

## **Local Vessels Advisory Committee**

### **Miscellaneous Amendments to Subsidiary Legislation under Merchant Shipping (Local Vessels) Ordinance and the Code of Practice – Safety Standards for Class I, II and III Vessels**

#### **Purpose**

This paper sets out the miscellaneous amendments to subsidiary legislation under the Merchant Shipping (Local Vessels) Ordinance (Cap 548) and the Code of Practice – Safety Standards for Class I, II and III Vessels (CoP) as proposed by the Marine Department (MD).

#### **Background**

2. Dr Neville Anthony Armstrong, an expert witness appointed by the Commission of Inquiry into the Collision of Vessels near Lamma Island on 1 October 2012 (CoI), made several dozens of recommendations for enhancing the existing control of maritime safety for local vessels in his Expert Report (Part 2) (Dr Armstrong’s Expert Report)<sup>1</sup> submitted to the CoI. For recommendations which entail greater impact or changes, consultation is being conducted with the industry under separate topics. Other recommendations will be followed up by a series of miscellaneous amendments.

#### **Interpretation of “Plan”**

3. Section 7(4) of the Merchant Shipping (Local Vessels) (Safety and Survey) Regulation (Cap 548G) stipulates in Part 3 of the Regulation that, unless the context otherwise requires, “plan” (圖則) includes drawings, details, diagrams and calculations. Dr Armstrong pointed out that the word “plan” also appeared in provisions other than those of Part 3. He recommended relocating the stipulation under section 7(4) to section 2 to make the interpretation applicable to all provisions of Cap 548G.<sup>2</sup>

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<sup>1</sup> Dr Neville Anthony Armstrong, Expert Report (Part 2), 5 March 2013, available from [www.coi-lamma.gov.hk/pdf/docs/Expert\\_Report\\_Part2\\_prepared\\_by\\_Dr\\_Armstrong.pdf](http://www.coi-lamma.gov.hk/pdf/docs/Expert_Report_Part2_prepared_by_Dr_Armstrong.pdf).

<sup>2</sup> Dr Armstrong’s Expert Report, paragraph B-1, For Consideration 23.

4. The MD will consult the Department of Justice (D of J) on Dr Armstrong's recommendations and prepare a legislative amendment proposal on the interpretation of the word "plan" in the Merchant Shipping (Local Vessels) (Safety and Survey) Regulation, subject to D of J's advice.

### **Fire Pumps Driven by Main Engines**

5. Section 2(1)(a)(i) under Part 1 of Schedule 4 to the Merchant Shipping (Local Vessels) (Safety and Survey) Regulation stipulates that where a local vessel is required by Schedule 4 to be provided with fire pumps operated by power, such fire pumps shall be driven by means other than the vessel's main engines. It is inconsistent with Note (5) to Table 1, Note (6) to Table 3 and Note (3) to Table 6 under Part 2 of Schedule 4 which state that "the fire pump may be propulsion engine driven, provided it can be readily engaged to the engine". Dr Armstrong recommended that the inconsistency be rectified.<sup>3</sup>

6. MD agrees with Dr Armstrong's recommendation. Subject to D of J's advice, MD proposes to amend section 2(1)(a)(i) under Part 1 of Schedule 4 to the Merchant Shipping (Local Vessels) (Safety and Survey) Regulation for the clarification of the requirement that fire pumps, unless otherwise specified, shall be driven by means other than the vessel's main engines. If the same requirement as stipulated in Note (5) to Table 1, Note (6) to Table 3 and Note (3) to Table 6 under Part 2 of Schedule 4 is met, the fire pump may be propulsion engine driven.

### **Flash Point Temperature**

7. Section 81 of the Merchant Shipping (Local Vessels) (Safety and Survey) Regulation stipulates that subject to other provisions, a Class I vessel, Class II vessel or Class III vessel shall not be fitted with an engine that uses fuel oil with a flash point not exceeding 61°C (closed cup test). Dr Armstrong pointed out that the International Convention for the Safety of Life at Sea (SOLAS Convention)<sup>4</sup> and the International Organization for Standardization (ISO)<sup>5</sup> require the flash point to be 60°C, instead of 61°C. He recommended that the existing requirement be fine-tuned accordingly to meet the international standard.<sup>6</sup>

8. MD agrees with Dr Armstrong's recommendation and proposes to fine-tune the flash point requirement in section 81 of the Merchant Shipping (Local Vessels) (Safety and Survey) Regulation from 61°C to 60°C. Also, in

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<sup>3</sup> Dr Armstrong's Expert Report, paragraph B-17, For Consideration 37.

<sup>4</sup> SOLAS Convention, Chapter II-2.

<sup>5</sup> ISO 8217:2010.

<sup>6</sup> Dr Armstrong's Expert Report, paragraph B-31, For Consideration 52.

accordance with the International Maritime Dangerous Goods Code, MD proposes to fine-tune the flash point requirement in Table 4 under Part 2 of Schedule 3 and Note (2) to Table 6 under Part 2 of Schedule 4 to the Merchant Shipping (Local Vessels) (Safety and Survey) Regulation, as well as section 37(2) of the Merchant Shipping (Local Vessels) (General) Regulation (Cap. 548F). The relevant clauses in the Code of Practice – Safety Standards for Classes I, II and III Vessels will also be amended accordingly.

### **New Schedule for Plans other than Life-saving Appliances**

9. Schedule 3 to the Merchant Shipping (Local Vessels) (Safety and Survey) Regulation contains requirements for the provision of life-saving appliances on board. According to section 3 under Part 1 of Schedule 3, there shall be kept at all times on board plans that contain certain information, which include plans that are irrelevant to life-saving appliances, namely fire-fighting apparatus, lights and sound signals, and the vessel's stability information. Dr Armstrong suggested that plans irrelevant to life-saving appliances be relocated from Schedule 3 to a separate schedule setting out the requirements.<sup>7</sup>

10. MD will consult D of J on Dr Armstrong's recommendations and, subject to D of J's advice, draw up a legislative amendment proposal to add a new schedule to the Merchant Shipping (Local Vessels) (Safety and Survey) Regulation.

### **Interpretation of "Margin Line"**

11. The term "margin line" appears in paragraph 3(d), Part 2 and paragraph 9(b), Part 3 of Annex F of CoP, but neither CoP nor the Merchant Shipping (Local Vessels) Ordinance (Cap. 548) or its subsidiary legislation contains a definition of "margin line". Dr Armstrong recommended including a definition of "margin line" in CoP.<sup>8</sup>

12. MD proposes to include the definition "a line drawn at least 76 millimetres below the upper surface of the bulkhead deck at the side of the ship" for "margin line" under "Definitions" in section 3, Chapter I of CoP.

### **Approval of Stability Information Booklet**

13. It is required in section 6.1, Chapter IV of CoP that a stability

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<sup>7</sup> Dr Armstrong's Expert Report, paragraph B-13, For Consideration 33.

<sup>8</sup> Dr Armstrong's Expert Report, paragraphs A-30 and 31, For Consideration 14.

information booklet should be submitted for approval after a vessel conducts an inclining test or a lightweight survey. Dr Armstrong pointed out that the approving authorities for stability information booklets had not been clearly stated in section 6.1.<sup>9</sup> MD proposes amending section 6.1 for the clarification of the requirement that stability information booklets shall be submitted to the authorities, persons or organisations as specified in item A8 of section 5, Chapter II of CoP for approval.

### **Correction of Reference to Provisions of International Code of Safety for High Speed Craft (HSC Code)**

14. According to section 3.1, Chapter XI of CoP, the damaged stability should meet the relevant requirements of sections 2.6, 2.13 and Annex 7 (except paragraph 1.5) of HSC Code. Dr Armstrong pointed out that “Annex 7 (except paragraph 1.5)” should read “section 2 of Annex 7”.<sup>10</sup> MD proposes to make the correction as suggested by Dr Armstrong.

### **Interpretation of “authorized organization”**

15. “Authorized organization” appears in various provisions in CoP, but no definition of the term is given. Dr Armstrong was of the view that it was unclear whether an “authorized organization” referred to a classification society. He recommended providing a definition for “authorized organization” in CoP. MD accepts Dr Armstrong’s recommendation and proposes to include the definition “an organization approved under Section 8 of the Merchant Shipping (Safety) Ordinance (Cap. 369)” for “authorized organization” under “Definitions” in section 3, Chapter I of CoP.

### **Plans Shall be Approved before Issue of Certificates, etc.**

16. Under section 9(1)(f) and (i) of the Merchant Shipping (Local Vessels) (Safety and Survey) Regulation, it is required that plans relating to the stability as well as fuel, machinery, shafting and electrical systems of a local vessel be submitted for approval before a certificate of inspection or certificate of survey is issued in respect of the vessel. Dr Armstrong considered section 9(1)(f) unclear as it did not specify whether “stability” meant intact stability, damaged stability or both, and recommended clarification be made. For section 9(1)(i),

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<sup>9</sup> Dr Armstrong’s Expert Report, paragraph B-35, For Consideration 56.

<sup>10</sup> Dr Armstrong’s Expert Report, paragraph B-37, For Consideration 58.

he was of the view that it contained too many disparate systems and recommended providing a breakdown.<sup>11</sup>

17. MD is of the opinion that the plans required to be submitted for approval under section 9(1) of the Merchant Shipping (Local Vessels) (Safety and Survey) Regulation are already listed under section 5, Chapter II of CoP. MD proposes to amend Section 5, Chapter II of CoP by clearly stating that the purpose of the section is to set out the plans and data required to be submitted under section 9(1) of the Merchant Shipping (Local Vessels) (Safety and Survey) Regulation.

### **“Classed Vessel” and “Not Classed Vessel”**

18. Section 4 of Chapter II of CoP stipulates that for a vessel classed with a classification society, the plans and data concerned should be submitted to the relevant classification society for approval. Dr Armstrong opined that the provision did not clarify what it meant by “a vessel classed with a classification society” and what vessels might submit data to classification societies for approval.<sup>12</sup> MD proposes to clarify that “a vessel classed with a classification society” is a vessel constructed to the standards of a classification society, and issued with a classification certificate by that classification society, and maintained to be classed with that classification society. Once a vessel has become a vessel not classed with a classification society, it shall comply with the approving procedure for vessels not classed with a classification society.

### **The Description “Not Classed Vessel”**

19. “Not classed vessel” appears in section 4.2, Chapter II of CoP. Dr Armstrong was of the view that “not classed vessel” would easily be associated with Class I, II, III and IV vessels and recommended it be clarified as “not classed with a classification society”.<sup>13</sup> MD proposes to clarify that the “not classed vessel” mentioned in CoP is a vessel not classed with a classification society.

### **Submission of Plans and Data**

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<sup>11</sup> Dr Armstrong’s Expert Report, paragraphs B-2 and 3, For Considerations 24 and 25.

<sup>12</sup> Dr Armstrong’s Expert Report, paragraphs B-9 to B-11, For Consideration 31.

<sup>13</sup> Dr Armstrong’s Expert Report, paragraph B-8, For Consideration 30.

20. Sections 4.2 and 4.3 of Chapter II of CoP require that plans and data marked with “@” be submitted to MD for record. Dr Armstrong considered “marked with “@”” unclear and recommended it be clarified as “marked with “@” in section 5”.<sup>14</sup> MD agrees and proposes that the above amendment be made.

### **Table 1 in Section 7 of Chapter II of CoP**

21. Dr Armstrong considered the meaning of the slash mark “/” in item A1 “Draft Marks/Load Line - verification” of Table 1, Section 7, Chapter II of CoP unclear since the two verification items could be misunderstood as alternatives. He recommended it be amended to read “Draught Marks and Load Line (if this is applicable) - verification”.<sup>15</sup> MD agrees and proposes the above amendment be made.

22. Dr Armstrong considered the meaning of the word “Seating” in Item A12 “Position of Navigation Light Seating - verification” of Table 1, Section 7, Chapter II of CoP unclear and recommended it be amended to read “Position of navigation light location and foundation - verification”.<sup>16</sup> MD agrees and proposes that it be so amended.

### **Table 3 in Section 7 of Chapter II of CoP**

23. Table 3 in section 7 of Chapter II of CoP sets out the survey items for final inspection. Dr Armstrong was of the view that essential safety items and general accommodation items were mixed up in item A&B6 of Table 3 and recommended the two be separated.<sup>17</sup> MD agrees and proposes to amend item A&B6 of Table 3 to read “Passenger Spaces, Crew Spaces, cabin escape arrangements, bulwarks and rails – general inspection”, and to add a new item which reads “Signage within passenger spaces including exits, no smoking, lifejacket donning instructions, plan on escape arrangement and fire-fighting plan – general inspection”.

### **Corrigendum to Section 3.5 of Chapter IIIA of the English Version of CoP**

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<sup>14</sup> Dr Armstrong’s Expert Report, paragraph B-12, For Consideration 32.

<sup>15</sup> Dr Armstrong’s Expert Report, paragraph B-25, For Consideration 45.

<sup>16</sup> Dr Armstrong’s Expert Report, paragraph B-26, For Consideration 46.

<sup>17</sup> Dr Armstrong’s Expert Report, paragraph B-27, For Considerations 47 and 48.

24. Section 3.5 of Chapter IIIA of CoP reads "... in accordance with the rules of the classification based on ..." and the corresponding Chinese version is "...依照船級社的規則，根據...". Dr Armstrong pointed out that the word "society" was missing after "classification" in the English version.<sup>18</sup> MD agrees and proposes the above correction be made.

### **Modification on Board**

25. Section 9 of Chapter IV of CoP sets out the data required to be submitted to MD and the tests needed to be conducted before any modifications are made to vessels. Dr Armstrong was of the opinion that the impact of modification on damage stability or watertight sub-division and floodable length should be considered before the modification, and recommended amending the second sentence of section 9.1 of the current version, namely, "Stability estimates for the modifications may be required to submit for approval", to read "Estimates of the effects of the modification on intact stability, damage stability and watertight sub-division should be submitted for approval", as well as section 9.2 to read "If the stability estimates show that the alterations will adversely affect the intact or damage stability of the vessel, an inclining experiment, or a lightweight survey or a rolling period test, as appropriate, should be conducted. If the watertight sub-division estimates show that the alterations will adversely affect the flooding capability of the vessel, additional buoyancy may be necessary".<sup>19</sup> MD agrees and proposes that the above amendments be made.

### **Redundancy of Emergency Electrical Power**

26. Dr Armstrong considered that the source of emergency electrical power should be separate from main power supply to avoid loss of power in case of fire or flooding in the engine room. He also pointed out that Table 3 in Section 7 of Chapter II and section 21 of Chapter IIIA of CoP did not require for redundancy of emergency electrical power. He recommended the inclusion of a new item "Location of emergency source of electrical power should be outside machinery space and above waterline - verification" in Table 3, section 7, Chapter II of CoP and a new provision "The emergency source of power shall not be located below the full-load waterline" in section 21 of Chapter IIIA.<sup>20</sup>

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<sup>18</sup> Dr Armstrong's Expert Report, paragraph B-28, For Consideration 49.

<sup>19</sup> Dr Armstrong's Expert Report, paragraph A-20, For Consideration 7.

<sup>20</sup> Dr Armstrong's Expert Report, paragraphs A-26 to A-29, For Considerations 12 and 13.

MD agrees and proposes that the above amendments, applicable only to new vessels constructed after the effective date of the amendments, be made.

### **Structural Fire Protection**

27. Section 13.5.2 of Chapter VI of CoP stipulates that the exterior boundaries of superstructures and deckhouses which are required to be insulated to “A-60” standard shall be constructed only of steel. Dr Armstrong was of the view that since there was no requirement for the exterior boundaries of superstructures and deckhouses to be insulated to A-60 standard in Tables 1 and 2 under section 13.5.3, Chapter VI of CoP, the requirement for “exterior boundaries of superstructures and deckhouses which are required to be insulated to “A-60” standard shall be constructed only of steel” in section 13.5.2, Chapter VI of CoP might cause misunderstanding.<sup>21</sup> MD proposes deleting section 13.5.2 since the insulation requirement for the exterior boundaries of superstructures and deckhouses has been detailed in section 13.5.1(d). Moreover, the SOLAS Convention allows divisions which are insulated to A-60 standard to be constructed of steel or other equivalent material. It is therefore unnecessary for CoP to require divisions which are insulated to A-60 standard to be of steel structure.

### **Plans to Be Retained on Board**

28. Section 6 of Chapter II of CoP requires certain plans to be retained on board. Dr Armstrong was of the opinion that such plans should be the latest available plans, particularly if the vessel had been modified (e.g. the seating arrangement and the locations of firefighting or lifesaving equipment). He recommended adding the following requirement to section 6 of Chapter II: “For every Class I, II and III vessel (excluding wooden fishing vessel and sampan) which has been modified or altered in a way that would change the seating arrangement or disposition of lifesaving or firefighting appliances, then all plans and documentation carried or displayed on board should be modified to reflect those changes”.<sup>22</sup> MD agrees and proposes that the above amendment be made. MD also proposes that the new requirement should be applicable to modifications or alterations which would change escape routes.

### **Fire Damper of Engine Room Ventilator**

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<sup>21</sup> Dr Armstrong’s Expert Report, paragraph B-36, For Consideration 57.

<sup>22</sup> Dr Armstrong’s Expert Report, paragraph B-23, For Consideration 43.



29. Section 10.2 of Chapter IIIA of CoP requires that a ventilator be fitted with a fire damper or other means of closing and that a fire damper be provided with an indicator to show its open or close position. It reads “The ventilator should be fitted with damper or other means of closing. The fire damper, if fitted, should be provided with indicator showing its open or close position”. Dr Armstrong considered the phrase “if fitted” ambiguous in relation to the preceding sentence.<sup>23</sup> MD proposes to amend the last sentence of section 10.2 to read “For a ventilator fitted with a fire damper, an indicator shall be provided to show whether the damper is in the open or close position” and, correspondingly, to amend the Chinese version to read “凡通風管安裝有擋火閘，須有裝置指示擋火閘是處於開或關的位置”。

### **Means for Isolating Power Supply in Emergency**

30. Section 21.6 of Chapter IIIA of CoP requires that ventilation fans serving machinery or cargo spaces, engines’ oil fuel pumps and other similar oil pumps should be capable to be stopped outside of the space where the appliance is situated. Dr Armstrong pointed out that similar requirement was stipulated in section 10.1(a), Chapter VI of CoP.<sup>24</sup> For avoidance of doubt, MD proposes stating in section 10.1(a) of Chapter VI that the requirement stipulated in it does not affect that in section 21.6 of Chapter IIIA, and vessels are required to comply with both requirements.

### **Sub-committee on Survey Work of Local Vessels**

31. The Sub-committee on Survey Work of Local Vessels agreed at its meetings on 22 May and 29 August 2014 to submit the above proposed miscellaneous amendments to this Committee for discussion.

### **Way Forward**

32. Subject to Members’ comments, MD will pursue the miscellaneous amendments as proposed above, and submit legislative amendments to the Legislative Council and amend CoP in due course.

### **Advice Sought**

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<sup>23</sup> Dr Armstrong’s Expert Report, paragraph B-29, For Consideration 50.

<sup>24</sup> Dr Armstrong’s Expert Report, paragraph B-33, For Consideration 54.

33. Members are invited to comment on the above proposed miscellaneous amendments.

**Marine Department**  
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