

PROVISIONAL LOCAL VESSELS ADVISORY COMMITTEE

Implementation of MARPOL Annex VI on Local Vessels

Purpose

1. The purpose of this paper is to seek members' views on the proposal to implement MARPOL Annex VI on board local vessels trading exclusively within the waters of Hong Kong.

Backgrounds

2. Annex VI of MARPOL 73/78, i.e. Regulations for the Prevention of Air Pollution from Ships was adopted in the 1997 Protocol and entered into force internationally since **19 May 2005**. Multi-lateral Policy Division (MPD) is currently working on the local legislation to extend this new Annex to HKSAR.

3. The main requirements of MARPOL Annex VI that may be relevant to local vessels include:

- i) prohibit the deliberate emissions of ozone depleting substances, which include halons and chlorofluorocarbons (CFCs). New installations containing ozone-depleting substances are prohibited on all ships. But new installations containing hydro-chlorofluorocarbons (HCFCs) are permitted until 1 January 2020;
- ii) a global cap of 4.5% m/m on the sulphur content of fuel oil;
- iii) set limits on sulphur oxide emissions from ship exhausts;
- iv) set limits on emissions of nitrogen oxides (NO_x) from diesel engines; and
- v) control the shipboard incineration of waste.

4. In March 2000 and July 2003, International Maritime Organization (IMO) approved amendments to MARPOL Annex VI and the NO_x Technical Code, these amendments provide further clarifications on definitions; survey requirements; issuance, endorsement, validity and form of certificate under MARPOL Annex VI and test conditions for NO_x emission measurement under the NO_x Technical Code. These amendments will enter into force internationally on 22 November 2006.

Application of MARPOL Annex VI to Local Vessels

5. MARPOL Annex VI is applicable to all ships (i.e. foreign-going and locally certificated ships) of 400 gross tonnage or above. In case of ships of less than 400 gross tonnage, the Administration will establish appropriate measures to ensure that the applicable provisions of Annex VI are complied with.

6. With regard to Regulation 13 on Nitrogen Oxide (NO_x), it is applicable to each diesel engine with a power output of more than 130 kW which is installed on board a ship constructed or undergone a major conversion on or after 1 January 2000.

7. Regulation 13 is not applicable to engines installed on ships solely engaged in voyages within waters subject to the sovereignty or jurisdiction of the State the flag of which the ship is entitled to fly, provided that such engines are subject to an alternative NO_x control measures established by the Administration.

Implementation Measures for Local Vessels under Annex VI

8. In view of the peculiarities of the local shipping industry, it is proposed to implement the following control measures on locally certificated vessels with respect to their gross tonnage:

i) *Local vessels of 400 gross tonnage or above*

The survey and inspection of these vessels will follow the provisions of Regulation 5 of Annex VI similar to that for foreign-going ships. Upon satisfactory completion of the required survey, a Hong Kong Air Pollution Prevention (HKAPP) Certificate will be issued to the vessel.

- ii) *Local vessels of less than 400 gross tonnage*
A simple system will be used for the survey and inspections of these vessels. This will include visual inspection during the annual survey of these vessels, to ensure no unauthorized modifications of approved equipment or the installation of non-approved appliances in respect of Annex VI requirements.

9. Diesel engines having power output of more than 130 kW, installed on board local vessels on or after 1 January 2000, and used on ships which operate exclusively within the waters of Hong Kong are not required to comply with Regulation 13 and the requirements of the NOx Technical Code, provided the following control measures are complied with:

- i) Engine International Air Pollution Prevention (EIAPP) Certificates which relates to NOx emissions are not required for these engines, provided the emission of NOx from these engines is less than 9.8 g/kW h.
When the local legislation for implementing MARPOL Annex VI in Hong Kong came into force, all engines of power output more than 130 kW must comply with the latest requirements of Annex VI, and certified by the engine manufacturers, authorized surveyors or recognized organizations. Special consideration on NOx emission may be given to diesel engines of less than 2000 rpm;
- ii) After the local legislation came into force:
 - a) records of those components, settings and operating values of the engine which influence its NOx emissions, including allowable adjustments or alternatives for the components of the engine, engine's rated speed and rated power, should be maintained at all times with the engine; and
 - b) diesel engines will be inspected annually during the annual survey of the vessel to ensure that they are in compliance with the emission criteria. This may include on board NOx verification in determining the engine parameters by verifying the engine components, settings and operating data have not deviated from the specifications as stated in the engine manufacturers records. On satisfactory completion of the survey, the

Certificate of Survey of the local vessel will be endorsed to indicate its compliance with MARPOL Annex VI.

10. Shipboard incineration will be prohibited on local vessels.

Action Requested

11. Members are invited to comment on the above proposal for implementing MARPOL Annex VI on locally certificated vessels.

Marine Department
Multi-lateral Policy Division
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Encl. MARPOL Annex VI
Resolution MEPC.132 (53)