
		box	0.90 (Note)
		ship	0.80 (Note)
Dumb Lighter (incl. Flat Top Barge)	No Propulsion engine	box	0.90
Edible Oil Barge	No Propulsion engine	box	0.90
Water Boat	With Propulsion engine	ship	0.60
Tug	With Propulsion engine	ship	0.60
Transportation Vessel	With Propulsion engine	ship	0.55
Transportation Sampan	With Propulsion engine	junk	0.60
Pilot Boat	With Propulsion engine	ship	0.60
Floating Workshop (incl. Repair Pontoon, Welding Barge), Crane Barge, Flat Top Work Barge, Landing Pontoon, Separation Barge, Ice Boat, Fish Drying Hulk	No Propulsion engine	box	Vertical ends 1 (Note) Sloped ends 0.90 (Note)

Note: For a vessel with intermediate hull form, for example, bow in ship form and stern in box form, C shall be the mean of the two coefficients, i.e. (0.80 + 0.90) / 2 = 0.85.

4.2.3 V_2 shall be determined by the following formula:

$$V_2 = \Sigma \; l \times b \times h \qquad m^3$$

where *l, b, h* are respectively the mean length, mean breadth and mean height of each tier of the enclosed spaces above the main deck, in m.

4.3 Net Tonnage

The net tonnage (NT) shall be determined by the following formula:

$$NT = K_2 GT$$

where: K_2 = coefficient obtained from the following table;

GT = gross tonnage calculated by section 4.2.1 above.

Class and Type of Vessel	**K_2**	
Class II Vessel		
Dangerous Goods Carrier Noxious Liquid Substances Carrier Oil Carrier Dry Cargo Vessel Edible Oil Carrier	With Propulsion engine	No propulsion engine
	0.56	0.84
Dumb Lighter (incl. Flat Top Cargo Barge) Hopper Barge	0.84	
All types other than the above	0.30	

CHAPTER X

SPECIAL REQUIREMENTS FOR VESSELS CARRYING DANGEROUS GOODS

PART 1 Hull Construction and Equipment

1 Hull Construction

1.1 ≤ The hull shall be constructed of metal ≥.

1.2 Cargo holds shall be efficiently ventilated.

1.3 A means for effectively closing the engine room and other machinery spaces shall be fitted so as to prevent a fire in that space from spreading.

1.4 No passenger is to be carried on board a vessel when it is engaged in carrying dangerous goods.

2 Windlass

Every vessel shall be fitted with windlass of sufficient number, strength and power for recovering the cables and anchors.

3 Signals

3.1 A vessel on which explosives are being handled (carriage, loading and unloading, etc.) must –

(a) between sunrise and sunset, fly the signal "B" as specified in the International Code of Signals published by the International Maritime Organization at the fore masthead; and

(b) between sunset and sunrise, exhibit an all-round red light at a height of not less than 6 metres above the uppermost deck, and such light shall be of such intensity as to be visible in clear atmosphere on a dark night at a distance of at least one nautical mile.

3.2 A vessel on which petroleum having a flash point of or less than 61^{o}C (closed cup test) is being handled must –

(a) between sunrise and sunset, fly a red flag of not less than one metre square with a white circular centre 150 mm in diameter at the fore masthead; and

(b) between sunset and sunrise, exhibit an all-round red light at a height of not less than 6 metres above the uppermost deck, and such light shall be of such intensity as to be visible in clear atmosphere on a dark night at a distance of at least one nautical mile.

4 Notices

A vessel on which dangerous goods is being handled shall prominently display at suitable locations onboard two of each of the following notices –

不准吸煙　No Smoking	不准明火　No Naked Lights

The Chinese characters and English letters shall be at least 100 mm in height.

PART 2 Carriage of Dangerous Goods in Packaged Form or in Solid Form in Bulk

5 Regulatory Requirements

5.1 Unless otherwise specified elsewhere in this code, any vessel intended for the carriage of dangerous goods in packaged form or in solid form in bulk shall -

(a) (i) in addition to complying with the fire protection requirements prescribed in Schedule 4 of the Survey Regulation;

(ii) comply with the special requirements for ships carrying dangerous goods as stipulated in SOLAS II-2/Part C; and

(b) be in accordance with the requirements of the IMDG Code with regard to classification, identification, marking, labelling, placarding, packing, stowage, segregation, fire precautions and documentation.

6 Dumb Steel Lighters carrying Packaged Dangerous Goods in Freight Containers

6.1 Dumb steel lighters intended for the carriage of any class(es) of dangerous goods as shown in the following table may, instead of complying with the section 5.1(a)(ii), comply with the relevant requirements indicated in the following table. Dumb lighters which carry cargoes in open-hatch type cargo hold shall meet the requirements of items A to G; flat top barges which carry cargoes on a complete weather deck shall meet the requirements of items A, F and G. Notwithstanding meeting the safety construction requirements shown in the table, the carriage of such cargoes shall comply with the control measures that embrace segregation, stowage and safe handling of dangerous goods as imposed from time to time by the Port Control Division of the Department.

(✓means applicable)

No.	Class of DG / Requirement	1.4 s	2 Note[a]	3	4 Note[a]	5.1	5.2 Note[a]	6.1	8	9
A	**Fire Pump Water Supplies** readily availability of water supplies sufficient for 4[Note d] jets, each with a 18 m length hoses and Ø12 mm nozzles, to cover the whole designated cargo area. Nozzles shall be of an approved dual-purpose type (i.e., spray/jet type) incorporating a shutoff. On existing vessel such fire pump may be electrical driven submerged pump rigged on frame fitted at shipside with hose attached for readily uses. On new vessel, A permanently installed fire pump shall be fitted.	✓	✓	✓	✓	✓	✓	✓	✓	✓

No.	Requirement \ Class of DG	1.4 s	2 Note[a]	3	4 Note[a]	5.1	5.2 Note[a]	6.1	8	9
B	**Electrical Installation** electrical equipment and wiring fitted in cargo hold shall be of ignition-proof type. However there shall not be any electrical equipment or wiring fitted in such cargo space if classes 1.4s, 2.1 and class 3 having flashing point less than 23°C (closed cup test) are to be carried.	✓	✓	✓	✓ Note[b]			✓	✓	✓ Note[c]
C	**Detection System** fixed fire detection and fire alarm system or a sample extraction smoke detection system shall be fitted in cargo hold. However such system may be waived if it can be shown that the crew can provide constant supervision of the cargoes onboard.	✓	✓	✓	✓	✓		✓	✓	
D	**Ventilation System** power ventilation of at least 6 Note e air changes per hour for an empty hold. The fans shall be of ignition-proof type. On existing vessel portable extraction fans of sufficient power may be provided. On new vessel, A fixed ventilation fan and ducting system shall be fitted. The fans shall be of ignition-proof type. Suitable wire mesh guards shall be fitted over inlet and outlet ventilation openings.		✓	✓	✓	✓		✓	✓	✓
E	**Bilge Pump** An independent cargo hold bilge pump shall be provided. Note: (*) Bilge pump shall be of self-priming type and of capacity not less than 50mm/hour multiplied by the length and breath of the cargo hold. There shall be two bilge wells; one on Port and one on Starboard of the cargo hold, connecting to the bilge pump located outside the cargo hold.			✓				✓	✓	
F	**Portable Fire Extinguisher** A minimum of additional 3 × 4 kg dry powder portable fire extinguishers shall be provided.	✓	✓	✓	✓	✓	✓	✓	✓	✓

No.	Requirement \ Class of DG	1.4 s	2 Note[a]	3	4 Note[a]	5.1	5.2 Note[a]	6.1	8	9
G	**Separation from Machinery Space and Fire Protection** lifting appliance and generator engines located on fore mast shall be partitioned (with height not less than to the top of the engines) on the rear side (facing the cargo stowage area) and the two sides. Spark arrester shall be fitted for engine exhaust pipes.	✓	✓	✓	✓	✓		✓	✓	

Note

(a) Under the provisions of the IMDG Code, stowage of following classes of dangerous goods under deck is prohibited:

(i) class 2.3 having subsidiary risk class 2.1;

(ii) class 4.3 liquids having a flashpoint less than 23℃.

(iii) class 5.2;

(b) Only applicable to dangerous goods evolving flammable vapour listed in the IMDG Code.

(c) Only applicable to dangerous goods having a flashpoint less than 23℃ listed in the IMDG Code.

(d) Subject to the following conditions the vessel may equip with only 2 jets/lengths of fire hose:

(i) when operating within Hong Kong waters；or

(ii) when operating within River Trade Limits the vessel is at all times accompanied by a tug equipped with at least 2 jets/lengths of fire hose.

(e) New vessel [Note1] - at least 6 air changes/hr; existing vessel - at least 2 air changes/hr.

PART 3 Carriage of Dangerous Goods in Liquid Form in Bulk

7 Carriage of Flammable Cargoes

7.1 Oil carriers and any vessel intended for carrying cargoes having a flash point of or less than 60°C (closed cup test) shall meet the applicable structural fire protection requirements prescribed in Schedule 4 of the Survey Regulation.

7.2 Any internal combustion engine installed on deck shall be of air, hydraulic or hand starting. The engine exhaust pipe shall be fitted with spark-arrestor.

8 Carriage of Dangerous Liquid Chemicals

The construction and equipment of any vessel constructed or adapted and used for the carriage in bulk of any liquid product listed in chapter 17 of the IBC Code shall comply with the relevant requirements of the said Code.

[Note1] A vessel which is when the reference to "the commencement date" of the Survey Regulation in the definition of "new vessel" under section 2 of the Survey Regulation is substituted by "3 March 2017".

CHAPTER XI
VESSELS BUILT TO CLASSIFICATION SOCIETY'S RULES AND REGULATIONS FOR HIGH SPEED CRAFT

1 General

1.1 This chapter applies to high speed craft (HSC) which are designed and built to the requirements of rules and regulations applicable to HSC issued by a classification society as listed in Annex A of this Code.

1.2 The requirements of this chapter apply to new vessels of HSC since 1 January 2000 operating solely within the waters of Hong Kong.

2 Intact Stability

The intact stability shall meet the relevant requirements of sections 2.3, 2.4, 2.5, 2.11, 2.12 and annex 7 of the HSC Code[1].

3 Damaged Stability

The damaged stability shall meet the relevant requirements of sections 2.6, 2.13 and sections 2 and 3 of annex 7 of the HSC Code.

4 Seating construction, Safety belts

4.1 A seat shall be provided for each passenger and crew member for which the vessel is certified to carry.

4.2 The installation of seats shall be such as to allow adequate access to any part of the accommodation space. In particular, they shall not obstruct access to, or use of, any essential emergency equipment or means of escape.

4.3 Seats and their attachments, and the structure in the proximity of the seats, shall be of a form and design, and so arranged, such as to minimize the possibility of injury and to avoid trapping of the passengers after the assumed damage in the collision design condition. Dangerous projections and hard edges shall be eliminated or padded.

4.4 One-hand-release safety belts shall be provided for front row seats. The g_{coll} acceleration for seat belt shall not be less than 3.

4.5 All seats, the supports and deck attachments shall have good energy-absorbing characteristics and shall meet the requirements of annex 9 of the HSC Code.

5 Directional control system

Means for directional control in compliance with requirements of chapter 5 of the HSC Code shall be provided.

6 Structural fire protection

6.1 The bulkheads and decks of engine room boundary shall be provided with structural

[1] International Code of Safety for High Speed Craft adopted by the Maritime Safety Committee of the International Maritime Organization by resolution MSC. 36(63) (HSC Code 1994), as may be amended by the Organization from time to time

fire protection based on providing protection for a period of 30 minutes.

6.2 The bulkheads and decks separating wheelhouse and passenger spaces shall be constructed with smoke-tight materials.

6.3 The requirements of sections 7.4.3.1 and 7.4.3.4 of HSC Code shall be complied with.

7 Fire detection and fixed fire extinguishing system

7.1 A fire detection system and a fixed fire extinguishing system shall be provided for engine rooms.

7.2 A fire detection system shall be provided for compartments where fuel oil tanks are located.

8 Remote control, alarm and safety systems

The remote control, alarm and safety systems shall meet the requirements of chapter 11 of the HSC Code.

9 Radar installations

One set of radar shall be fitted. If a radar in compliance with section 80 of the Survey Regulation has been fitted on the vessel, no additional radar is required.

10 Wheelhouse Layout

10.1 The wheelhouse shall be designed so that an all-round view of the horizon from the navigating workstation is obtained.

10.2 The layout of the wheelhouse shall comply with the requirements of sections 15.3.2~15.3.6 of HSC Code.

11 Documentation

Every vessel shall be provided with operating manual, route operating manual, training manual and maintenance manual in accordance with section 18.2 of HSC Code.

12 Failure mode and effect analysis

A failure mode and effect analysis (FMEA) in respect of the vessel's directional control systems, machinery, electrical installation and stabilization systems shall be conducted according to the requirements in annex 4 of the HSC Code. A detailed FMEA may not be required for a system if it meets the conditions stated in sections 4.4 and 4.5 of the annex.

13 Operational and safety trial

The operational and safety performance of the vessel shall be demonstrated in accordance with annex 8 of the HSC Code.

CHAPTER XII

VESSEL SAFE OPERATION AND OPERATOR REQUIREMENTS

1 General

Every vessel that is fitted with propulsion engine shall be controlled by the following appropriate complement when underway -

(a) coxswain; and

(b) engine operator, except that specified in Schedule 3 of the Merchant Shipping (Local Vessels) (Certification and Licensing) Regulation (Cap. 548 sub. leg.).

2 Certificate Classes and Validity

2.1 Local certificates of competency issued before, and after commencement of the Merchant Shipping (Local Vessels)(Local Certificates of Competency) Rules, (Local Certificates of Competency Rules), and its validity limitations are shown in the following table :

Certificates issued before the commencement of Local Certificates of Competency Rules	Certificates issued under Local Certificates of Competency Rules	Vessels Applicable
Local Certificate of Competency as Master of a vessel of 300 tons and under; Local Certificate of Competency as Trawling Master	Coxswain Grade 1	Up to and including 1600 gross ton [Note 1]
Local Certificate of Competency as Master of a vessel of 60 tons and under	Coxswain Grade 2	Up to and including 24 m length [Note 2], and 26.4 m length overall [Note 3]
Local Certificate of Competency as Master of a Fishing Vessel;	Coxswain Grade 3	Up to and including 15 m length [Note 2], and 16.5 m length overall [Note 3]
Local Certificate of Competency as Ferry engineer; Local Certificate of Competency as Engineer for a vessel with engine power over 150 BHP	Engine Operator Grade 1	Up to and including 3000 kW aggregate power
	Engine Operator Grade 2	Up to and including 1500 kW aggregate power
Local Certificate of Competency as engineer of a vessel with engine power up to 150 BHP; Local Certificate of Competency as Engineer of a Fishing Vessel	Engine Operator Grade 3	Up to and including 750 kW aggregate power

Note

1 If vessel's gross tonnage is greater than 1600 or vessel's total propulsion power is greater than 3000kW, special consideration may be sought from the Director.

2 "Length", as defined in Ch. I/3.1.

3 "Length overall", as defined in Ch. I/3.1.

2.2 Local certificate of competency as master restricted to operate a craft of not more than 10 metres in length and fitted with either a petrol outboard engine of not more than 12 kW power or a diesel engine of not more than 38kW power within limits of permitted areas issued before the commencement of the Local Certificates of Competency Rules shall, unless earlier suspended or cancelled-

(a) continue in force until the date of its expiry;

(b) valid for operation within the limits of the permitted areas as shown shaded on the map in Schedule 3 of the Local Certificates of Competency Rules; and

(c) subject to the conditions except the geographic operational limits as endorsed in the original certificate.

2.3 Local certificate of competency as master restricted to operate in typhoon shelters only issued before the commencement of the Local Certificates of Competency Rules shall, unless earlier suspended or cancelled-

(a) continue in force until the date of its expiry;

(b) valid for operation in typhoon shelters only; and

(c) subject to the conditions as endorsed on the original certificate.

3 Vessel Permitted to be Operated by Combined Coxswain and Engine Operator

3.1 Except the types of vessels stated in section 3.2, and subject to the condition stated in section 3.3, vessels equipped for unattended machinery space operation as required in Ch. IIIA/18 when operating within Hong Kong waters may be operated under the command of a person who is a holder of both valid coxswain certificate and valid engine operator certificate (i.e. "combined coxswain").

3.2 The following types of mechanically propelled vessels while underway are not allowed to be controlled by only a combined coxswain:

(a) oil carrier;

(b) dangerous goods carrier;

(c) noxious liquid substances carrier;

(d) tug;

(e) vessel of length exceeding 24 metres;

(f) vessel of total engine horsepower exceeding 1000 kW (1340 BHP);

(g) any other type of vessel as considered by the Director not suitable to be operated by only a combined coxswain.

3.3 On a vessel commanded by only a combined coxswain, there shall be at least one crew member with common engineering knowledge on board to assist the combined coxswain while the vessel is underway.

4 Reporting of Accidents

It is a statutory requirement for the owner or coxswain or agent of any local vessel to report accidents relating to collisions and fires etc. as required in Part XI of the Ordinance.

5 Observance of Safe Navigational Speed, Carrying Certificated Operators and Adequate Number of Crew

5.1 When any vessel is under way, the coxswain shall ensure the vessel is proceeding at a safe navigational speed, and diligently comply with the speed limits in the relevant operating areas and the relevant operational requirements as promulgated in Marine Department notices from time to time.

5.2 Any vessel owner or coxswain of the vessel shall observe any specified licensing conditions on vessel operator requirements, including those indicated in Ch. IIIA/18, IIIB/13, XII and Annex U-4 of this Code, in order to cope with operational needs including helping out emergency measures etc.

6 Third Party Risks Insurance Coverage

It is the obligation of the owner and agent of any local vessel to ensure compliance with the relevant requirements of the Merchant Shipping (Local Vessels) (Compulsory Third Party Risks Insurance) Regulation.

7 Duties Relating to Owner and Agent of Vessel

7.1 It is the responsibility of the owner and agent of any vessel:-

(a) to ensure that the vessel is properly maintained, surveyed and certificated in accordance with the requirements of the Ordinance and regulations as mentioned in section 2, in addition to this Code; and

(b) to ensure that the vessel is built and constructed with adequate strength and stability, adequacy in safety for machinery, electrical and in safety arrangement and equipment for vessel's intended purpose through statutory survey and certification.

7.2 It is the responsibility of the owner, agent and the coxswain of any to observe applicable duties as indicated in the Merchant Shipping (Local Vessels)(General) Regulation and Merchant Shipping (Local Vessels)(Certification and Licensing) Regulation, and in particular relating to restrictions imposed under section 6 and operators holding relevant certificates of competency etc. required on any vessel specified under sections 46 to 50 of the latter Regulation.

8 Operational Safety Requirements on Cleanliness

8.1 The owner of a passenger carrying vessel and his agent shall ensure that vessel is kept clean at all times as specified under section 31 of general regulation.

8.2 The owner or master of a passenger carrying vessel shall ensure the vessel is in a proper state of cleanliness and repair, its equipment and appliances to be maintained in good order and kept in readiness for immediate use.

9 First Aid Kit

Every vessel plying within River Trade Limits shall be provided onboard a first aid kit. Refer to the following table for the complement of each kit.

	Name	Description	Quantity required
1	Triangular of Calico	110cm x 110 cm x 127 cm	4 offs
2	Conforming bandage	5cm x 2m	1 rolls
3	Bandage (ordinary or elastic type)	5cm x 5.5m	1 rolls
4	Bandage (ordinary or elastic type)	7.5cm x 5.5m	1 rolls
5	Tape	Assorted, sterile, adhesive	10 offs
6	Dressings	Sterile paraffin gauze	5 offs
7	Dressing strip	2.5cm x 5m	1 rolls
8	Absorbent cotton wool	35 gm	1 packs
9	Safety pins	Rustless, size 5cm	6 offs
10	Scissors	Stainless steel throughout	1 pair
11	Disinfectant		0.1 Litre

Notes:

(1) The first aid kit shall be regularly replenished as and when it is used up.

(2) The first aid kit shall be placed in conspicuously marked and easily accessible container.

(3) Ship owner/coxswain may add more contents to first aid kit to meet the need of their operations.

ANNEX A

RULES AND REGULATIONS FOR CLASSIFICATION OF VESSELS APPLICABLE TO LOCAL VESSELS

1 American Bureau of Shipping (ABS)

(i) Rules for Building and Classing Steel Vessels under 90 metres in Length

(ii) Rules for Building and Classing High Speed Craft

(iii) Rules for Building and Classing Steel Barges

(iv) Steel Vessels for Service on Rivers and Intracoastal Waterways (for vessels operating within smooth waters)

2 Bureau Veritas (BV)

(i) Rules for the Classification of Steel Ships

(ii) Hull Structure and Arrangement for the Classification of Cargo Ships less than 65 m and Non Cargo Ships less than 90 m

(iii) Hull Arrangement, Stability and Systems for Ships less than 500 GT

(iv) Hull in Composite Materials and Plywood, Material Approval, Design Principles, Construction and Survey

(v) Hull in Aluminium Alloys, Design Principles, Construction and Survey

(vi) Rules for the classification of high speed craft

3 China Classification Society (CCS)

(i) Rules for Classification of Sea-going Steel Ships

國內航行海船建造規範

(ii) Rules for the Construction and Classification of Coastal Boats (applicable to vessels of length not exceeding 20 metres

沿海小船入級與建造規範

(iii) Rules for the Construction and Classification of Sea-Going High Speed Craft

海上高速船入級與建造規範

(iv) Rules for Classification of Inland Waterways Steel Ships (applicable to vessels of length equal to or greater than 20 metres, operating in waters of Hong Kong or River Trade Limits not exceeding 5 km from coast)

鋼質內河船舶建造規範

4 DNV - GL

(i) DNV Rules for Classification of Ships

(ii) DNV Rules for Classification of High Speed, Light Craft and Naval Surface Craft

5 Lloyd's Register of Shipping (LR)

(i) Rules and Regulations for the Classification of Ships

(ii) Rules and Regulations for the Classification of Special Service Craft

(applicable to high speed craft, light displacement craft, multi-hull craft, yachts of overall length 24 m or greater and craft with draught to depth ratio less than or equal to 0.55)

6 Nippon Kaiji Kyokai (NK)

(i) Rules and Guidance for the Survey and Construction of Steel Ships

(ii) Rules and Guidance for the Survey and Construction of Passenger Ships

(iii) Rules and Guidance for the Survey and Construction of Inland Waterway Ships

(iv) Rules and Guidance for the Survey and Construction of Ships of Fibreglass Reinforced Plastics

(v) Rules and Guidance for High Speed Craft

7 Register of Fishing Vessel of the People's Republic of China (RFV)

The following are applicable to fishing vessel/fishing sampan

(i) Regulation for Statutory Surveys of Fishing Vessels of the PRC – River Trade, GRP, Wooden Sea-going and Small Steel Fishing Vessels Statutory Surveys and Technical Regulations

《漁業船舶法定檢驗規則——內河、玻璃鋼、海洋木質及小型鋼質漁業船舶法定檢驗技術規則》

(ii) Rules and Regulations for Construction of Sea-going Steel Fishing Vessel

《鋼質海洋漁船建造規範》

(iii) Rules and Regulations for Statutory Inspection of Fishing Vessel

《漁業船舶法定檢驗規則》

(iv) Rules and Regulations for Construction of Glass Reinforced Fibre Fishing Vessel (applicable to fishing sampan only)

《玻璃纖維增强塑料漁業船舶建造規範》

Note

(1) The lists include the current rules and regulations applicable to local vessels issued by 7 classification societies/recognized authority and are not exhaustive. Rules and regulations issued by other authorized organizations; and alternative standards may be considered.

(2) Hull scantlings and engine shafting calculations shall be verified and stamped by the respective Classification Society/Recognized Authority.

ANNEX B

FREEBOARD MARK

1 Position of Marks

On receiving particulars of the assigned freeboard, the owner of the Class II vessel concerned or his agent shall cause to be marked on each side of the vessel, to the satisfaction of the Director or competent surveyor, the appropriate marks in accordance with this Annex.

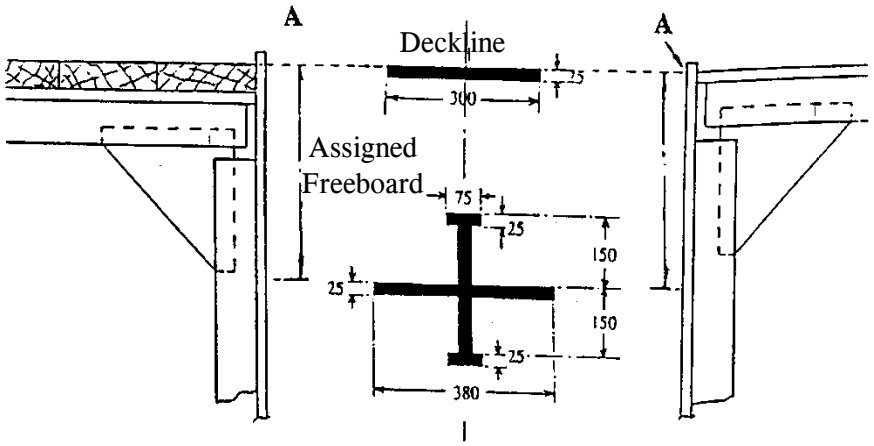
2 Method of Marking

2.1 The lines described in section 3 shall be marked in such a manner as to make them plainly visible. They shall be painted in white or yellow on a dark background or in black on a light background.

2.2 On steel or aluminium vessels, the marks shall be made by cutting plate or welding bead; on wooden vessels, the marks shall be cut into the planking to a depth of not less than 3 mm; on glass reinforced plastic (GRP) vessels, the marks shall be permanently affixed to the sides of the vessel by bonding or some other effective method.

3 Details of Marks

A Class II vessel to which this Part applies shall be marked on each side at amidships, with a deck line and freeboard line as follows -



Midship

(a) The deck line shall be a horizontal line of 300 mm in length and 25 mm in breadth marked amidships with its upper edge passing through the point where the continuation outwards of the upper surface of the freeboard deck intersects the outer surface of the shell. Where the deck is partly sheathed amidships, the upper edge of the deck line shall pass through the point where the continuation outwards of the upper surface of the actual sheathing at amidships intersects the outer surface of the shell.

(b) The horizontal freeboard line shall be 380 mm in length and 25 mm in breadth, and 2 additional lines each 75 mm in length and 25 mm in breadth, shall be located with their upper edges at distances of 150 mm, one above, and one below, the upper edge of the horizontal freeboard line. All horizontal lines shall

be at right angles to a vertical line 325 mm in depth and 25 mm in width which bisects the horizontal lines.

(c) The assigned freeboard shall be measured from the upper edge of the deck line to the upper edge of the horizontal freeboard line.

ANNEX D

STABILITY WHEN LIFTING

1 Conditions to be computed

A vessel's various loading conditions at free running and at the worst condition of combination of hook load and outreach of hook shall be computed.

2 Stability Standard

2.1 If the vessel's hull proportions fall within any one of the following limits:

(a)	Beam / depth	3.40~4.75; or
(b)	Length / beam	3.20~4.50; or
(c)	Draft / depth	0.60~0.85

it is sufficient if the vessel owner can demonstrate that the vessel, at the condition stated in paragraph 1, will not heel beyond the limits of one-half of the freeboard or one-half of the draft, whichever occurs first.

2.2 Any vessel which hull proportions fall beyond the limits stated in 2.1 above, shall meet the stability standard prescribed below:

At the worst loading condition (maximum load/maximum outreach condition), the residual area contained between GZ curve and heeling arm curves, in m-rad, up to the smallest of the following angles:

(a) the angle corresponding to the maximum GZ

(b) the downflooding angle

(c) 40^0

shall not be less than:

0.053 m-rad if the vessel operates solely within Hong Kong waters; or

0.080 m-rad if the vessel operates in River Trade Limits.

Annex E

APPROXIMATE DETERMINATION OF STABILITY

Part 1 Simple Inclining Test

1 General

1.1 The simple inclining test is to ascertain the angle of heel a vessel would occur when 2/3 of the persons distributed on one side of the vessel and 1/3 on the other side. The objective being that it should be ensured that no angle of heel exceeding 7° will arise as a result of the movement of persons from one side of the vessel to the other side.

2 Test Procedure

2.1 The vessel should be tested with weights to represent the fully laden service condition.

2.2 The weights should be disposed, as far as practicable, with their centres of gravity in the correct vertical and lateral positions having regard also to those vessels where persons should be taken as congregated at 0.3 m^2 each on the uppermost deck or decks to which they have access.

2.3 The test should be carried out in the following manner: -

(a) the vessel is to be loaded with weights as described above,

(b) calculate a heeling moment equal to $1/12^{th}$ the weight of the persons (W) multiplied by the extreme breadth (B) of the vessel (WB/12),

(c) transfer weights from one side of the vessel to the other side in 3 equal increments such that the final heeling moment is equal to WB/12, the same vertical CG of the whole being maintained.

The weights and the distance that are moved together with the angle of heel should be recorded for each of the 3 moves.

(d) restore all the weights to their original positions and record angle of heel when they are restored,

(e) repeat (c) moving weights from opposite side,

(f) repeat (d),

(g) if the angle of heel exceeds 7° during the test, the owner might add ballast weight and to repeat the test procedures (c), (d), (e) and (f). The weight and position of such ballast should be recorded.

3 Acceptance of Stability

3.1 As a general rule, no vessel will be accepted where the angle of heel exceeds 7° as a result of a heeling moment of WB/12 or any greater heeling moment that could be expected to arise in service.

3.2 In any case where an angle of heel exceeding 4° has arisen as a result of a heeling

moment of WB/12, the seating and other arrangements of the vessel should be examined to see whether a heeling moment greater than WB/12 could be expected to arise in service. If this is found to be so, proper measure should be taken to avoid an angle of heel greater than 7° would arise as a result of this heeling moment.

Part 2 Rolling Period Test

4 General

The rolling period is the duration for one complete oscillation, i.e. starting from the extreme end of a roll to one side of the vessel, moves right across to the other extreme side and returns to the original starting point.

5 Test Procedure

(a) The test should be conducted in harbour, in smooth water with the minimum interference from wind and tide.

(b) The mooring should be slack. A reasonable clearance at the sides of the vessel should be maintained to avoid making any contact during its rolling.

(c) Weights which are liable to swing or liable to move (e.g. a drum) should be secured against such movement. The free surface effects of slack tanks should be kept as small as is practicable.

(d) The vessel is made to roll (e.g. by rhythmically lifting up and putting down a weight far off middle-line; by people running athwartships in unison; or by any other means). As soon as this forced rolling has commenced the vessel is allowed to roll freely and naturally.

(e) By means of a stopwatch, the time is taken for not less than about five complete oscillations.

(f) After allowing the roll to completely fade away, repeat the operations in paragraphs (d) and (e) twice and time recorded.

6 Determination of Metacentric Height (GM)

(a) From the total time for the total number of oscillations made, calculate the mean time (say T seconds) for one complete oscillation.

(b) The metacentric height GM_o is to be determined from the following formula:

$$GM_o = (0.77\ B/T)^2$$

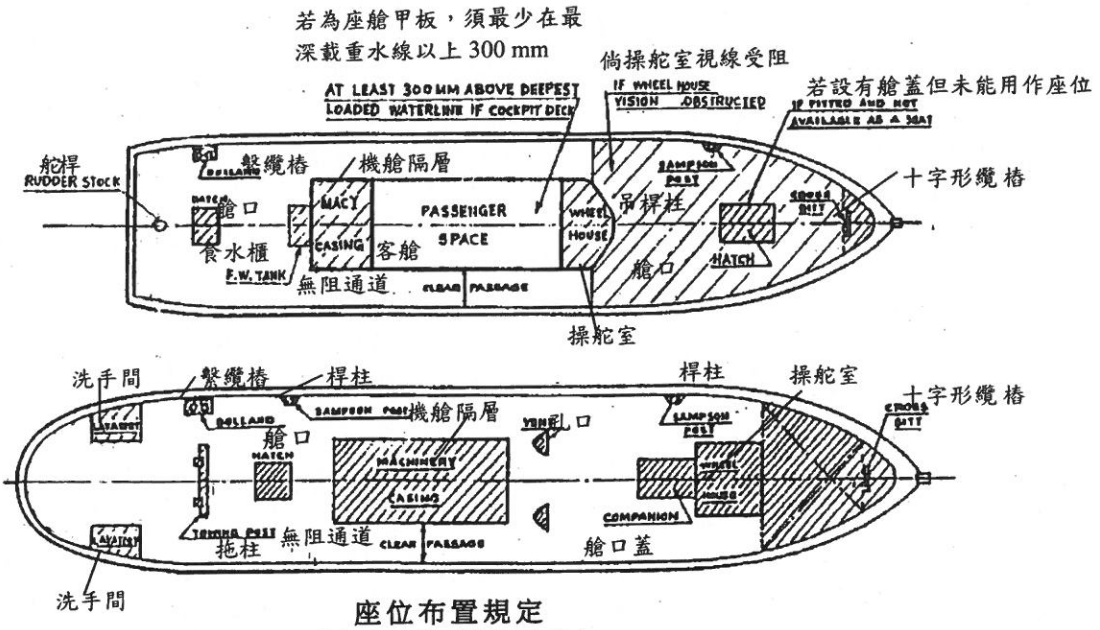
where

B = extreme breadth of vessel in metres

(Note: the formula is valid for motor dry cargo vessel of length not more than 24 metres in lightweight condition).

釐定第 I 及 II 類別船隻乘客艙間的指引圖

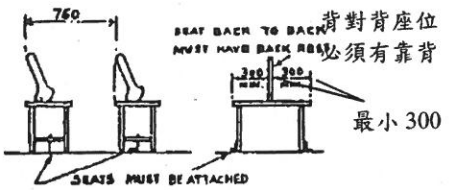
（圖示 ▨ 的範圍不包括在內）



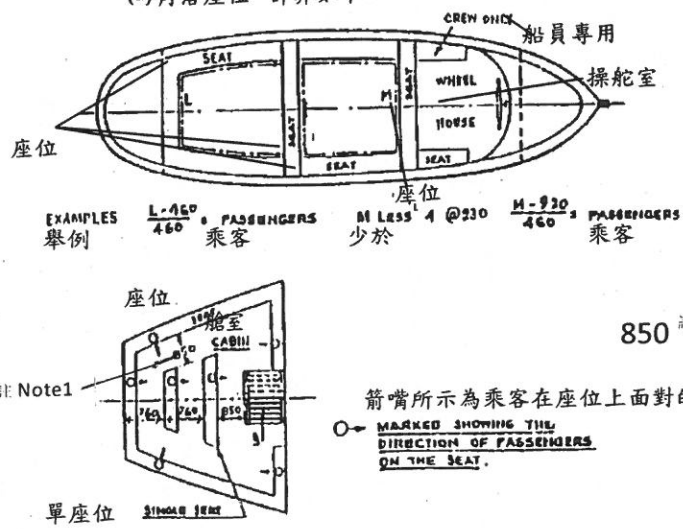
座位布置規定

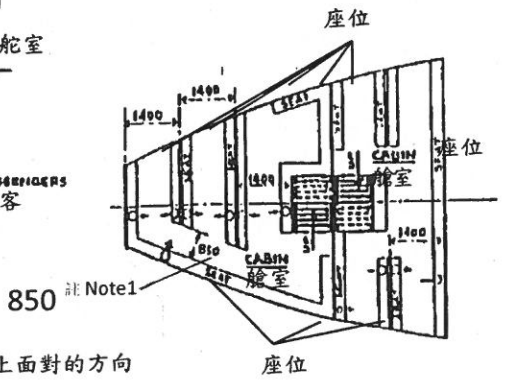
(以 mm 為量度單位)

(a)最小闊度	460
(b)最小距離	
(i) 面對面的座位	1400
(ii)面向同一方向的座位	760
(c)最小伸腳空間	
(i) 一行不超過 6 個座位	250
(ii)一行超過 6 個座位	300



(d)角落座位，計算如下：





註[1] 適用於在《檢驗規例》第 2 條"新船隻"的釋義中，對於《檢驗規例》"生效日期"的提述，以"2017 年 3 月 3 日"替代的船隻。

Note[1] Applicable to a vessel which is when the reference to "the commencement date" of the Survey Regulation in the definition of "new vessel" under section 2 of the Survey Regulation is substituted by "3 March 2017".

Annex I-1

VISIBILITY REQUIREMENT FOR WHEELHOUSE

Regarding navigation bridge visibility, new vessels of 45m and over in length shall comply with the Regulation 22, Chapter V of the SOLAS; new vessels of 12m to 45m in length shall comply with the following paragraphs 1 to 12; new vessels of under 12m in length should comply as far as practicable to the requirements for larger vessels as set out in this Code of Practice.

Requirements for new vessels of 12m to 45m in length are as follows.

1. The view of the sea surface from the conning position (it is defined in this Code of Practice as the main steering position controlled by the coxswain in wheelhouse) shall not be obscured by more than two ship lengths, or 500 m, whichever is the less, forward of the bow to 10 degrees on either side under all conditions of draught, trim, deck weight and cargo handling gear. Attention should be drawn on the blind sector created on tankers whilst in lightweight condition.

2. No blind sector caused by cargo, cargo handling gear or other obstructions (e.g. securing bars fitted on window) outside of the wheelhouse forward of the beam which obstructs the view of the sea surface as seen from the conning position, shall exceed 10 degrees. The total arc of blind sectors shall not exceed 20 degrees. The clear sectors between blind sectors shall be at least 5 degrees. However, in the view described in para. 1, each individual blind sector shall not exceed 5 degrees;

3. The horizontal field of vision from the conning position shall extend over an arc of not less than 225 degrees, that is from right ahead to not less than 22.5 degrees abaft the beam on either side of the ship.

4. From each bridge wing the horizontal field of vision of vision shall extend over an arc of at least 225 degrees, that is from at least 45 degrees on the opposite bow through right ahead and then from right ahead to right astern through 180 degrees on the same side of the ship.

5. From the main steering position the horizontal field of vision shall extend over an arc from right ahead to at least 60 degrees on each side of the ship.

6. The ship’s side shall be visible from bridge wing.

7. The height of the lower edge of the wheelhouse front windows above bridge deck should be kept as low as possible. In no case shall the lower edge present an obstruction to the forward view.

8. The upper edge of the wheelhouse front windows shall allow a forward view of the horizon, for a person with a height of eye of not less than 1600 mm above the deck at the conning position, when the ship is pitching in seas.

9. Framing between the wheelhouse windows shall be kept to a minimum and not be installed immediately forward of any workstation.

10. To help avoid reflections, the bridge front windows shall be inclined from the vertical plane top out, at an angle of not less than 10 degrees and not more than 25 degrees.

11. Polarized and tinted windows shall not be fitted.

12. At all time, regardless of weather conditions, at least two of the forward windows shall provide a clear view, and in addition depending on the wheelhouse configuration, an additional number of windows shall provide a clear view.

13. On ships of unconventional design which, in the opinion of the Director, cannot comply with this Annex, arrangements shall be provided to achieve a level of visibility that is as near as practical to that prescribed in this Annex.

Requirement for existing vessels

It is required that existing vessels have a clear view ahead from the steering position and where practicable, comply with the requirements in this Code.

Checklist for Engine Inspection

Annex I-2

(to be completed by Engine Workshop except Part 3)
[Note : This form is applicable to mechanized vessels installed with propulsion and generator engines]

Name of Vessel : _____ C.O.O. No.:_____

Type of Engine : _____

Engine Model : _____

Engine Serial No.: _____

Part 1 : Inspection item	Yes	No	N/A	Remarks
Cylinder head				
Valves, inlet/exhaust				
Liners and jackets				Hydraulic test
Pistons and gudgeon pins				
Bottom end bearings				
Cooling system				Hydraulic test
Injectors				Injectors calibration report shall be submitted
Fuel system				Fuel pump calibration report shall be submitted
Crankshaft/main bearing/Camshaft system				Inspection report shall be submitted
Governors				
Turbocharger				Inspection report shall be submitted
Lubrication system				
Starting system				
Electrical system				
Control system				
Instrumentation and monitoring system				
Mounting and alignment				
Detailed engine maintenance report attached				

Part 2 : Maintenance Workshop Particulars

Name of Responsible Person : _____ Tel.: _____

Position / Rank : _____ Date : _____

Responsible Person's Signature : _____ Tel : _____

Name of Engine Workshop : _____ Company Chop :

Company Address : _____

Business Registration No. : _____

Part 3: Vessel Owner Declaration

I have inspected the open up and overhaul of engine on _____

Actual Completion date: _____ Signature/Chop:

Name of Owner/Coxswain/Engine Operator _____

Telephone No. : _____

Note : (1) Please use separate sheets if inspections are conducted by more than one workshop.
(2) Officers of Marine Department or Authorized Surveyors/Organizations reserve the right to inspect and dismantle the engine if necessary.

Checklist for Gearbox Inspection

(to be completed by Maintenance Workshop except Part 3)
[Note : This form is applicable to mechanized vessels installed with gearboxes for propulsion]

Name of Vessel : _____ C.O.O. No.: _____

Type of Gearbox : _____

Gearbox Model : _____

Gearbox Serial No.: _____

Part 1 : Inspection item	Yes	No	N/A	Remarks
Casing				
Gears and shafts				
Disc				
Clutch system				
Bearings				
Gasket and seal				
Gearbox control system				
Cooling system				Hydraulic test
Hydraulic system				
Lubrication system				
Instrumentation and monitoring system				
Mounting and alignment				
Other items				
Detailed gearbox maintenance report attached				

Part 2 : Maintenance Workshop Particulars

Name of Responsible Person : _____ Tel.: _____

Position / Rank : _____ Date : _____

Responsible Person's Signature : _____ Tel : _____

Name of Maintenance Workshop : _____ Company Chop :

Company Address : _____

Business Registration No. : _____

Part 3: Vessel Owner Declaration

I have inspected the open up and overhaul of gearbox on _____

Actual Completion date: _____ Signature/Chop:

Name of Owner/Coxswain/Engine Operator _____

Telephone No. : _____

Note: (1) Use separate sheets if inspections are conducted by more than one workshop.
(2) Marine Department Officers or Authorized Surveyors/Organizations reserve the right to inspect and dismantle the gearbox if necessary.

Annex I-5A

REQUIREMENTS FOR THE REPLACEMENT OF MAIN ENGINE

1 Document/Data/Drawing to be Submitted

1.1 Proof of sales of the new / used engine;

1.2 Type Approval Certificate / Maker Certificate certified Marine Type of the new/used engine;

1.3 The added weight, vertical centre of gravity (VCG) and longitudinal centre of gravity (LCG) of new new/used main engine and its accessories;

1.4 The percentage of the added weight based on the lightship weight;

1.5 Engine Seating Arrangement for approval (if any modification);

1.6 Piping Arrangement for approval (if any modification);

1.7 When replacing engine power output is more than 130kW, it shall comply requirements in Annex I-10.

2 Devices to be Provided and Fitted

2.1 Main engine automatic shut-off and alarm arrangements (see remarks for applicable vessels)

2.2 Main engine emergency stopping device in the wheelhouse (all vessels);

2.3 A silencer or expansion chamber should be fitted on the exhaust pipe (all vessels);

2.4 Existing gearbox and shafting system should be in acceptable condition (all vessels).

3 Fee and Form to be Done by Owner

3.1 Appropriate fees are to be paid in advance and surveys are to be arranged at appropriate stages;

3.2 "Form Survey 6B" is to be completed and returned to this office for further action.

4 Inspection/Measurement to be Taken

4.1 Inspection of device of para. 2.3;

4.2 Testing of all safety devices of 2.1, 2.2 and general inspection of 2.4;

4.3 Lightship weight verification (inclining experiment if required);

4.4 Inspection of modified items; and

4.5 The engine should be stripped down and inspected by MD officer/authorized inspecting personnel (used engine only).

Remarks:

Types of new vessels applicable in accordance with Ch. IIIA/8.4:

(i) Oil tanker carrying cargo oil having a flash point not exceeding 60°C (closed cup test);

(ii) Dangerous goods carrier;

(iii) Noxious liquid substances carrier;

(iv) Tug;

(v) Category A vessels that may ply beyond Hong Kong waters.

REQUIREMENTS FOR THE REPLACEMENT OF GENERATOR SET

1 Document/Data/Drawing to be Submitted

1.1 Proof of sales of the new generator set;

1.2 Maker Certificate certifying that the new/used generator set is of Marine Type;

1.3 The added weight, vertical centre of gravity (VCG) and longitudinal centre of gravity (LCG) of new new/used main engine and its accessories;

1.4 The percentage of the added weight based on the lightship weight;

1.5 Engine Seating Arrangement for approval; (if any modification);

1.6 Piping Arrangement for approval; (if any modification);

1.7 Electrical Arrangement / Revised Electrical Arrangement; (if any modification);

1.8 Main Switchboard Wiring Diagram; (if any modification);

1.9 A.C. Electrical System Diagram. (if any modification);

1.10 When replacing engine power output is more than 130kW, it shall comply requirements in Annex I-10.

2 Devices to be Provided and Fitted

2.1 A silencer or expansion chamber should be fitted on the exhaust pipe (all vessels).

3 Fee and Form to be Done by Owner

3.1 Appropriate fees are to be paid in advance and surveys are to be arranged at appropriate stages;

3.2 "Form Survey 6B" is to be completed and returned to this office for further action.

4 Inspection/Measurement to be Taken

4.1 Lightship weight verification (inclining experiment if required).

4.2 Inspection of modified items.

4.3 The engine should be stripped down and inspected by MD officer/authorized inspecting personnel (used engine only).

Annex I-5C

REQUIREMENTS FOR WAIVING INCLINING EXPERIMENT AFTER THE ADDITION / REPLACEMENT OF ENGINE(S) OR MINOR MODIFICATION

1 Technical Requirements

In general speaking, the Inclining Experiment can be waived subject to the total increased/decreased weight of the engine and its accessories or minor modification do not exceed 2% of lightship weight (which was measured in the last inclining test) and the following conditions:

(a) Heel is not more than 5 degree;

(b) Ship's trim in any probable loading condition does not make the passenger deck less than 300mm above deepest loaded waterline;

(c) The intact and damage stability (where applicable) comply with the requirements of Ch. IV/1.3 and 2 respectively;

(d) Minimum freeboard complies with the requirements of Ch. IV/1.2.

(e) Comply with the applicable requirements of this Code.

2 Information to be Submitted

(a) The added/decreased weight, vertical centre of gravity (VCG) and longitudinal centre of gravity (LCG) of engine and its accessories or proposed modification.

(b) The lightship weight and longitudinal centre of gravity (LCG) calculation with the percentage change.

Annex I-8

GUIDANCE NOTES FOR INSPECTION OF LANDING PLATFORM, LANDING PONTOON

PART 1 LANDING PLATFORM and LANDING PONTOON of other than that included in PART 2

Landing Platform is defined as a floating structure having construction in the form of floating bridge or overhang platform supported by objects with sufficient flotation, used for embarking and disembarking of any people from vessels other than ferry vessels, kaitos and floating restaurants.

1. At the first time of licensing, photos and drawings of general arrangement of Landing Platform should be submitted for record purpose

2. At least one life buoy for each platform should be provided for marine work or landing purposes

3. At least one fire extinguisher for each platform should be fitted for marine work or machinery fitted on board

4. If the platforms are used in the night time, adequate illumination should be provided. An all round white light should be installed if a location of platform is within the marine traffic area.

5. If two or more platforms chained together to form a single walkway, the requirement of provision of life buoy may be reduced appropriately to suit the conditions.

6. A notice board for the maximum allowable passengers on transit to be installed on board or adjacent to landing area.

7. The lightship freeboard at four corners will be recorded in the licence book

8. A visual inspection for structure will be carried out. The structural scantling for deck loading may be submitted for approval subject to the working condition, shape and size of the landing platform.

9. A simple inclining experiment for the landing platform may be carried out for approval in the present of surveyor. The simple inclining experiment requires that the angle of heel should not be greater than 7° and the deck edge should not be immersed, when the passengers distributed on the platform with 2/3 of the passengers standing on one side of the platform and 1/3 on the other side. The simple inclining experiment can be replaced by an acceptable naval architecture calculation.

10. The landing platform is to be surveyed afloat every two years. A written declaration from owner stating the landing platform is in good operating condition is to be provided in the alternate year when survey is not carried out.

Note : Fire Fighting and Life Saving requirements are indicated in the Survey Regulation.

PART 2 LANDING PONTOON for PASSENGER USE

Item Nos 2, 3,7, 8, 9 and 10 of this Part applies only to new vessel[Note1]

1. "Landing pontoon for passenger use" is defined as a vessel with pontoon type hull form, to be made fast to shore or moored at midstream, used for embarking and disembarking of people from vessels of ferry vessels, launches, kaitos and floating restaurants. According to Schedule 1 of the Survey Regulation landing pontoon is categorized as a Category B vessel.

2. When applying for first licence, the construction plans and stability information approval; and initial surveys to be carried out per chapter II of this Code for items applicable to Category B vessels.

3. The construction is to follow requirements of chapter IIIB of this Code, and scantlings to class rules. Due regard is to be paid to safety of passengers during transit viz, handrails, non-slip deck and ramp surfaces, adequate illuminations, etc.

4. Life saving appliances (lifebuoy, buoyant lifeline, self-igniting light (for new vessel of L≥37 m) are to be provided per Schedule 3, Part 2, Table 3 of Survey Regulation. Note that lifejacket is not required according to Note (2) of Table 3.

5. Fire-fighting apparatuses (FFA) are to be provided per Schedule 4, Table 3 of Survey Regulation. If there is no fuel oil or engine installations fitted on board no FFA is required according to Note (1)(a) of Table 3.

6. Lights and sound signals are to be fitted per Merchant Shipping (Safety) (Signals of Distress and Prevention of Collisions) Regulations, Cap. 369 sub. Leg. N. Side lights, stern light and anchor light are to be fitted if vessel is intended for operation in midstream; and anchor light (all round white light) only if the vessel is to be made fast to shore.

7. The vessel, when in the fully loaded condition (with full number of passengers and ballast water (if any)), etc. should have at least a freeboard in accordance with Chapter IV of this Code applicable to L&FV.

8. The intact stability of vessel should be assessed per Chapter IV of this Code applicable to L&FV, except the turning stability.

   The vessel may instead meet the equivalent standard stipulated in recommended by IMO if it is not practical to meet the stability criteria for L&FV, due to its geometric characteristics (e.g. the ratio of beam / depth is exceeding 2.5).

Note1 A vessel which is when the reference to "the commencement date" of the Survey Regulation in the definition of "new vessel" under section 2 of the Survey Regulation is substituted by "3 March 2017".

9. The maximum number of passengers is to be determined at the scale of $4P/m^2$ on deck areas accessible to passengers.

10. A notice board for the maximum number of passengers on transit to be installed on board or adjacent to landing area.

11. After licensing the vessel is to be surveyed afloat every two years; and surveyed on slip every 6 years. A written declaration from owner stating the landing pontoon is in good operating condition is to be provided in the alternate year when survey is not carried out.

ANNEX I-9

HARMFUL ANTI-FOULING SYSTEMS

The Merchant Shipping (Control of Harmful Anti-Fouling Systems on Ships) Regulation (Cap. 413N) which comes into effect on 1 January 2017 is to implement the International Convention on Control of Harmful Anti-Fouling Systems on Ships. 2001. The requirements of the Regulation are highlighted as follows:

(1) Any vessel must not, on or after the commencement date of the regulation, bear any organotin compounds that act as biocides in the anti-fouling system of the vessel. If a vessel bore any organotin compounds that act as biocides in its anti-fouling system before the commencement date, it must, as from that date, bear a coating that forms a barrier to the compounds.

(2) Any vessel of 400 gross tonnage or above and engaged in international voyages must be subject to survey for the issue / endorsement of International Anti-Fouling System Certificates.

(3) Any vessel of 24 meters or more in length, less than 400 gross tonnage and engaged in international voyages, the owner and the master of which must ensure that a declaration that is made in respect of anti-fouling system of the vessel is kept on board the vessel.

Annex I-10

Implementation of the Requirements of Annex VI of MARPOL 73/78 to Locally Licensed Vessels

The new Merchant Shipping (Prevention of Air Pollution) Regulation, CAP 413P has entered into force on 1 July 2016. The regulation is to implement the requirements of MARPOL Annex VI in Hong Kong. The Marine Department Notice (MDN) No. 39 of 2016 promulgated on 6 April 2016 gives details of the relevant requirements applicable to local vessels under the regulation. The MDN 39 of 2016 is available at the following URL:
http://www.mardep.gov.hk/en/notices/pdf/mdn16039.pdf

Annex J-1

SPECIAL REQUIREMENTS OF INITIAL SURVEY FOR LICENSING OF NEWLY BUILT WOODEN VESSELS

1. General Requirement

Due to the difference in hull form and the structure pattern, if the arrangement of main longitudinal structural component and the section scantling satisfy the total section area of the various components in the midship region, it is allowed to adequately adjust the section scantling of various components in the deck and the ship's bottom part (below bilge keel).

2. Inspection before Commencement of Work

2.1. Examination of raw material

2.1.1. Examine whether the material quality, strength and performance of primary structural components for the construction of ship are conformed to the requirements of drawings, rules and standards.

2.1.2. Besides the natural contorted material used in the curving shape structure, the timber wood used on ship should be fully exsiccated.

2.1.3. According to the toughness of different types of tree, it may be divided into hard wood (如坤甸、紅稠、柞、櫟、榆、水曲柳、黃菠蘿、樟、槐、柚、柯、梢等) and soft wood (如紅松、落葉松、馬尾松、杉柏、桉等) two major types.

The components of bulkhead base, stem, stern frame, rudder post, stern centre girder, stern side girder, bracket, bulkhead stiffeners etc should used hard wood. Keel plate, side planking and engine bed plate should used hard wood or high quality pine wood

2.1.4. Whether it is planking or batten, the front side should be facing outward when installed. And the reverse side (tree ring side)should be facing inward

2.1.5. Defects and limitation of usage of timber material can refer to the relevant requirements of recognized classification societies or flag administrations.

2.2 Building yard should submit the important construction workmanship to Marine Department for approval.

2.3 Examine the workshop for pre-fabrication of frames and ensure the workshop is neat and solid.

3. Hull Inspection

3.1. According to approved drawing, inspect whether the material and dimensions of all

components and shell plate are conformed to the approved drawing or the relevant requirements of recognized classification societies or flag administrations. Keel plate, engine bed and rubbing strake should use hard wood. If good quality pine wood is to be used, permission from Marine Department to be obtained.

3.2. When laying the keel, surveyor should check the size and type of the joint. Also check whether two hard wood treenails are effectively piled at the centre line of the joint.

3.3. To inspect the structural style of stem, stern frame structural style, and whether the connections of other components are fasten and reliable.

3.4. Spot check the quality of the constitution of frames, the deviation of the half breadth of the frames at waterline should not be greater than 3mm. The quality of the joint should conform to the relevant requirement.

To survey the position of the frame installed on the keel and the deviation of the level of left and right, the deviation should not be greater than 4mm. If distortion appeared after the installation, corresponding corrective process should be carried out before the construction can continue.

3.5. The end of the joints of longitudinal structure, side shell and deck plating, except there is limitation in the structure, should fit in the transverse aggregate and fastened by bolts. The contact face must be closely fitted. The shifted distance between planks in way of the joints should satisfy the relevant requirements of recognized classification societies or flag administrations.

3.6. The side shell plating and frame should be closely fitted; the contact area should not be less than 90% of the total contact area. The contact face should be spread with putty. The gap of plank seam between every plate should meet the requirements of recognized classification societies or flag administrations.

3.7. The joints of garboard plate and sub-garboard plate should avoid placing under the engine base, the connection to the two sides of the keel plate should be suitably process and closely fitted.

3.8. Deck plating and beams should be closely fitted. The contact face should be spread with putty. The gap of plank seam between every plate should meet the requirements of recognized classification societies or flag administrations.

3.9. According to the approved drawings, inspect the installation position of the engine bed plate. The deviation should not be greater than 5mm. If the installation position changed, permission must be obtained from surveyor.

The lower surface of engine bed plate and the upper surface of side shell frame should be closely fitted. The un-contact face of each side shell frame should not be more than 30% of the total contact face. The thickness of the outside engine base plate should not be less than 60mm.

4. The Installation and Process of Hull Components

4.1. Inspect the condition of the process of the surface of the hull main components, the smooth finish of the surface should conform to the relevant requirement.

4.2. Mast post, rudder stock and others round shape components should be fine processed.

4.3. The adjoining plane of stern frame and stern tube, mutual adjoining plane of parts of combination stern tube should be precise processed, the surface can be rough machining.

4.4. Engine bed plate surface should be precise processed, other surface allow fine processed.

4.5. Measurement of main components of hull dimensions, the tolerances should not be more than the following required value:

a) The allowable deviation of material of keel, keelson, stem, stern frame, rudder stock, stern tube: length is ±0.3%; wide is ±1%; thickness (height) is ±1%

b) The allowable deviation of material of garboard plating, ship side planking, deck planking, longitudinal girder, beam stringer: width is ±5 mm; thickness is ±4mm.

c) The allowable deviation of deck beam, hatch end beam, half beam, hatch side girder, hatch coaming, engine base plate, deck plate, side planking: width is ±4mm, thickness is ± 2mm.

d) The allowable deviation of the height of side frame is ±3%

4.6. The allowable deviation of the hull principal dimensions:

a) The allowable deviation of ship length (L) is ±0.3%

b) The allowable deviation of ship breadth (B) is ±0.3%

c) The allowable deviation of ship depth (D) is ±0.4%

d) The allowable deviation of stem, centre line of stern frame and centre line of keel should not be greater than 5mm

e) The allowable deviation of centre line of tailshaft and centre line of rudder stock should not be greater than 3mm

f) The width of side frame at waterline level should not be greater than 0.3% of the width of waterline

5. Inspection of Nails, Screws and Bolts

5.1. Examine the strength performance test report of the connection of material, verify the whether the machined dimension of the connecting piece conform to the requirements.

5.2. Check whether the number and arrangement of nails, screws and bolts for connection of each component are conforming to the relevant requirements.

5.3. Check whether the size of the hole drilled for nails and bolts during fabrication with diameter 1mm less than the diameter of the nails and bolts to be fitted. Check whether the nails and bolts inserted into each component are fastened.

5.4. When using nails and bolts, gasket (rove) should be added. Before insert, the head should wrap with 2 to 3 layer of yarn (or rattan) soaked with putty. The nut of the bolts should be in the inboard of the hull.

5.5. The end of the joints of longitudinal structure, side shell and deck plating, except there is limitation in the structure, should fit in the transverse aggregate and fastened by bolts. The contact face must be closely fitted.

5.6. Except due to special condition in the structure, all nails, ends of bolts and the top surface of screws installed on board should be embedded 3mm to 10mm under the surface of components, and plastered by putty.

6. Caulk and Watertight

6.1. General requirement of caulking of hull

6.1.1. Caulking must not be carried out on any components when nails, screws and bolts are not in fasten condition or the timber is in wet condition.

6.1.2. The seam of all components such as hull plating, deck plating, deck house, bulkhead of superstructure and watertight transverse bulkhead, etc after caulking and all nails, screw and bolts should be plastered to ensure the watertightness and surface smoothness of the hull.

6.1.3. In the important watertight position, such as side planking, deck plating, watertight transverse bulkhead and water tank, etc, “clinching” and “spike nail” for connection of seam should be applied at suitable distance (about 100mm).

6.1.4. When the depth of crackle on the hull surface components exceeds 1/10 the thickness of the material, repair by caulking should be carried out. When there is decay, borer or other defects on components, patch should be applied (remove all the defected timber and inert the filler material of the caulk) to bride and fill up. For larger area, should gouge and clinching, and then patch to increase the adhesive strength.

6.1.5. The edge of the seam of the two plank should be beveled, the seam should be in “V” shape when place in position together.

6.1.6. The seam between two planks should be as close as possible. If the thickness of plank is less than 60mm, the outside gap of the seam should not be greater than 5mm, the inside gap of the seam should not be greater than 3mm. If the thickness of the plank is greater than 60mm, the outside gap of the seam should not be greater than 8mm, the inside gap of the seam should not be greater than 3mm.

6.1.7. The gap of the seam of hull plating, deck plating cannot meet the about requirement, it is allowed to use clinching to process.

6.2. The requirements of caulking technique

6.2.1. Caulking layer included bottom putty, filling material and top putty three parts. The bottom putty should be a smaller amount and evenly spread, do not put excessive putty. The filing material should be shredded into small piece and squeezed into the seam. After squeezed into the seam should have a recess of 2 ~ 5 mm. After the external area of the filler about 30% ~ 35% desiccated, the seam should be plastered by putty. The putty should be leveled with the surface of the plank.

6.2.2. The overlapping of the same putty connection should not be less than 100mm and should be repeatedly kneaded.

6.2.3. For double side caulk, caulking to be carried out in the inboard side before the outboard side. The depth of the caulk of the seam in the inboard side should be 10% ~ 20% of the plank thickness. The depth of the caulk of the seam in the outboard side should be 50% ~ 60% of the plank thickness. For single side caulk, the depth of the caulk should be 60% ~ 70% of the plank thickness.

6.2.4. If the putty is not congealed 15 days after the completion of the caulking of the hull, the reason to be find out and take necessary action.

6.3. Inspection of caulking material

6.3.1. Examine whether the yarn, gauze, rattan and putty are conforming the requirements of recognized classification societies or flag administrations.

6.3.2. Examine the certificate of the product of wood oil, whether the physical properties are conforming the requirements of recognized classification societies or flag administrations. The following simple testing methods can be used during survey to verify:

a) Smell: Whether there is a special odour of the wood oil;

b) Colour: Whether the oil is clear. The colour of good oil is pure and no impurity;

c) Viscosity: Use a rod to soak some oil and drop into still and clear water. Check whether the oil will congregate into a circular droplet and not diffuse. If the oil quickly diffused into the water, it means water content is high and it fake oil;

d) Boil: Put a spoon of wood oil into an iron pan, heat to 250^{o}C ~ 290^{o}C temperature. If the oil can form a honeycomb shape solid, the wood oil is pass.

6.4. Hull Tightness Test

6.4.1. After all the putty of the vessel dried up, tightness test is to be carried out before launching of the vessel. Surveyor can deem necessary the condition of the vessel to decide which part to be tested. During the test, no leakage occur in the part tested is

considered acceptable.

6.4.2. There are three types of tightness test, flood test, hose test and spray test:

a) Flood test: the height of the flooding to be up to maximum loaded draught for not less than 1 hour;

b) Hose test: The nozzle diameter for the test should not be less than 16mm. During the test, the height of the water jet should not be less than 10m and the distance between the nozzle and the testing area should not be greater than 3m;

c) Spray test: Use water spray to testing area and simulate the windy and rainy weather condition.

6.4.3. Flood test is applicable for the hull shell plate and water tank bulkhead; hose test is applicable for deck plate, deck house bulkhead and hatch cover; spray test is suitable for skylight of engine room, windows and doors of bridge and other windows and doors to open area.

6.4.4. When it is difficult to carry out tightness test when the vessel is on slipway, the tightness test can be carried out after the launching of the vessel with the approval from the surveyor.

7. Special Requirements and Inspection of Machinery and Electrical Installation

7.1. Inspection of main engine and gearbox installation

7.1.1. Main engine and gear box seating should have adequate strength and rigidity. The roughness of upper and lower contact area of seating should not exceed 6.3 μm, and the tolerance of the total length of plane should not exceed 0.10mm. The holding down fitted bolts of engine should not be less than 15% of the total bolts and minimum should have 4 fitted bolts. At least 2 fitted bolts are to be fitted for gearbox.

7.1.2. The foundation and the engine bed plate should be uniformly contact, the contact area should not be less than 75%.

7.1.3. One to three layer of metallic liners may be used for adjusting the space between the engine bed plate and foundation, and preventive measure is to be provided to avoid loosen of fitted bolts.

7.1.4. The gap between side frame and the casing of main engine and gear box shall not be less than 25 mm.

7.1.5. If the main engine has been installed on the slipway, the main engine and the shafting system to be re-examined after 48 hours of the launching of the vessel.

7.2. Inspection of lightning protection system

7.2.1. All wooden fishing vessels should be fitted with lightning protection.

7.2.2. Air terminals should be made from copper rod of not less than 12mm diameter or iron rod of not less than 25mm diameter, and project at least 150mm above the top of the vessel (or fittings).

7.2.3. Down conductors should have a minimum cross sectional area of 70mm^2 for copper tape or 100mm^2 for iron tape. The tape shall be solidly connected between air terminal and earth plate.

7.2.4. Down conductors should be securely connected between air terminal and earth plate. The earth plate shall be installed on exterior of hull shell plate and ensure the plate remain immersed when the vessel is rolling. The earth plate shall be of copper and the area shall not be less than 0.2m^2. The earth plate shall not be painted.

7.3. Inspection of earthing of electrical appliance

All electrical appliances should be earthed. The requirements of main earth plate and lightning earth plate are the same. However, the two systems shall not be connected to the same earth plate.

Note: The above are made reference to the relevant requirements of "The 'Ocean Fishing Vessels Statutory Survey Standard 2003' of Register of Fishing Vessels of the People's Republic of China"

Annex J-2

HULL INSPECTION REQUIREMENTS (OPERATION INSPECTION)OF WOODEN VESSEL

1. General Requirements

1.1. If the components or parts of the hull of wooden vessel under operation, exceed the required erosion (decay) limitation as specified in the following Table. The repair or renewal shall be carried out according to the requirements of original building.

Limitation of erosion (decay) of main components of hull

Serial No.	Components	Type of erosion, decay	Allowable erosion limit
1	Keel, keelson	Normal borer, decay	Depth exceeding 20% of the thickness; Partial depth exceeding 30% of the thickness
2	Hull shell plate	Borer, decay, wear down	Depth exceeding 25% of the thickness
3	Deck plate	Wear down, decay	Depth exceeding 25% of the thickness
4	Stem, rudder stock, deck beam, hatch side girder	Rotten	Depth exceeding 35% of the thickness
5	Side frame and it stiffeners	Erosion	Partial depth exceeding 25% of the thickness; Area of erosion more than 25% of the surface

1.2. On hull shell plate, main deck and other external and internal longitudinal components. If the depth and area of the wear and tear or decay affect the fastening function of the nails and bolts or cannot carry out caulking and there is leakage. The repair or renewal shall be carried out according to the requirements of original building.

1.3. Before docking of the vessel, the fuel tank, cargo hold, fish hold, refrigerating hold and water tank, etc should be emptied. Blocking should be properly arranged to avoid local concentration of loading.

1.4. Inspect of hull of wooden vessel also need to conform the relevant requirements of Chapter II of this Code.

2. Annual Survey

2.1. In general external inspection of each part of the hull is to be carried out. Particular attention will be paid on the main structural components of amidship and forward side planking (planking), rubbing strake, bulwark stay, bulwark stringer, fwd and aft handrail, deck longitudinal, etc. Also the technical condition of the caulk will be checked.

2.2. All opening and hatch arrangement to be inspected and tested. The relevant requirements of Load Line survey shall refer to Chapter IV of this Code.

3. Intermediate Survey

3.1. The inspection items, contents and requirements of intermediate survey shall include the annual survey items. In addition, the survey of hull bottom is to be carried out.

3.2. Intermediate survey shall normally carry out on slipway. External inspection of keel, garboard plate, bottom plate, bilge keel, stem, stern frame, rudder stock and keel band shall be carried out. The caulk of the underwater hull part to be carefully examined. When crack appear on caulk of seam, the caulk to be partially gouged out for inspection if necessary. Inspection shall also include the effectiveness of the coating for the prevention of borer, decay and anti-fouling.

3.3. The underwater hull inspection shall also include the examination of propeller, rudder, oil sealing arrangement of tail shaft and the examination and measurement of the rudder pintle clearance and tail shaft bearing clearance.

4. Renewal Survey

4.1. Renewal survey shall be carried out on slipway together with the repair works of the vessel if possible. Surveyor shall carry out survey together with the ship owner and the shipyard. According to the results of the survey and the requirements of Table at para. 1.1 of this Annex, verify the repair items of the vessel.

4.2. After docking of the vessel, the bottom sheathing and any sundries inside the fish hold, refrigerating hold and water tank etc. shall be removed. The paneling, insulation and other obstacle shall be partially removed, if necessary, to facilitate the inspection of the technical condition of the covered hull structure.

4.3. For vessel less than 10 years of age, inspection shall concentrate on the hull shell plate, keel band, deck plate, bulwark, cargo hold or fish hold, including the components near the insulation and the condition of the joints, tabled-scarf, caulk and coating, etc.

4.4. For vessel more than 10 years of age, more thorough inspection shall be carried out on main components of the vessels such as keel, stem, stern frame, side frame, deck beam, internal longitudinal girder, bulkhead, etc. To check the level of borer, decay, wear and tear and contact damage. If the damages exceeding the required limit, repair or renewal shall be carried out.

4.5. Full inspection shall be carried out for all the caulk below waterline. For vessels more than 8 years old, all caulk of the hull shall be gouged and renewed. In general the outer gap of the seam should not be greater than 15mm; the inner gap of the seam shall be closely fitted. Otherwise, it shall not carry out caulking. If the width of the seam is large and not suitable for caulking, the plank shall be replaced to reduce the width of the seam.

All caulk shall be subject to tightness test after repair or renewal.

4.6. When examine the condition of the stern structure, pay attention to distortion in the joints of components, leakage in seam, variation in shaft line of tailshaft, increase in vibration, etc. If abnormality find, repair shall be carried out. If the variation of the shaft line of tailshaft is due to insufficient hull strength, repairs shall combine with partial reinforcement of the strength and rigidity of the hull.

5. Hull Repair Requirements

5.1. When the main components of the hull exceeding the erosion (decay) limit prescribed in the Table at para. 1.1, the component shall be replaced. If the limit is not excess, the borer and decay part shall be removed. Use patch method to gouge and fill up. For wider area, rabbet shall be bored or clinching and patch to increase the adhesive strength.

5.2. If transverse cracks or broken damages appear in the components of the hull, the component shall be renewed.

5.3. If the joint in side shell, longitudinal components, strengthened deck plate, transverse framing of amidship area find loosen or crack or distortion appear in the seam. Repair and reinforcement of the structure shall be carried out.

5.4. In the seam and tabled-scarf area at the end face of the important components. If cross crack appear and the colour of the component near the crack changed to black, the component shall be replaced. Under the condition that the strength and watertighess are not affected, the main plank can be partially renewed.

5.5. The requirements for the precision of machining, tolerance after machining, connection method, the shifted distance between planks, choice of nails, screw or bolts, etc shall follow the relevant requirements of recognized classification societies or flag administrations.

5.6. The old caulking material shall be removed and re-filled with new caulking material in caulk required for repair. The bevel edge of the plank shall not be damage during the removed of old caulking material. The caulk shall be smooth, clean and grease free.

5.7. For scattered worm holes with diameter less than 5mm. The worm shall be removed and fill up with putty and gauze. For diameter less than 10mm, bore hole in way of the worm hole and remove the worm. Plug the hole with treenail and interlace the surrounding gap with gauze and cover with putty.

5.8. For exposed nuts, depend on the condition of the surrounding timber. Interlace with gauze and plaster with putty, if necessary. Not caulking shall be carried out if the bolt is not fastened.

6. Prevention of Worm and Decay

6.1. The periodical requirements of worm and decay preventive measure on main structural components:

a) The wooden structural components below fully loaded waterline shall carry out a worm prevention process every four years (in line with renewal survey).

b) The surface of all steel components below fully loaded waterline and weather exposed area shall be coated every year, can be in line with annual survey.

c) Anti-fouling coating for the vessel bottom shall be re-coated every year.

d) Asphalt type coating for under water hull below the fully loaded waterline and coating for the hull surface above fully loaded waterline and components inside accommodation. Shall be re-coated every two years together with renewal survey or intermediate survey.

Note: The above are made reference to the relevant requirements of "The 'Ocean Fishing Vessels Statutory Survey Standard 2003' of Register of Fishing Vessels of the People's Republic of China"

Annex L

IMPLEMENTATION OF THE REVISED REGULATIONS OF ANNEX I OF MARPOL 73/78 TO LOCALLY LICENSED VESSELS

Locally licensed oil carriers shall comply with the Merchant Shipping (Prevention Of Oil Pollution) Regulations and its amended Merchant Shipping (Prevention Of Oil Pollution)(Amendment) Regulation 2016 regarding the latest requirements with respect to control of oil pollution. The electronic version of the regulations is available at the following URL: http://www.gld.gov.hk/egazette/pdf/20162016/es22016201647.pdf

Annex M

GUIDANCE ON MACHINERY AND HULL WEAR DOWN OR CORROSION TOLERANCE LIMITS AND OTHER INSPECTION ITEMS

Note: If a vessel is classed with a recognized classification society (AO), the corresponding technical guidance of the classification society may be applied to such vessel.

(A) Hull

1. Repairing of Corroded Hull and Structural Member

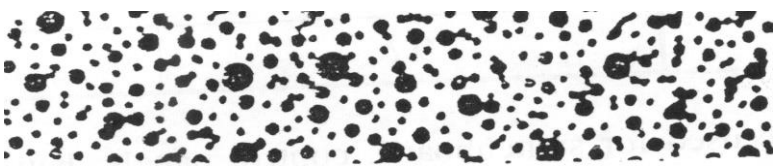
1.1 The thickness reduction of hull envelope plating and internal structural members caused by corrosion shall not be more than the specified percentage of the original built thickness as shown in the following table (in the case of increased thickness from minimum requirement will be separately considered):

Material / Structural Member	Corrosion Limit (%)	
	Steel	**Aluminium**
Deck Plating Shell Plating	30	15
Internal Structural Member	30	20
Seating for Main Engine, Crane, Windlass, etc.	25	15

When the corrosion exceeds the above limit, the relevant plate or structural member shall be cropped and renewed.

1.2 Local scar corrosion: the corroded member shall be cropped and renewed if the width of the scar exceeds 50mm or the depth of the scar exceeds 40% of the fabricated thickness.

1.3 Pitting corrosion: the corroded member shall be cropped and renewed if the depth of the pitting exceeds the limit of paragraph 1.1 and the pitted area exceeds 30% of the concerned area. (see following diagram for reference).



1.4 According to the requirements of paragraphs 1.1 to 1.3, the renewed plating shall be a minimum dimension of 150mm x150mm and the structural member shall be minimum 150mm in length.

1.5 Scattered pitting: pitting, which diameter between 15mm to 50mm and depth exceeds 50% of the fabricated thickness, generally may be repaired by welding. Prior to the repair the surface shall be properly cleaned; and after repair, the rebuilt areas shall be smoothened and ground to normal thickness.

1.6 For significant worn out structural member or suspected area, ultra-sonic test or other equivalent method may be required.

2. Other Requirement for Inspection of Structural Member

2.1 Buckling of plating(deformation of plating between framing)

Maximum allowable deflection =0.06s;
Where s= frame spacing at indents area (mm)

2.2 Indent of framing structure (deflection of combined framing and plating)

Maximum allowable defection *=6 l+10mm*;
Where l =span (m)

2.3 Buckling of plating and indent of framing structure are generally to be rectified by hot work; and if failed to return to original to be cropped and renewed.

2.4 Crack is not allowed in any case on hull envelope plating and structural members below main deck.

2.5 No buckling is allowed at bracket. Mis-alignment between beams and frames shall not exceed the frame thickness.

3. Water Tank & Oil Tank Tightness Test Pressure

3.1 Initial Inspection

Item	Type Of Tank	Water Pressure Head (m)
1	Fore / Aft Peak Tank, Deep Tank, Cofferdam	Top of air pipe
2	Fuel Tank, Liquid Cargo Tank	2.5m above highest point of tank top or to the height of the overflow whichever is the higher

3.2 Periodical Inspection

For all tanks, pressure test, which may be carried out using liquid of the tank carries, to top of air pipe or 2.5m above highest point of tank top as appropriate, or air test to 0.14kg/cm^2.

4. Requirements for the Inspection of Water Tightness by Hose Test

4.1 The water jet pressure shall not be less than 2 kgf/cm^2

4.2 Nozzle shall not be more than 1.5m from the test item

4.3 Nozzle diameter shall not be less than 13mm for vessels of length below 90 m.

5. Mooring Equipment

5.1 Wear down of chain cable and related parts shall not exceed 85% of the original diameter.

5.2 Loss of anchor weight shall not exceeds 20 % of original weight.

6. Wear Down Limit of Steering System and Tightness Test

6.1 Wear down tolerance for rudder

No.	Items	Wear Limit
(a)	Rudder stock	7 % of rule diameter
(b)	Kort nozzle, Rudder	30 % of design thickness
(c)	Flange	10 % of design thickness
(d)	Rudder chain	10 % of design diameter

Defect of steering component may be repaired by welding.

6.2 Kort nozzle and double plate rudder tightness test

(i) Hydraulic test - 0.25 kg/cm^2

(ii) Air test - 0.20 kg/cm^2

(B) Machinery & Electrical

7. Air Receiver

7.1 Corrosion limit of plating for air receiver shall not exceed 10% of original thickness.

7.2 Air receiver and piping system shall be hydraulic tested to the pressure specified in the IIIA/15.6.

8. Tail Shaft and Bearing

8.1 Polishing may be used to remove defect on tail shaft, however, the diameter of the tail shaft shall not be less than rule requirement after surface finishing.

8.2 Clearance limit between tail shaft and bearing

Tail Shaft Diameter (Mm)	Bearing Material	Lignum Viatae, Layered Rubber	White Metal Alloy		Cast Rubber
	Clearance Limit (mm)		Oil lubricated	Water lubricated	
<100		4.0	1.50	2.0	3.5
100~<150		4.4	1.65	2.2	4.4
150~<200		4.8	1.80	2.4	4.8
200~<250		5.2	1.95	2.6	-

9. Minimum Allowable Insulation Resistance Value

For the electrical circuit of nominal voltage over 50V, the insulation resistance shall not be less than 1.0 MΩ.

Note: The insulation resistance shall be measured by a 500V megger tester.

第 I 或 II 類別船隻的最高可運載人數的計算及/或檢驗證明裝置是適合由一名 "兼任輪機員船長"操控

Determination of maximum number of persons to be carried and / or Survey Certification on installation suitable for "combined coxswain" operation of a Class I or II vessel

Name of Vessel……Certificate of Ownership No:……Class/ Cat Vsl:……

船名 :……擁有權證明書編號 :……船隻類別/分類:……

Type of vessel 船隻類型:……

1 (a) 最高可運載量和座椅 Maximum Carrying Capacity and Seating

船隻的最高可運載量(包括乘客和船員在內)的計算方法如下: (參照第 V 章相關的要求)
The maximum carrying capacity (including passengers and crew) are determined as follows:(Chapter V refers)

[ ] (i) 第二類別機動船隻在特定遮蔽水域 Mechanized Class II vessel operating in specified sheltered water

0.35 x L × B passenger numeral	所得乘客人數	( ) ≤ 10
Minimum number of crew	最少船員名額	( ) ≤ 4
Determined Total No. of Persons	計算總人數	( )

[ ] (ii) 圍蔽式甲板船隻 enclosed deck vessel

總人數 total number of persons = L × B ×Cnp (Cnp : 0.35 ~ 0.85)

計算總人數 Determined Total No. of Persons ( )

及/and 船東指示要求最少船員名額 Owner's indicated the requested minimum number of crew = ( )

式中 where L : 船隻(甲板)的總長(米) vessel's (deck) length overall in metres = ( )

B : 船隻的最大寬度(米) vessel's maximum breadth in metres = ( )

(b) 乘客坐椅的形狀、設計與固定在甲板的狀況須足以應付所需服務。第 I/4.2 節所述高速船隻的坐椅結構和安全帶須遵守第 XI 章所訂明的相關規定。乘客坐椅安置及要求應按照第 V/3 及 4.2.2 節的相關規定。

The form, design and attachments to the deck of passenger seats should be adequate for the intended service. The seating construction and safety belts on high speed vessels as stated in Ch. I/4.2 should comply with the relevant requirements specified in Ch. XI. Seating arrangement and requirements should be as per Ch V/3 and 4.2.2 as relevant.

不適用 Not applicable

足夠 / 不足夠 Adequate / Not Adequate

(c) 運載乘客的船隻之乘客空間的標記

Marking in Passenger Space for vessel carrying passengers

須在乘客上船的顯眼位置，以中、英文註明每層甲板可載運的乘客人數，如以下所示
The number of passengers in which each deck can accommodate should be indicated, in a conspicuous location, at all spaces where passengers will be embarking, in Chinese and English :-

上層甲板 Upper level	( )	不適用 Not applicable
主甲板 Main Deck	( )	
等等 Etc.	( )	
最高乘客名額 Maximum number of passengers	( )	已標記 / 未有標記 **Marking Completed / Marking Not Done**
最少船員名額 Minimum number of crew	( )	
最高運載量 Maximum carrying capacity	( )	

2. 證明這船隻裝置是適合由一名 "兼任輪機員船長"操控
Certification on installation suitable for "Combined Coxswain" operation for this vessel

不適用 Not applicable

適合 / 不適合 Suitable / Not suitable

以此證明這船隻的無人操作機器艙間備有適合由一名"兼任輪機員船長"操控的配備並經檢驗及測試滿意，包括艙底水警報，主要的主機控制、儀錶、主機及發電機故障警報裝置，主機、發電機及抽氣扇的遙控關閉，煙霧偵測及警報裝置等裝置。(參照第 IIIA/18 節及第 XII 章相關的要求)

This is to certify that this vessel has appropriately equipped, inspected and tested satisfactory, including fittings of bilge alarm, essential main engine controls, indicators and main / generator engines abnormal warning alarms, remote shutdown of main / generator engines and ventilation fans, and a fire or smoke detection system etc., as appropriate, for unattended machinery space requirements suitable for "combined coxswain" operation. (Refers to relevant requirements in Ch. IIIA/18 and Chapter XII)

- 裝置 / 額外詳細資料 Installation / Additional Details:
-

備註 Remark : (如有需要可另加頁數 additional sheet if required)

……

特許驗船師姓名 / 特許機構名稱 / 獲承認的當局及其驗船師姓名

Name of Authorized Surveyor / Authorized Organization / Recognized Authority and name of surveyor

……

簽署 Signature ……日期 Date ……

For use on new wooden kaito / fishing sampan / GRP or wooden small boat or sampan etc.

適用於新船木殼街渡 /漁船舢舨 / 玻璃纖維或木質小船或舢舨等

(Vessel length less than 15 m /船隻長度小於 15 米)

Simple Plans Required Approval for Initial Licensing of Local Vessels

本地船隻首次牌照 需要審批的簡單圖則

* Delete where not appropriate / 刪去不需要處		File No. / 檔案號碼	
Licence No./ Cert of Ownership no. 牌照號碼 / 船隻擁有權證明書號碼		Vessel Class / Type / Category 船隻 類別 / 類型 / 種類	

Approval Plans / 審批圖則	**Remark /備註**
(A) General Plans /一般圖則	
1. 簡單圖則 ***Plan(Simp)-G –01*** **General Arrangement Plan** (Owner to provide necessary information on layout, decks etc.) **一般佈置圖則** (船東提供所需資料如外形、甲板層數等)	Yes / No / Not Applicable * 有 / 沒有 / 不需 *
2. 簡單圖則 ***Plan(Simp)-G-02 /11*** (Only applicable to vessel carrying more than 4 passengers /只適用載乘客 4 人以上) **Passenger Space (shelter)/ Seating Arrangement & Position / Freeboard Mark Diagram** **乘客艙(遮閉安排) / 座位佈置及座位設置 / 吃水標示意圖則**	Yes / No / Not Applicable * 有 / 沒有 / 不需 *
3. *簡單圖則* ***Plan(Simp)-G –01+ HS-01/ 09*** (equiv to *Plan-G-01and Plan-H-09)* (Only applicable to vessel length less than 8 m / 只適用於船隻長度小於 8 米) **Vessel Particulars , General Arrangement and** **Basic Hull and Deck Plate Thickness Diagram** **船隻特別資料、 一般佈置及基本船殼和甲板之板厚示意圖則**	Yes / No / Not Applicable * 有 / 沒有 / 不需 *
(B) Hull and Safety Equipment Plans / 船殼及安全設備圖則	
4. 簡單圖則 ***Plan(Simp)-HS-01/ 09*** *(equiv to Plan- HS-03, H-09*) **Vessel Particulars , and Basic Hull and Deck Plate Thickness Diagram** **船隻特別資料及基本船殼和甲板之板厚示意圖則**	Yes / No / Not Applicable * 有 / 沒有 / 不需 *
5. 簡單圖則 ***Plan(Simp)-HS-07*** **Inclining Experiment Report/Rolling Period / Simple Inclining - Test Report** **傾斜試驗／橫搖週期 / 簡單傾斜- 測試報告**	Yes / No / Not Applicable * 有 / 沒有 / 不需 *
6. 簡單圖則 ***Plan(Simp)-HS –10A&B (HS-10C)*** **LSA & FFA Installation and Arrangement Diagram** **救生及救火設備及佈置示意圖則**	Yes / No / Not Applicable * 有 / 沒有 / 不需 *
7. 簡單圖則 ***Plan(Simp)-HS –10C*** *(Not applicable to open boat* / 開敞船隻不需要) **Escape Installation and Arrangement Diagram** **逃生設備及佈置示意圖則**	Yes / No / Not Applicable * 有 / 沒有 / 不需 *
8. 簡單圖則 ***Plan(Simp)-HS –10D*** **Lights, Shapes & Sound Signals Installation and Arrangement Diagram** **號燈、號型、聲號備及佈置示意圖則**	Yes / No / Not Applicable * 有 / 沒有 / 不需 *
(C) Machinery Installation Plans 機器及其系統設備圖則	
9. 簡單圖則 ***Plan(Simp)-M-01/ to / 10 etc.***	Yes / No / Not Applicable * 有 / 沒有 / 不需 *
(D) Electrical Installation Plans 電器及其系統設備圖則	
10. 簡單圖則 ***Plan(Simp)-E-01 / to / 05 etc.***	Yes / No / Not Applicable * 有 / 沒有 / 不需 *
(C/D) Machinery / Electrical Installation Plans 機器/電器及其系統設備圖則	
11. 簡單圖則 ***Plan(Simp)- M-01/ to / 10 + E-01 / to /05 etc.***	Yes / No / Not Applicable * 有 / 沒有 / 不需 *

Note : If required, owner shall submit additional plans to supplement for deficient information (please refer to relevant Code of Practice or regulation).

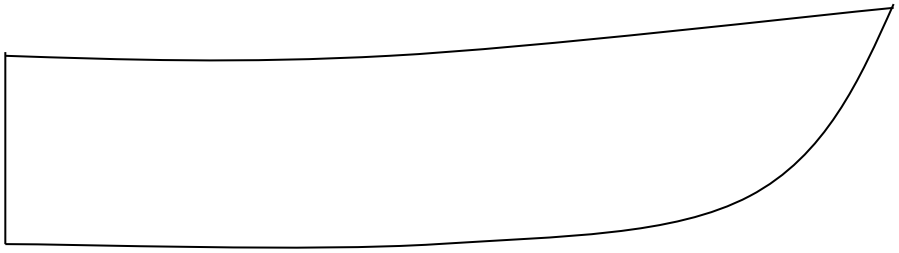
註 : 如有需要，船東須另加圖則以補充不足的資料 (參考本有關 工作守則或規例) 。

簡單圖則 Plan(Simp)-G –01

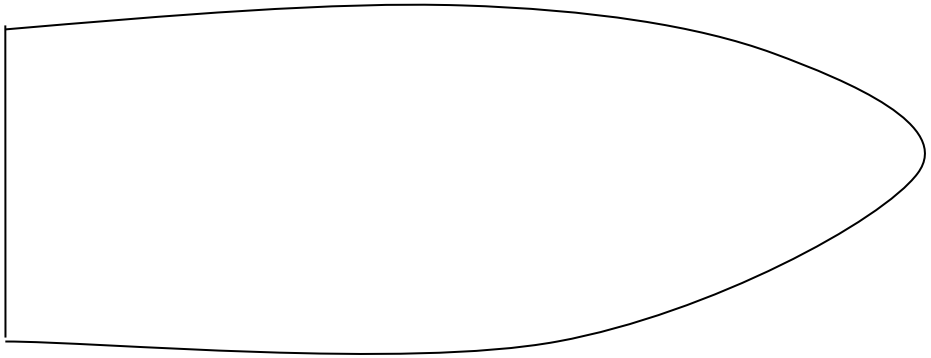
General Arrangement Plan (Owner to provide necessary information on layout, decks etc.)

一般佈置圖則 (船東提供所需資料如外形、甲板層數等)

(Note : A copy of this diagram shall be kept onboard)
(註 : 一份此圖則須放置在船上)



側面圖
Side View Profile



甲板
DECK

Remarks 備註:

1. If there is superstructure, please indicate.
   如設有上層建築, 請標示
2. Details can be supplement by photos or separate sheets.
   詳細可以相片補充或另加紙張
3. Not to proportion/scale.
   不按比例/標尺

Vessel information **船隻資料**	**Content** **資料內容**
1. File No. 檔案號碼	
2. Licence No./ Cert of Ownership no. 牌照號碼 / 船隻擁有權證明書號碼	
3. Vessel Class / Type / Category 船隻 類別 / 類型 / 種類	
4. Length 長度	
5. Width 闊度	
6. Depth 深度	
7. No. of decks 甲板層數 (Please Show Location / 請顯示位置)	
Approved by 經辦審批 :	Date 日期 :

簡單圖則 Plan(Simp)-G-02 /11

(Only applicable to vessels carrying more than 4 passengers */只適用載乘客 4 人以上)*

Passenger Space (shelter)/ Seating Arrangement and Position / Freeboard Mark Diagram

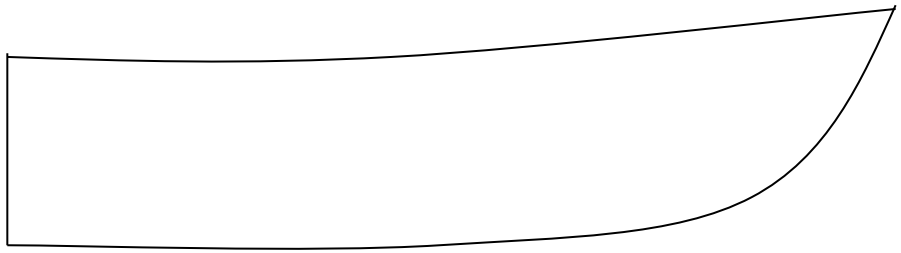
乘客艙(遮閉安排) / 座位佈置及座位設置 / 吃水標 示意圖則

(Note : A copy of this diagram shall be kept onboard)

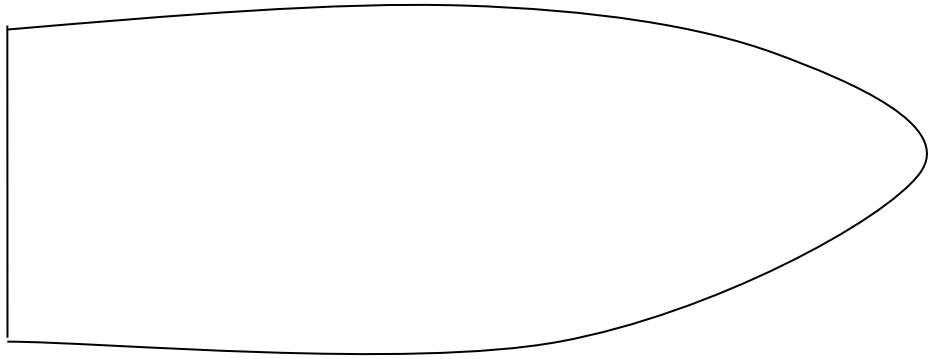
(註 : 一份此圖則須放置在船上)

Remarks 備註:

1. If there is superstructure, please indicate.
   如設有上層建築, 請標示
2. Details can be supplement by photos or separate sheets.
   詳細可以相片補充或另加紙張
3. Not to proportion/scale.
   不按比例/標尺



側面圖
Side View Profile



甲板
DECK

Vessel information **船隻資料**	**Content** **資料內容**
1. File No. 檔案號碼	
2. Licence No./ Cert of Ownership no. 牌照號碼 / 船隻擁有權證明書號碼	
3. Vessel Class / Type / Category 船隻 類別 / 類型 / 種類	
4. Length 長度	
5. Width 闊度	
6. Depth 深度	
7. Freeboard Mark (mm below main deck) 吃水標 (主甲板以下(mm)) (Please Show Location / 請顯示位置)	
8. Seating Arrangement / Position(*) 座佈置及座位設置(*)	
Approved by 經辦審批 :	Date 日期 :

(Only applicable to vessel length less than 8 m / 只適用於船隻長度小於 8 米)

簡單圖則 Plan(Simp)- G-01+ HS-01/09

Vessel Particulars / General Arrangement and Basic Hull and Deck Plate Thickness Diagram

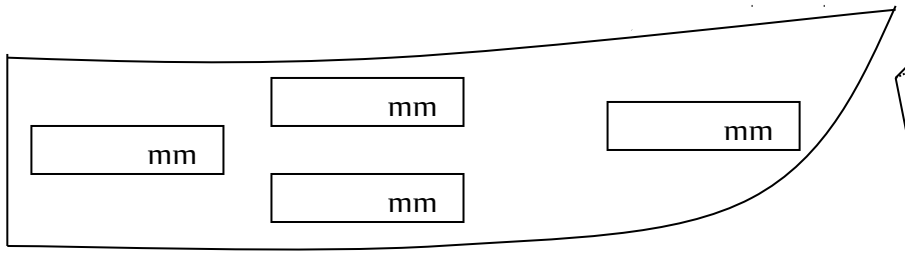
船隻特別資料/一般佈置/及基本船殼和甲板之板厚示意圖則

(Note : A copy of this diagram shall be kept onboard)

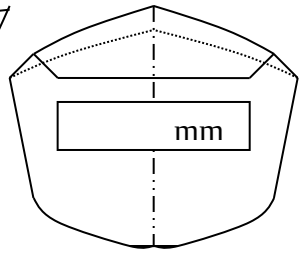
(註 : 一份此圖則須放置在船上)

Remarks 備註:

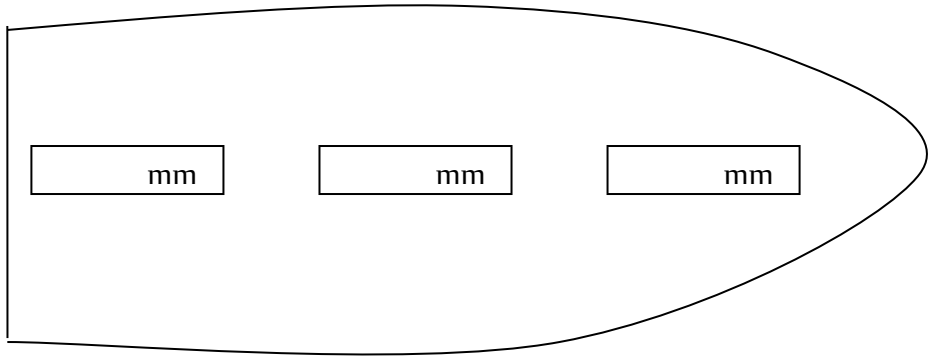
1. If there is superstructure, please indicate.
   如設有上層建築, 請標示
2. Details can be supplemented by photos or separate sheets.
   詳細可以相片補充或另加紙張.
3. Please show by dotted line long/transverse frame.
   請以虛線列出縱及橫向肋骨.
4. Not to proportion/scale. / 不按比例/標尺



船旁及船底板
SIDE & BOTTOM PLATING



船尾板圖
TRANSOM



甲板
DECK PLATING

Vessel Particulars & Basic Hull information **船隻特別資料及基本船殼資料**	**Content** **資料內容**
1. File No. 檔案號碼	
2. Licence No./ Cert of Ownership no. 牌照號碼 / 船隻擁有權證明書號碼	
3. Vessel Class / Type / Category 船隻 類別 / 類型 / 種類	
4. Length 長度	
5. Width 闊度	
6. Depth 深度	
7. Material 構造材料 (GRP 或 木質)	
8. Number of Transverse Frame 橫架數目	
9. Number of Long. Girder/Keelson/ Frame 縱龍骨/邊龍骨/直隔擋數目	
10. Number / Size of Buoyancy Space 浮艙數目及容量 _____ / _____ (Please show location/ 請顯示位置)	
11. Hull design / construction standards /rules adopted 應用的船殼/結構標準/規則	
Approved by 經辦審批	Date 日期

簡單圖則 Plan(Simp)-HS-01/09

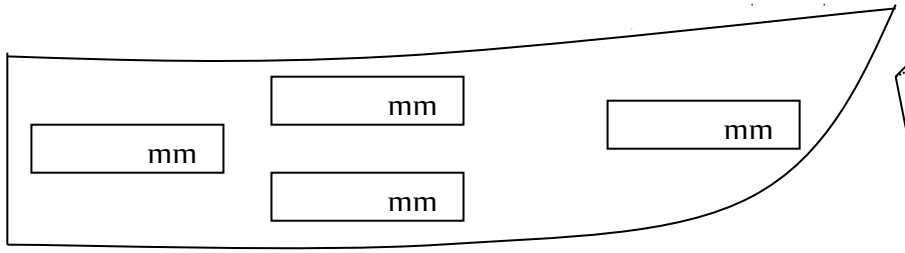
Vessel Particulars and Basic Hull and Deck Plate Thickness Diagram

船隻特別資料及基本船殼和甲板之板厚示意圖則

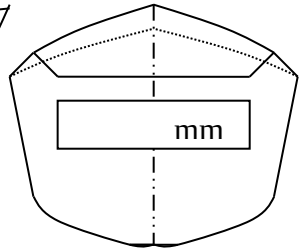
(Note : A copy of this diagram shall be kept onboard)
(註 : 一份此圖則須放置在船上)

Remarks 備註:

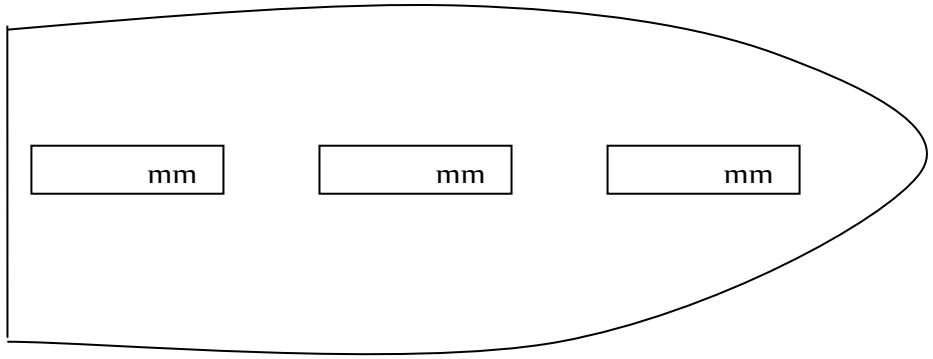
1. If there is superstructure, please indicate.
   如設有上層建築, 請標示
2. Details can be supplemented by photos or separate sheets.
   詳細可以相片 補充或另加紙張.
3. Please show by dotted line long/transverse frame.
   請以虛線列出縱及橫向肋骨.
4. Not to proportion/scale. / 不按比例/標尺



船旁及船底板
SIDE & BOTTOM PLATING



船尾板圖
TRANSOM



甲板
DECK PLATING

Vessel Particulars & Basic Hull information **船隻特別資料及基本船殼資料**	**Content** **資料內容**
1. File No. 檔案號碼	
2. Licence No./ Cert of Ownership no. 牌照號碼 / 船隻擁有權證明書號碼	
3. Vessel Class / Type / Category 船隻 類別 / 類型 / 種類	
4. Length 長度	
5. Width 闊度	
6. Depth 深度	
7. Material 構造材料 (GRP 或 木質)	
8. Number of Transverse Frame 橫架數目	
9. Number of Long. Girder/Keelson/ Frame 縱龍骨/邊龍骨/直隔擋數目	
10. Number / Size of Buoyancy Space 浮艙數目及容量 _____ / _____ (Please show location/ 請顯示位置)	
11. Hull design / construction standards /rules adopted 應用的船殼/結構標準/規則	
Approved by 經辦審批	Date 日期

簡單圖則 ***Plan(Simp)-HS-07***

Inclining Experiment Report/Rolling Period / Simple Inclining - Test Report
傾斜試驗／橫搖週期 / 簡單傾斜- 測試報告

Remarks 備註:

1. Details can be supplemented by photos or separate sheets.
   詳細可以相片補充或另加紙張.
2. Please show by dotted line long/transverse frame.
   請以虛線列出縱及橫向肋骨.
3. Not to proportion/scale.
   不按比例/標尺

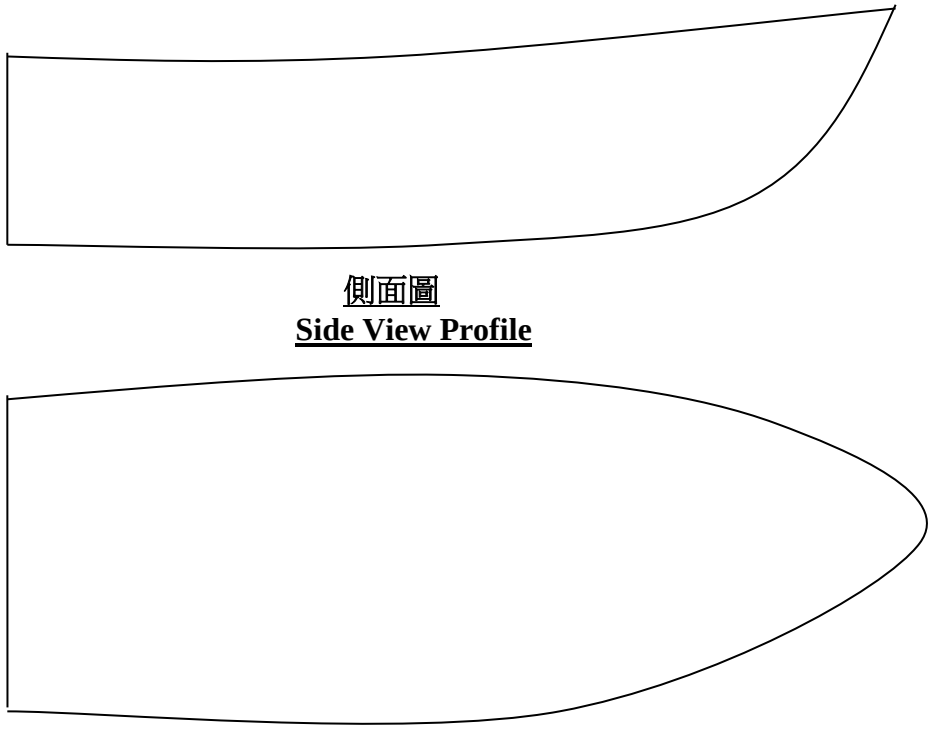
Vessel Particulars & Basic Hull information **船隻特別資料及基本船殼資料**	**Content** **資料內容**
1. File No. 檔案號碼	
2. Licence No./ Cert of Ownership no. 牌照號碼 / 船隻擁有權證明書號碼	
3. Vessel Class / Type / Category 船隻 類別 / 類型 / 種類	
4. Length 長度	
5. Width 闊度	
6. Depth 深度	
7. Material 構造材料 (GRP 或 木質)	
8. Number of Transverse Frame 橫架數目	
9. Number of Long. Girder/Keelson/ Frame 縱龍骨/邊龍骨/直隔擋數目	
10. Number / Size of Buoyancy Space 浮艙數目及容量 _____ / _____ (Please show location/ 請顯示位置)	
Approved by 經辦審批	Date 日期

簡單圖則 Plan(Simp)-HS –10A&B (HS-10C)

LSA & FFA Installation and Arrangement Diagram

救生及救火設備及佈置示意圖則

(Note : A copy of this diagram shall be kept onboard)
(註 : 一份此圖則須放置在船上)



側面圖
Side View Profile

甲板
DECK

Remarks 備註 :

1. If there is superstructure, please indicate.
   如設有上層建築, 請註明
2. May use separate sheet for each arrangement of information
   可用另外紙張顯示每種設備或佈置
3. Escape routes can be shown in this plan or in separate sheets.
   逃生佈置可顯示在本圖則上或另外紙張
4. Details can be supplemented by photos or separate sheets.
   詳細可以相片補充或另加紙張
5. Not to proportion/scale.
   不按比例/標尺

Vessel information 船隻資料		**Content 資料內容**	
1. File No. 檔案號碼			
2. Licence No. / Cert of Ownership no. 牌照號碼 / 船隻擁有權證明書號碼			
3. Vessel Class / Type / Category 船隻 類別 / 類型 / 種類			
4. LSA & FFA installation 救生及救火設備		(Please show location/ 請顯示位置)	
Item	No		
(a)			
(b)			
(c)			
(d)			
(e)			
(f)			
Approved by 經辦審批		Date 日期	

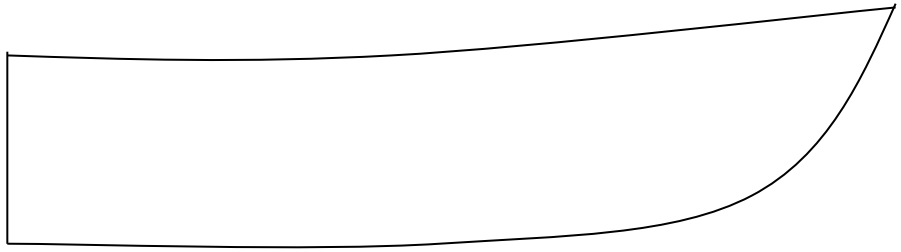
簡單圖則 Plan(Simp)-HS –10C *(Not applicable to open boat / 開敞船隻不需要)*

Escape Installation and Arrangement Diagram

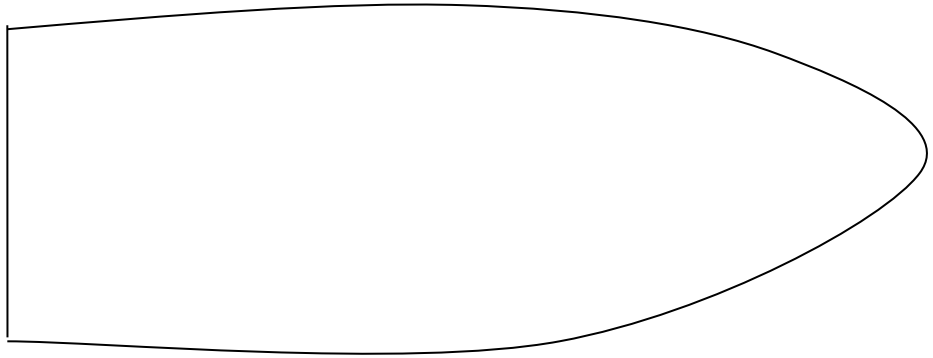
逃生設備及佈置示意圖則

(Note : A copy of this diagram shall be kept onboard)

(註 : 一份此圖則須放置在船上)



側面圖
Side View Profile



甲板
DECK

Remarks 備註:

1. If there is superstructure, please indicate.
   如設有上層建築, 請標示
2. Details can be supplemented by photos or separate sheets.
   詳細可以相片補充或另加紙張
3. Not to proportion/scale.
   不按比例/標尺

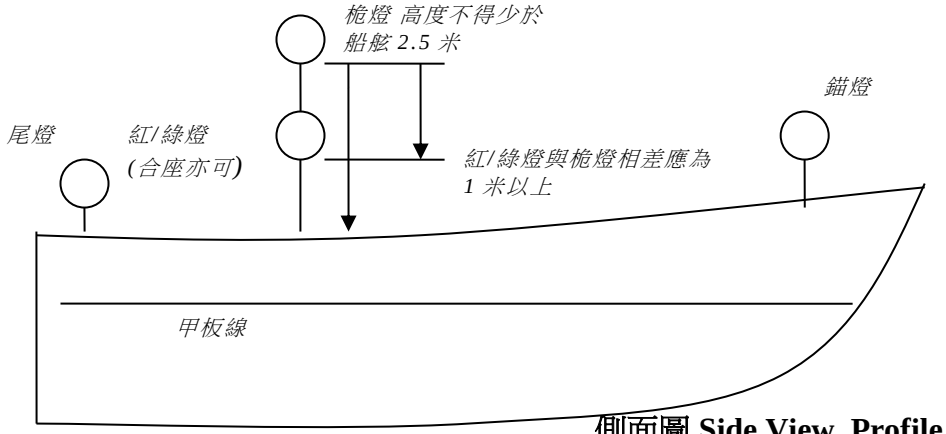
Vessel information **船隻資料**	**Content** **資料內容**
1. File No. 檔案號碼	
2. Licence No. / Cert of Ownership no. 牌照號碼 / 船隻擁有權證明書號碼	
3. Vessel Class / Type / Category 船隻 類別 / 類型 / 種類	
4. Escape Installation 逃生及設備 (Please show location/ 請顯示位置)	
Approved by 經辦審批	Date 日期

簡單圖則 Plan(Simp)-HS –10D

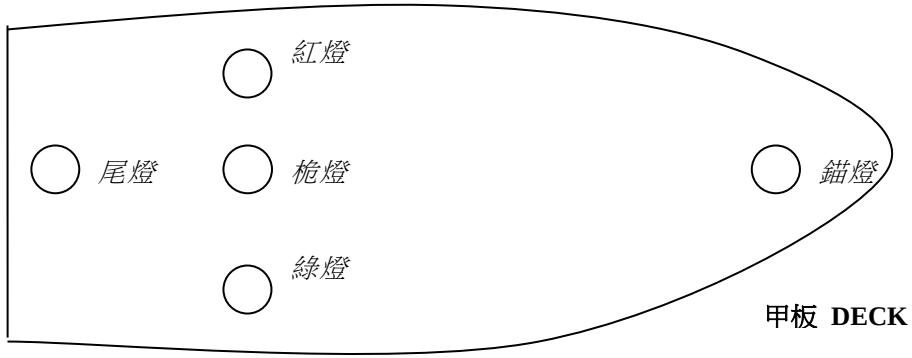
Lights, Shapes & Sound Signals Installation and Arrangement Diagram

號燈、號型、聲號設備及佈置示意圖則

(Note : A copy of this diagram shall be kept onboard)
(註 : 一份此圖則須放置在船上)



側面圖 Side View Profile



註: 1) 長度未滿 7 米，最大航速不超過 7 節，只需環照白(錨燈)一盞。如條件許可，亦需裝設紅及綠燈。
2) 長度滿 7 米至小於 12 米，需加 3 個黑色球體，1 個黑色菱形體及一個能發出有效聲號器具。
3) 長度滿 12 米至小於 20 米，需加 2 支環照紅(失控燈) ，1 個黑色菱形體及 3 個黑色球體，號笛及號鐘各一個。

Remarks 備註:

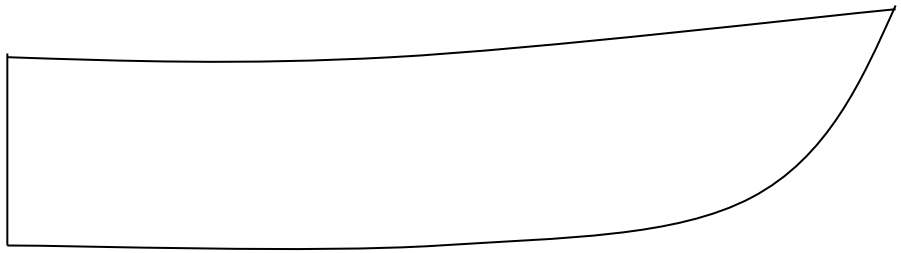
1. If there is superstructure, please indicate.
   如設有上層建築, 請標示
2. Details can be supplemented by photos or separate sheets.
   詳細可以相片補充或另加紙張
3. Not to proportion/scale.
   不按比例/標尺

Vessel information 船隻資料	**Content 資料內容**
1. File No. 檔案號碼	
2. Licence No. / Cert of Ownership no. 牌照號碼 / 船隻擁有權證明書號碼	
3. Vessel Class / Type / Category 船隻 類別 / 類型 / 種類	
4. Lights, Shapes & Sound Signals installation 號燈、號型、聲號設備 (Please show location/ 請顯示位置)	
Approved by 經辦審批	Date 日期

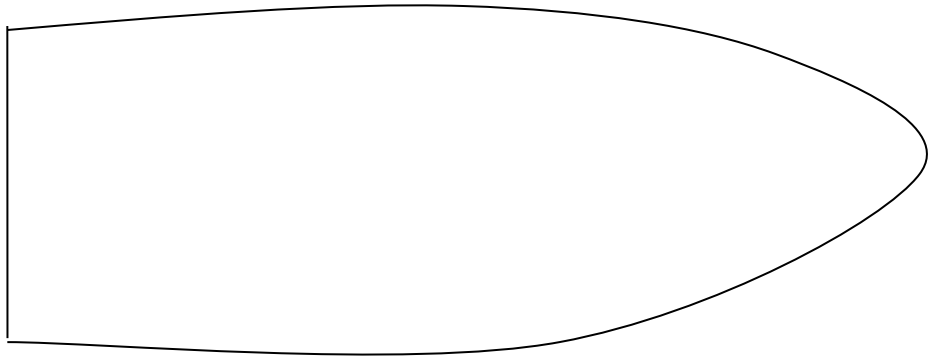
Machinery Installation Plans
機器及其系統設備圖則

(Note : A copy of this diagram shall be kept onboard)
(註 : 一份此圖則須放置在船上)

簡單圖則 Plan(Simp)-M-01/ / 16 etc



側面圖
Side View Profile



甲板
DECK

Remarks 備註:

1. If there is superstructure, please indicate.
   如設有上層建築, 請標示
2. Details can be supplemented by photos or separate sheets.
   詳細可以相片補充或另加紙張
3. Not to proportion/scale.
   不按比例/標尺

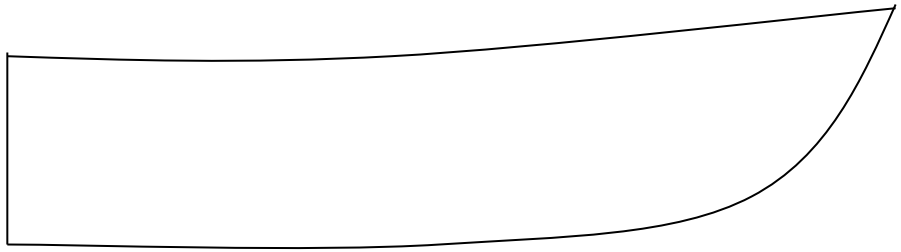
Vessel information **船隻資料**	**Content** **資料內容**
1. File No. 檔案號碼	
2. Licence No. / Cert of Ownership no. 牌照號碼 / 船隻擁有權證明書號碼	
3. Vessel Class / Type / Category 船隻 類別 / 類型 / 種類	
4. No. of Main engines/ Propellers. 主機 / 推進器 數量	
5. Main engine maker /type. 主機製造商/型類	
6. Main engine serial number. 主機號碼	
7. Total engine power (kW)/ RPM. 主機總功率 (千瓦) / 轉速	
8. Fuel type/ tank no./ total capacity 燃油類 / 油缸數量 / 總容量	
9. Generator IC engine maker /type. 發電內燃機製造商/型類	
10. Generator engine serial number. 發電內燃機號碼	
11. Fuel type/ tank no./ total capacity 燃油類 /油缸數量 / 總容量 (If not same as above / 如與上不同)	
(Please show location/ 請顯示位置)	
Approved by 經辦審批	Date 日期

Electrical Installation Plans

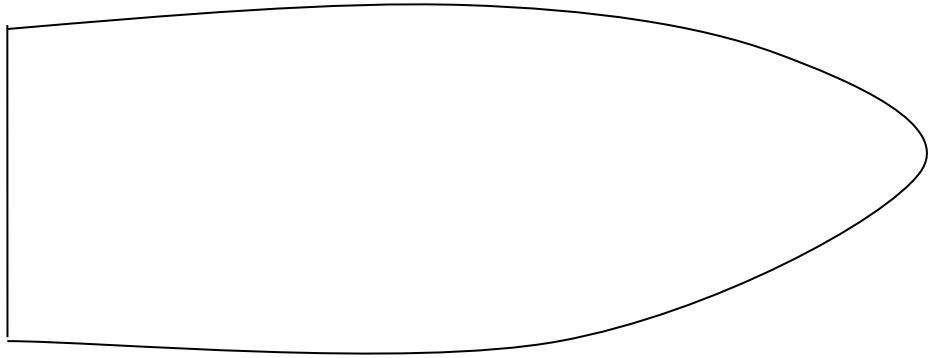
電器及其系統設備圖則

(Note : A copy of this diagram shall be kept onboard)
(註 : 一份此圖則須放置在船上)

簡單圖則 ***Plan(Simp)-E 01/ / 05 etc***



側面圖
Side View Profile



甲板
DECK

Remarks 備註:

1. If there is superstructure, please indicate.
   如設有上層建築, 請標示
2. Details can be supplemented by photos or separate sheets.
   詳細可以相片補充或另加紙張
3. Not to proportion/scale.
   不按比例/標尺

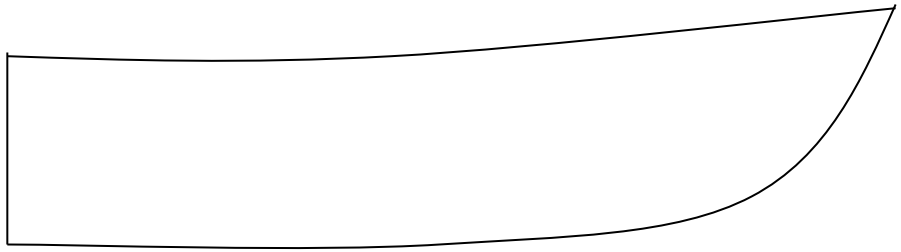
Vessel information **船隻資料**	**Content** **資料內容**
1. File No. 檔案號碼	
2. Licence No./ Cert of Ownership no. 牌照號碼 / 船隻擁有權證明書號碼	
3. Vessel Class / Type / Category 船隻 類別 / 類型 / 種類	
4. Generator maker /type. 發電機製造商/型類	
5. No. of Generator / serial no.. 發電機數目 / 號碼	
6. Total engine power (kW)/ RPM. 發電總功率 (千瓦) / 轉速(每分)	
7. Voltage (V) / Frequency (Hz) 電壓 (伏特) / 週頻 (轉數/每秒)	
(Please show location/ 請顯示位置)	
Approved by 經辦審批	Date 日期

ANNEX Q

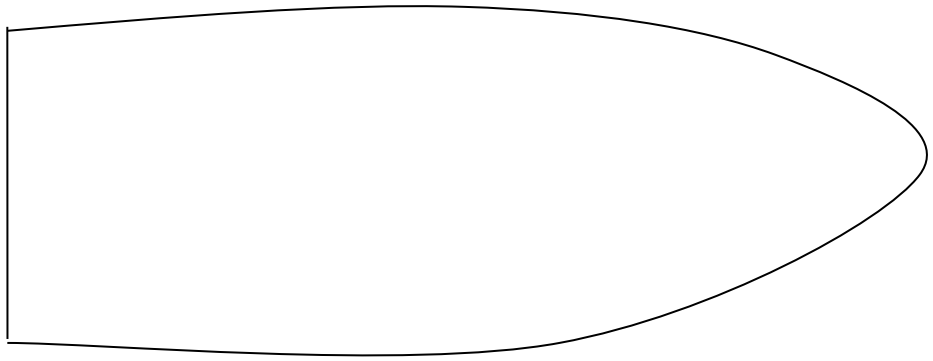
Machinery & Electrical Installation Plans
機器與電器及其系統設備圖則

(Note : A copy of this diagram shall be kept onboard)
(註 : 一份此圖則須放置在船上)

簡單圖則 Plan(Simp)-M-01/ / 16 & E-01/ /05 etc



側面圖
Side View Profile



甲板
DECK

Remarks 備註:

1. If there is superstructure, please indicate.
   如設有上層建築, 請標示
2. Details can be supplemented by photos or separate sheets.
   詳細可以相片補充或另加紙張
3. Not to proportion/scale.
   不按比例/標尺

Vessel information **船隻資料**	**Content** **資料內容**
1. File No. 檔案號碼	
2. Licence No. / Cert of Ownership no. 牌照號碼 / 船隻擁有權證明書號碼	
3. Vessel Class / Type / Category 船隻 類別 / 類型 / 種類	
4. No. of Main engines/ Propellers. 主機 / 推進器 數量	
5. Main engine maker /type. 主機製造商/型類	
6. Main engine serial number. 主機號碼	
7. Total engine power (kW)/ RPM. 主機總功率 (千瓦) / 轉速	
8. Fuel type/ tank no./ total capacity 燃油類 / 油缸數量 / 總容量	
9. Generator IC engine maker / type. 發電內燃機製造商/型類	
10. Generator engine serial no. 發電內燃機號碼	
11. Generator maker /type. 發電機製造商/型類	
12. No. of Generator / serial no.. 發電機數目 / 號碼	
13. Total engine power (kW)/ RPM. 發電總功率 (千瓦) / 轉速(每分)	
14. Voltage (V) / Frequency (Hz) 電壓 (伏特) / 週頻 (轉數/每秒)	
(Please show location/ 請顯示位置)	
Approved by 經辦審批	Date 日期

Annex U-1

DOMESTIC LIQUEFIED PETROLEUM GAS INSTALLATION

1 Marking

1.1 Liquefied petroleum gas (LPG) cylinders shall be clearly marked of the name of their contents.

2 Properties of LPG

2.1 Possible dangers arising from the use of LPG appliances include fire, explosion and asphyxiation due to leakage of gas from the installation, etc.

2.2 LPG is heavier than air and, if released in a space with coaming, may travel some distance whilst seeking the lowest part of that space and its adjourning spaces. The accumulation of LPG probably poses dangerous consequence and fatality when triggered by inadvertent spark or ignition.

3 Storage

3.1 No more than 50 kg (or combined water capacity 130 litres) of LPG shall be carried on board.

3.2 LPG cylinders and expended cylinders shall as far as practicable be stowed on open decks. The cylinders and all valves, pressure regulators and pipes leading from such cylinders shall be properly secured, protected against mechanical damage, and excessive variations in temperature and direct rays of the sun. The cylinders shall be installed upright to prevent liquid from flowing into the pipes.

3.3 The LPG cylinder storage locker, and associated pipes and joints shall be readily accessible for the check of suspected leaks; and shall be as far away from any air pipes, ventilators, hatchways, etc. and close to the cooking appliances as practicable.

3.4 Except as necessary for service within the space, electrical wiring and fittings shall not be permitted within compartments used for the storage of LPG. Where such electrical fittings are installed, they shall be to the satisfaction of the Department for use in a flammable atmosphere. Sources of heat shall be kept clear of such spaces and "不准吸煙 No Smoking" and "不准明火No naked light" notices shall be displayed in a prominent position.

3.5 Compartments used for the storage of LPG shall not be used for storage of other combustible products nor for tools or objects nor part of the gas distribution system. The LPG locker shall be marked with “LPG” on the door of the locker.

4 Installation

4.1 LPG pipes-

(a) LPG pipes shall be of solid drawn copper alloy or stainless steel pipes, with appropriate compression or screwed fittings.

(b) Flexible connections shall be avoided. Should they be used, an approved type of synthetic rubber hose connection shall be fitted. When used with flexible connections, appliances shall be controlled from the nearest isolating valve fitted on metallic pipe.

4.2 LPG cylinder storage locker

(a) For storage above main deck-

(i) ventilation openings shall be provided on top and bottom of locker;

(ii) when LPG pipe is arranged to pass through bulkhead, the opening on bulkhead shall be of suitable size and height, to avoid the gas being leaked into the accommodation. If the LPG pipe is a synthetic rubber hose, precaution shall be taken to prevent the hose being chafed. A protecting conduit shall be fitted when necessary.

(b) For storage below main deck-

(i) the locker bulkhead shall be of gastight construction. Bulkhead piece shall be fitted when LPG pipe is arranged to pass through bulkhead;

(ii) adequate ventilation shall be provided at top and bottom of locker and be led overboard;

(iii) gas detectors shall be fitted to detect any accumulation of LPG in the bilge.

4.3 Newly fitted or replaced gas consuming appliances shall be of type approved by Gas Authority, EMSD and marked with "GU" on them. Existing Gas consuming appliances (e.g. stove, water heater etc.) are recommended to be fitted with automatic gas shut-off device to stop the gas supply in the event of flame failure.

批准氣體用具GU標誌

5 Maintenance

5.1 Changing cylinders shall be done according to instructions of gas dealers. If it is suspected that either a cylinder or valve is faulty, put it ashore as quickly as possible, and in the meantime keep it in the open air, clear of any gratings, hatches or other openings leading below decks.

5.2 Sufficient ventilation shall be provided at the cooking space to displace the products of combustion and respiration.

6 Inspection

6.1 The vessel's crew or operator shall regularly examine joints of the LPG installation. If a leakage is suspected, the cylinder stop valve shall be turned off immediately; the vessel's engine shall be stopped, no switch on/off of electrical appliances and no other means of ignition allowed until it is certain that the vessel is clear of gas. Never put an appliance back into use without the leak having been found and rectified.

[Table-1] Minimum Safe Manning Requirements for Hong Kong Licensed Vessels operating in Hong Kong Waters and River Trade Limits [Remark (1), (2) and (3)]

(These requirements on Minimum Safe Manning are based on vessels meeting unmanned engine room installation requirements)

Minimum Safe Manning Standards			Mechanically Propelled Class II Vessels - Types and Length Limits						
Persons onboard	Trading Area/ Vessel Length (L)	No. of Persons	Tug		Dry Cargo Vessel [c] and Oil Carrier/Tanker [f]				
			L < 24m	24m ≤ L < 35m	L < 24m	24m ≤ L <35m	35m ≤ L<50m	50m ≤ L<75m	75m ≤L<100m
Coxswain [a] [h]	Hong Kong Waters	1	1	1	1	1	1	1	1
	River Trade Limits [b]	2 [g]	2	2	2	2	2	2	2
Engine Operator [a]	Hong Kong Waters or River Trade Limits	1 [e]	1	1	1	1	1	1	1
Deck crew [d]	Hong Kong Waters or River Trade Limits	as below							
	24m≤ L < 35m	+1	-	1	-	1	1	1	1
	35m≤ L < 50m	+1	-	-	-	-	1	1	1
	50m≤ L < 75m	+1	-	-	-	-	-	1	1
	75m≤ L < 100m	+1	-	-	-	-	-	-	1
Hong Kong Waters: Minimum Manning Scale			2	3	2	3	4	5	6
River Trade Limits: Minimum Manning Scale			3	4	3	4	5	6	7

Remarks: (1) These requirements are made under section 11 of Merchant Shipping (Local Vessels) (General) Regulation. The minimum safe manning scales are prescribed for practical guidance of owners and coxswains to ensure sufficient crew onboard with appropriate skills and experience, having regard to vessel size, speed, power, duration and nature of voyage or trade area, equipment and machinery commonly adopted for different types of vessels, for the purpose of maintaining general surveillance and safe navigation, mooring and unmooring operation safety, safe of carriage of cargo during transit, measures on prevention of fire and pollution of environment and the handling of general emergency situation. For vessel types or operation condition or situation outside the above basic scope would require consideration or assessment on case by case basis by Marine Department. In general, the manning crew number would be expected higher for additional work or tasks to be taken by crewmember on repair maintenance and business/cargo handling etc. The requirements in this Annex should be complied together with those specified in Ch. XII of this Code.

(2) For Class I vessels including passenger ferries or high speed ferries operating in Hong Kong waters, the manning requirements would depend on their operational needs. Marine Department will prescribe the minimum safe manning requirement individually through making reference to necessary assessment including fire and emergency drills etc. during final inspection of the vessel. Refer to Annex U-6 for "Guideline on the Minimum Safe Number of Crew for Ferry Vessels and Launches".

(3) On HK licensed fishing vessels operating in mainland waters, all crewmembers (including coxswain & engine operator) shall carry "four mini certificates" and maintain necessary watchkeeping duties and minimum manning as required by mainland authority. In Hong Kong waters, owner and Master / Coxswain should observe the practice indicated in Note (h) below with particular consideration of safe navigation and the size and length of the vessel.

Notes: (a) Crew of Vessels should hold relevant basic maritime safety training certificates (see Remark (3) above and Note (d) below). Types of Local Certificates of Competency as required under statutory requirements are indicated in Table-2 of this Annex.

(b) River Trade Limits is defined in section 2 of the Survey Regulation.

(c) Also applicable to Class II vessel types: edible oil carrier, water boat, work boat and pilot boat. The minimum manning of these are treated same as dry cargo vessel.

(d) Deck and engine crew (other than certificated coxswain and engine operator) of mechanically propelled Class II vessels operating in mainland waters should hold the basic maritime safety training certificates issued by Hong Kong Maritime Services Training Institute- Basic Safety Training for Local Vessels' Crew Certificate (Yellow Card), or "Fire fighting Certificate" plus "Personal Survival Techniques Certificates".

(e) If the navigation time of the vessel is exceeding 12 hours within any 24 hours operation and the vessel does not meet unmanned engine room requirements, one additional engine operator is required for vessels of length exceeding 24 metres.

(f) Coxswain, engine operator and crewmembers working onboard oil tankers/carriers should hold relevant oil tanker/carrier safety training certificates. For oil tankers/carriers, noxious liquid substance carriers and dangerous goods carriers, one extra deck crew is required to assist with deck operational and emergency measures.

(g) (i) Alternative, the arrangement of one coxswain and one assistant coxswain are acceptable provided that the assistant coxswain must hold a Certificate of Competency of one grade lower than the coxswain relevant to the type of vessel and have gained not less than 12 months practical experience relating to River Trade Limits / mainland waters operation and have familiar with watchkeeping duties to assist the Coxswain.

(ii) For those vessels trading to close limits to neighbouring ports of Hong Kong, including Macau, Zhuhai, Shenshen Yantian in Mirs Bay and Shenzhen Shekou in Deep Bay, one assistant coxswain could be waived.

(h) Master /Coxswain should ensure adequate hands of ship's crew available for mooring and unmooring /berthing and unberthing operations as required.

[Table-2] Statutory Requirements on Local Certificates of Competency for Hong Kong Licensed Vessels operating in Hong Kong Waters or River Trade Limits

Post onboard	Before LVO (i) being in force		After LVO (i) being in force	
	Size of Vessel - Tonnage (NT) or Main Engine Power (HP)/ (kW)	**Local Certificate of Competency required** (see Remarks (v))	**Size of Vessel** - Gross Tonnage (GT)/ Length (m) or Total Main Engine Power (kW)	**Local Certificate of Competency required**
Master/ Coxswain	Vessel Tonnage: 60 NT and under	Master [60 NT and under]	Vessel Length: not more than 15m and 16.5 m length overall	Coxswain **Grade 3**
	Vessel Tonnage: Exceeded 60 NT But vessel length < 24m and Tonnage < 300 NT	Master [60 NT and under] + Exemption or Master [300 NT and under]	Vessel Length: not more than 24m and 26.4 m length overall	Coxswain **Grade 2**
	Vessel Tonnage: More than 300 NT But not more than 1600 NT	Master [up to 300 NT] (ii) + Tonnage Endorsement	Vessel Tonnage: Not more than 1600 GT	Coxswain **Grade 1** (iv)
Engineer/ Engine Operator	Power of one single engine: Up to 150 HP	Engineer [for engine power up to 150 HP]	Main engine total power: Up to 750kW	Engine Operator **Grade 3**
	Power of one single engine: Over 150 HP, but total main engine power not more than 750 kW	Engineer [for engine power up to 150 HP] + Exemption		
			Main engine total power: Not exceeded 1500kW	Engine Operator **Grade 2**
	Power of one single engine: Over 150 HP	Engineer [for engine power over150 HP] (iii)	Main engine total power: Up to 3000kW	Engine Operator **Grade 1** (iv)

Remarks

(i) LVO means [Merchant Shipping (Local Vessels) Ordinance]. Local Certificates of Competency issued under LVO, except those endorsed with restrictions, would be valid for use on relevant size of Class I, II or III vessels.

(ii) After the enforcement of LVO, holder of the Local Certificate of Competency as Master – [up to 300 NT] issued before LVO with Tonnage Endorsement could operate vessels not exceeded 1600 GT.

(iii) After the enforcement of LVO, the Local Certificate of Competency as Engineer – [for engine power over 150 HP] issued before LVO would be applicable to vessels with main engine total power not more than 3000kW.

(iv) Based on experience and/or oral/practical assessment, Director may consider application for endorsement to relevant Grade 1 Local Certificate of Competency to allow the holder to operate vessels more than 1600 GT or main engine total power more than 3000kW.

(v) Local Certificates of Competency issued before LVO mentioned in above table, including Local Certificates of Competency as Ferry Engineer, would continue to be valid for use on relevant size or type of Class I or II vessels. Local Certificates of Competency as Master of a Fishing Vessel, "Restricted Master" Certificates of Competency and Local Certificates of Competency as Engineer of a Fishing Vessel would continue to be valid for use on the relevant size/type of Class III vessels. If a Local Certificate of Competency is obtained through examination held by Marine Department, the holder of:

(1) a Local Certificate of Competency as Master of a Fishing Vessel issued before LVO may apply with prescribed fee paid for the issue of a Local Certificate of Competency as Coxswain Grade 3.If the holder has more than 1 year experience as the master of a fishing vessel or vessels other than pleasure vessel within 3 years before application, he may apply, within 2 years after the commencement date of the new legislation, for a Grade 2 Certificate that is endorsed to the effect that the holder may also act as the coxswain on a fishing vessel of more than 24 metres in length overall.

(2) A Local Certificate of Competency as Engineer of a Fishing Vessel issued before LVO may apply with prescribed fee paid for the issue of a Local Certificate of Competency as Engineer Operator Grade 3 or for examination of Grade 2 certificate under LVO.

(3) a Local Certificate of Competency as Ferry Engineer issued before LVO may apply with prescribed fee paid for the issue of a Local Certificate of Competency as Engineer Operator Grade 1 under LVO.

SAFETY BRIEFING FOR CLASS I AND CLASS II VESSELS ENGAGED IN VOYAGE CARRYING PASSENGERS

1. The coxswain shall brief at least one other crew or assistant who will be sailing with the vessel regarding the following: -

   (a) Procedures for the recovery of a person from the sea;

   (b) Location of first aid kit, if any;

   (c) Procedures and operation of radios carried on board, if any;

   (d) Location of navigation light switches and other light switches;

   (e) Location and use of fire-fighting equipment;

   (f) Method of starting, stopping, and controlling the main engine; and

   (g) Handling emergency situations and communication arrangements.

2. Safety guide plates or cards will be considered to be an acceptable way of providing the information required in paragraph 1 above.

Certificates Relevant to Local Vessels

1. Apart from the certificates listed in Chapter II, the following plan approval, surveys and/or issuance of certificates or record document, which may be for operational purpose or requirements specified under legislations outside the Ordinance, Cap 548, are also relevant to local vessels if applicable:

    (1) Minimum Safe Manning document;

    (2) International Tonnage Certificate;

    (3) International Load Line Certificate;

    (4) International Oil Pollution Prevention Certificate;

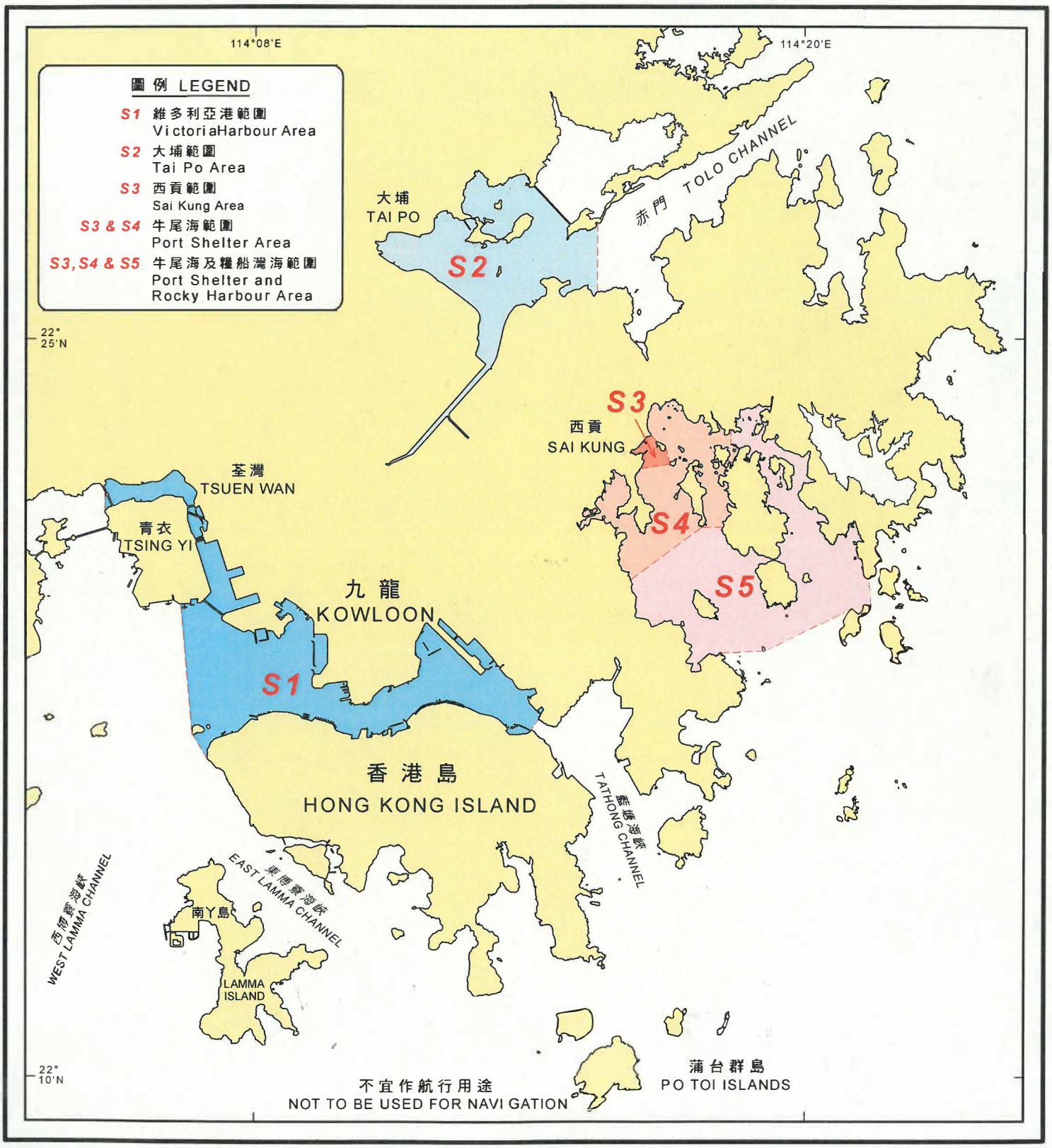
    (5) International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk;

    (6) International Air Pollution Prevention Certificate or Hong Kong Air Pollution Prevention Certificate.

2. For the issuance of items 1.(1) and (5) of the above, owners shall apply to Marine Department directly. For initial certificate, application must be enclosed with relevant application details/plans for assessment.

3. For items 1.(2), (3), (4) and (6), the indicated International Convention certificates may be issued by recognized classification societies directly to the owner, together with survey records in accordance with the requirements of the relevant Convention. A copy of such certificate and record is required to be submitted to Marine Department.

香港水域範圍內指明遮蔽水域
Specified Sheltered Waters within Hong Kong Waters



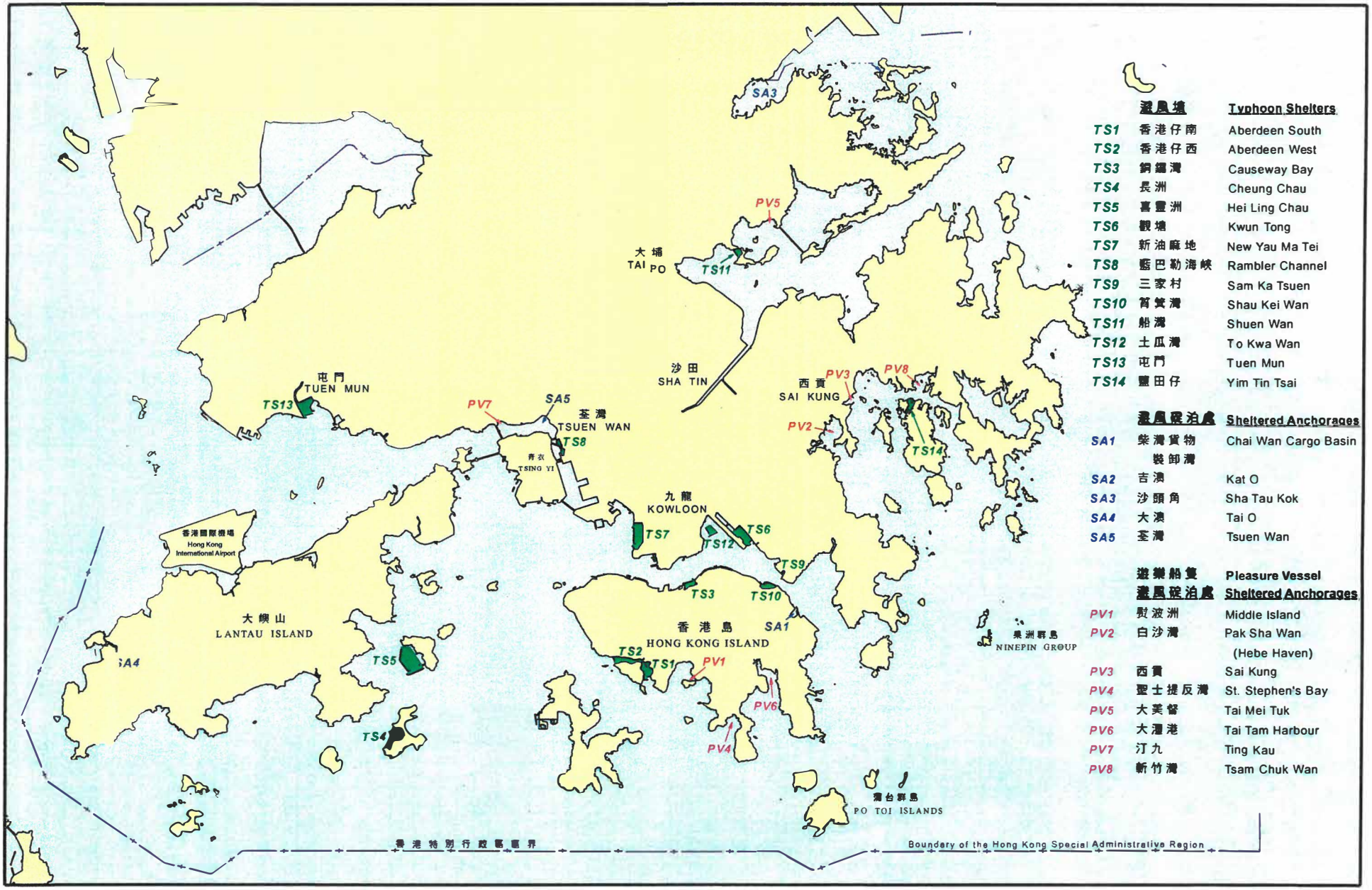
海事處海道測量部於2014年6月繪製
Prepared by the Hydrographic Office,
Marine Department. June 2014

基準 Datum WGS 84

圖則編號 Drawing No. 2014mar014

避風塘及避風碇泊處位置圖

Location Plan of Typhoon Shelters and Sheltered Anchorages



	避風塘	Typhoon Shelters
TS1	香港仔南	Aberdeen South
TS2	香港仔西	Aberdeen West
TS3	銅鑼灣	Causeway Bay
TS4	長洲	Cheung Chau
TS5	喜靈洲	Hei Ling Chau
TS6	觀塘	Kwun Tong
TS7	新油麻地	New Yau Ma Tei
TS8	藍巴勒海峽	Rambler Channel
TS9	三家村	Sam Ka Tsuen
TS10	筲箕灣	Shau Kei Wan
TS11	船灣	Shuen Wan
TS12	土瓜灣	To Kwa Wan
TS13	屯門	Tuen Mun
TS14	鹽田仔	Yim Tin Tsai

	避風碇泊處	Sheltered Anchorages
SA1	柴灣貨物裝卸灣	Chai Wan Cargo Basin
SA2	吉澳	Kat O
SA3	沙頭角	Sha Tau Kok
SA4	大澳	Tai O
SA5	荃灣	Tsuen Wan

	遊樂船隻避風碇泊處	Pleasure Vessel Sheltered Anchorages
PV1	鴨脷洲	Middle Island
PV2	白沙灣	Pak Sha Wan (Hebe Haven)
PV3	西貢	Sai Kung
PV4	聖士提反灣	St. Stephen's Bay
PV5	大美督	Tai Mei Tuk
PV6	大潭港	Tai Tam Harbour
PV7	汀九	Ting Kau
PV8	斬竹灣	Tsam Chuk Wan

海事處海道測量部2009年6月繪製
Prepared by the Hydrographic Office, Marine Department. June, 2009

圖則編號 2009MAR019_A
Drawing No.

Owner's Declaration of Permanent Ballast

Annex Y

Note: You must fill in the information required and sign the owner's declaration below the table.

COO/AIP No.		Vessel Class	*I	*II	*III	*IV	Vessel Name	
			* Please delete as appropriate					

This is to certify that the positions of all permanent ballast installed on board this vessel are:

☐ as shown in the table below and the sketch on a separate sheet.

☐ as shown in the approved permanent ballast plan enclosed.

Note: ① The positions, quantity, materials, unit weight, etc. of permanent ballast should be the same as the information stated in the stability information booklet (the owner may seek advice or assistance from the Marine Department). Inclining experiment or other methods for confirming the installation positions and quantity of permanent ballast may be required.

② The positions of permanent ballast should be the same as those shown in the photos submitted earlier.

No.	Position				Material	Unit Weight (kg)	Quantity (Pcs)	Total Weight (kg)	Serial Number	Remarks
	Longitudinal: The frame number or forward bulkhead frame number of the position of the front point of the ballast	Transverse: Distance between the outer edge of the ballast and the shipside (m)	Vertical: Distance between the bottom of the ballast and the bottom of the vessel (m)	Tier						
1										
2										
3										
4										
5										

The owner should ensure that the correct quantity of ballast is fixed (or stowed in a way that it is not movable while at sea) at the positions specified above at all times.

Owner's Declaration

	Signature of the owner/ owner's representative	Grade of survey	Date
1st year		A/B/Others	
2nd year		A/B/Others	
3rd year		A/B/Others	
4th year		A/B/Others	
5th year		A/B/Others	
(Endorsement in the 5th year is only applicable to classed vessels)			

Application for Grade B survey for the vessel's next full survey (if applicable)

This is to certify that in the Grade B survey of this vessel, no excessive corrosion (1/2 or above of the corrosion limit stated in Annex M of the Code of Practice) was found at the bottom of the hull where the ballast was stowed and on the internal structural members, etc., and the coating was in good condition with no obvious damage.

Signature of the owner/owner's representative and date

[This part is applicable to vessels surveyed by competent surveyors]

Name of the surveying officer and his/her organisation/company

Signature and date confirm that the above is true

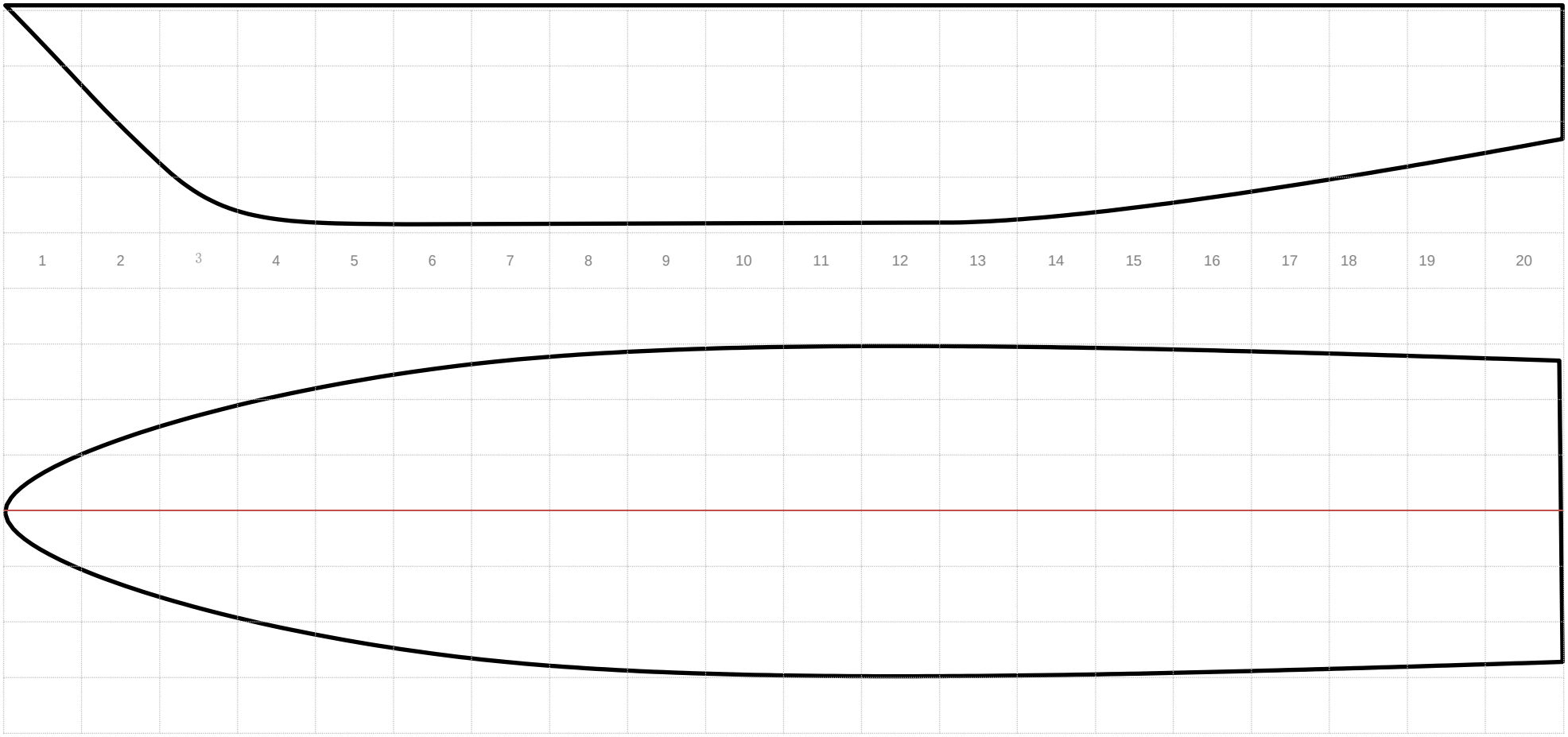
Comments of the Marine Department [Approve/Not Approve]

Signature and date

COO/AIP No.	

Owner's Declaration of Permanent Ballast

Annex Y



Please mark the positions of permanent ballast on the sketch

Annex AA

Former Requirements of Life-Saving Equipment 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

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

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 \ Type of vessel	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>(5)	100%(1) and (6)	
VHF (very high frequency) radio installation	1	1(4)
buoyant lifeline(7)	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