

LOCAL VESSELS ADVISORY COMMITTEE

**Installation of Automatic Identification System, Radar and
Very High Frequency Radiotelephone on Local Vessels**

Purpose

This paper sets out the proposed implementation details on the installation of Automatic Identification System (AIS), radar and Very High Frequency (VHF) radiotelephone on local vessels put forward by the Marine Department (MD).

Background

2. Currently, only some local vessels are required to be fitted with AIS, radar and VHF radiotelephone. High-speed ferries granted with Miscellaneous Permits, commonly known as Speed Restriction Exemption Permits, and oil carriers over 50 metres in length licensed after June 2010, are required to install AIS. Ferries or launches that operate a franchised service or a licensed service that ply outside the Victoria port are required to be fitted with radar. Vessels of over 300 gross tonnage registered in the Mainland or Macau and trading to or from Hong Kong, local vessels that participate in the vessel traffic service and ferries that ply outside the Victoria port are required to carry VHF radiotelephone.

3. At the adjournment debate of the Legislative Council on 18 October 2012, the Secretary for Transport and Housing proposed ten measures to enhance the safety of local passenger vessels, one of which was to study the feasibility of requiring local vessels to install AIS. This Committee discussed the proposed installation of AIS at its meeting on 26 October 2012, and Members agreed that it should be further discussed at the meetings of the Sub-committee on Survey Work of Local Vessels.

4. To prevent the recurrence of similar vessel collision incidents in future,

the Report of the Commission of Inquiry into the Collision of Vessels near Lamma Island on 1 October 2012 (CoI Report) recommended that all ferries and launches permitted to carry more than 12 passengers should be required to carry a VHF radiotelephone, and those permitted to carry more than 100 passengers should be equipped with AIS and radar.

Proposed Installation

Installation of AIS, Radar and VHF Radiotelephone to Enhance Marine Safety

5. MD accepts the recommendations in the CoI Report and agrees that the installation of AIS, radar and VHF radiotelephone on local vessels will help enhance the overall marine safety and the safety of passengers on board –

- (a) AIS provides navigational information of a vessel (e.g. the vessel's position, name, course, speed, etc.) automatically to other vessels and shore stations (e.g. MD's Vessel Traffic Centre (VTC)). Installation of AIS allows detection of navigational status of a vessel by other vessels fitted with AIS (including ocean-going vessels) so that appropriate navigational decisions or collision avoidance actions can be taken promptly when necessary. In addition, vessels equipped with AIS can be more easily located and identified in emergency situations, facilitating the effective deployment of rescue teams and relevant arrangements for a more expeditious search and rescue operation. AIS navigational information can also be used for future traffic management planning and accident investigation;
- (b) Radar helps detect the conditions of the nearby waters and predict collision risks with vessels or objects in the vicinity. Avoidance actions can then be taken in the earliest opportunity to enhance navigational safety. Radar is particularly useful during times of restricted visibility (e.g. heavy fog or rain); and
- (c) VHF radiotelephone is a common type of communication equipment at sea which enables vessels in emergency to contact and seek assistance from the VTC and nearby vessels, as well as to communicate with government vessels handling emergency situations at sea (e.g. Marine Police and Fire Services launches). VHF radiotelephone disseminates messages by way of broadcast so

that all parties concerned receive the messages simultaneously.

Scope of the Proposed Installation

6. MD proposes that all Class I vessels permitted to carry more than 100 passengers should be required to install AIS (Class A) and radar, and all Class I vessels permitted to carry more than 12 passengers should be required to carry VHF radiotelephone. However, the proposal excludes floating restaurants, stationary vessels and Class I vessels operating within typhoon shelters only from the installation requirement. Since the excluded vessels are stationary, or operate only in very close proximity to the shore or within highly restricted areas, the risks involved in their navigation are rather low; it is therefore not necessary for them to be equipped with those three kinds of navigational equipment.

7. On installation of AIS, in addition to local passenger vessels, MD proposes to extend the installation requirement to the following two types of local cargo vessels: (a) Class II vessels with propulsion and of 300 gross tonnage or above (excluding vessels used for carrying dangerous goods¹); and (b) Class II vessels used for carrying dangerous goods¹ (with or without propulsion). Due to the dangerous nature of the goods carried by these vessels and their large size, they pose greater potential hazard to marine safety and therefore their navigational status should be more readily detected for safe navigation. To give priority to implementing recommendations in the CoI Report, MD proposes to require local passenger vessels to install the relevant navigational equipment first, before extending the requirement of installing AIS to the above local cargo vessels in due course.

8. Regarding the installation of radar, MD will consider exempting existing passenger vessels which ply within the Victoria port at slow speed (i.e. not exceeding 15 knots) with fixed routes for reasons below –

- (a) In terms of the natural navigational situation, the Victoria port is relatively calmer and sheltered from wind;
- (b) Coxswains of vessels on fixed routes are familiar with the navigational channels and situation in nearby waters; and

¹ i.e. dangerous goods carriers, noxious liquid substance carriers and oil carriers.

- (c) With the installation of AIS, the navigational risks of vessels plying within the Victoria port at slow speed are not high.

As radar is particularly useful during times of restricted visibility, MD will require shipowners/vessel operators to have in place a system or guidelines so that coxswains of vessels granted with such exemption are required to decide in their professional judgment whether or not to suspend voyage out of safety when visibility is low.

9. For vessels with technical difficulties in installing AIS or radar due limitations of their hull structure or electricity supply, MD will consider granting exemption or making alternative arrangements on a case-by-case basis.

10. The estimated number of local vessels affected by the proposed installation is set out at Annex.

Subsidy for Installation of AIS and Radar

11. MD understands the concerns of shipowners/vessel operators that the required installation of new navigational equipment would impose additional financial burden. In view of the benefits that the use of navigational equipment would bring to overall marine safety, MD proposes that full subsidy and half subsidy be provided respectively for the installation of AIS and radar on local vessels. The implementation plan and details will be announced in due course.

As for the proposal of equipping VHF radiotelephone, the costs will be borne by the trade as they are relatively low; MD does not propose to provide subsidy.

Training Matters

12. MD understands the concerns of the trade about the need for some crew to receive relevant training on the use of navigational equipment and whether there are sufficient crew in the industry who are qualified to operate the navigational equipment.

13. Regarding AIS, its operation is in fact not complicated. MD does not propose to require the crew who operate AIS to have completed a specific course or to possess a particular qualification. However, the crew may attend AIS training courses on a voluntary basis should they wish. MD has liaised with training institutions on running AIS training courses, and their initial response is positive. The course is expected to last about a few hours.

14. For radar, with reference to the requirement under existing Code of Practice – Safety Standards for Class I, II and III Vessels, MD proposes to require the crew who operate radar to have completed a radar training course approved by the Director of Marine. The trade has indicated that they find the existing radar training course too complicated. MD has reviewed the syllabus of the radar training course and made appropriate adjustments. MD has also liaised with relevant training institutions and is given to understand that the revised radar training course will be available in the third quarter of 2014 the earliest. As we understand, the courses are tentatively planned to last about 24 hours and to be run once a month with a class size of about 12 persons. If necessary, MD will discuss with the training institutions for more courses or classes to be offered.

15. For VHF radiotelephone, according to the Telecommunications Ordinance (Cap 106), the crew who operate VHF radiotelephone shall have a certificate of competency in radiotelephony issued by the Communications Authority (CA). The certificate is obtained through examination. The trade has indicated that they find the current examination for the certificate of competency in radiotelephony too complicated. MD has liaised with CA on the examination. MD is given to understand that the format and syllabus of the examination is being reviewed by CA and the review is expected to be completed by the end of 2014 the earliest. MD has also liaised with relevant training institutions and is given to understand that the training courses for the examination are tentatively planned to last 20 to 36 hours and to be run six to eight times a year with a class size of about 12 to 18 persons. MD will continue to discuss with the training institutions for more courses or classes to be offered.

16. The estimated number of crew required to complete a radar training course and obtain a certificate of competency in radiotelephony as a result of the proposed installation of radar and VHF radiotelephone is set out at Annex. Subject to the training courses on the relevant navigational equipment being approved, subsidy on course fee will be made available to eligible participants by the Maritime and Aviation Training Fund.

17. MD plans to submit the proposed legislative amendments on the required installation of AIS, radar and VHF radiotelephone to the Legislative Council in 2015 for the legislative amendment procedures. MD understands the concern of the trade over the training matters. The legislative amendments on

the required installation of AIS, radar and VHF radiotelephone will come into effect only after the training of crew is ready.

Sub-committee on Survey Works of Local Vessels

18. The Sub-committee on Survey Works of Local Vessels discussed the proposed installation of the navigational equipment at its meetings between November 2012 and March 2014. At its meeting on 27 March 2014, the Sub-committee agreed that the relevant proposal should be submitted to this Committee for discussion.

Way Forward

19. MD will commence the preparation of draft legislative amendments on the required installation of AIS, radar and VHF radiotelephone, and seek the endorsement of the Legislative Council Panel on Economic Development. MD plans to submit the proposed legislative amendments to the Legislative Council in 2015.

Advice Sought

20. Members are invited to comment on the above proposal on requiring installation of AIS, radar and VHF radiotelephone.

Marine Department
April 2014

**Estimated number of local vessels and crew affected by
the proposed installation of Automatic Identification System (AIS),
Radar and Very High Frequency (VHF) Radiotelephone**

(As at 11 April 2014¹)

	AIS	Radar	VHF Radio- telephone
Class I vessels permitted to carry more than 100 passengers ²	98	41	
Class I vessels permitted to carry more than 12 passengers ²			314
Class II vessels with propulsion and of 300 gross tonnage or above	35		
Class II vessels used for carrying dangerous goods ³ (with or without propulsion)	193		
Estimated number of vessels affected	326	41	314
Estimated number of crew required to complete a radar training course and obtain a certificate of competency in radiotelephony⁴		82	628

¹ Estimated on the basis of the number of vessels with a valid certificate of survey between 2 January 2012 and 11 April 2014.

² Excluding floating restaurants, stationary vessels and Class I vessels operating within typhoon shelters only.

³ i.e. dangerous goods carriers, noxious liquid substance carriers and oil carriers.

⁴ Estimated that each vessel affected will need two crew to operate radar and VHF radiotelephone.