

## Shipping Consultative Committee

### Control of Smoke Emission from Vessels in the Waters of Hong Kong

#### Purpose

This paper is to seek members' endorsement on the proposal to introduce new provisions under the Shipping and Port Control Regulations (Cap.313A) and the Merchant Shipping (Local Vessels) (General) Regulation (Cap. 548F) to control dark smoke emission from vessels in the waters of Hong Kong.

#### Background

2. Deterioration of air quality in recent years has become the major concern in Hong Kong. In 2000, the Marine Department conducted a review to evaluate the situation of air pollution in the marine environment, reassess the control measures for dark smoke emission from vessels, and explore ways to minimize dark smoke under its purview. Members were informed of the findings and recommendations of the review via SCC/128 and endorsed the paper by circulation on 30 April 2007.

#### Present Situation

3. At present, section 50 of the Shipping and Port Control Ordinance, Cap. 313 and section 51 of the Merchant Shipping (Local Vessels) Ordinance, Cap 548, stipulate that it is an offence for a vessel in the waters of Hong Kong to emit smoke in such quantity as to be a nuisance. Since the previous consultation in 2000, the department has taken forward the recommendations of the review progressively. MD patrol officers have adopted a more objective standard of Shade 2 on the "Ringelmann Chart"<sup>1</sup> for more than 3 minutes continuous emission at any one time as a reference to measure the quantity of dark smoke. Further, a Code of Practice issued under the Merchant Shipping (Local Vessels) Ordinance (Cap.548) also stipulates that any engine fitted on a vessel should be properly maintained at all times so that it is free from dark smoke emission. In this regard, a smoke emission test using Shade 2 of the "Ringelmann Chart" and a continuous period of 3 minutes as the upper limits has been included in the engine performance condition check during the final

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<sup>1</sup> "Ringelmann Chart" means a shade chart as defined in the Air Pollution Control (Smoke) Regulations (Cap. 311C). A copy of the chart is provided at Annex for reference purpose.

inspection for initial and periodic surveys. Observations indicate that today most vessels do not emit any visible smoke during operations, however stricter regulation is required for vessels do.

4. To support the Government's determination to improve air quality in Hong Kong and to align with the prevailing control standards for land-based emissions as set out in the Air Pollution Control (Smoke) Regulations (Cap. 311C), it is now proposed that a consistent standard to control dark smoke emission from vessels in the waters of Hong Kong should be adopted in the marine legislation and to make it an offence for a vessel to emit dark smoke which is as dark as or darker than Shade 1 on the "Ringelmann Chart" for more than 3 minutes continuously at any one time.

### **Proposal**

5. Legislative amendments are proposed to incorporate the following provisions in the Shipping and Port Control Regulations (Cap. 313A) and the Merchant Shipping (Local Vessels) (General) Regulation (Cap. 548F):

- (i) A provision to specify that any vessel is prohibited from emitting dark smoke which is as dark as or darker than Shade 1 on the "Ringelmann Chart" for more than 3 minutes continuously at any one time.
- (ii) A provision to specify that it is an offence for contravention of the provision proposed at sub-paragraph (i) above. The owner, his agent or the coxswain of the vessel concerned should be held responsible for the offence and be liable to a fine at level 3 (i.e. \$10,000) and in addition a fine of \$100 for every one quarter of an hour during the whole or any part of which such offence is knowingly and wilfully continued. On any subsequent conviction, the penalty should be a fine of level 3 (i.e. \$10,000) and imprisonment for 3 months, and in addition a fine of \$100 for every one quarter of an hour during the whole or any part of which such offence is knowingly and wilfully continued. It would be a defence that the dark smoke is emitted for safety of life or of the vessel.
- (iii) A provision to specify that the Director of Marine may give a direction / notice to the owner, his agent or the master of the vessel concerned to require them to take necessary action to avoid emitting dark smoke in excess of the limit specified in sub-paragraph (i) above.

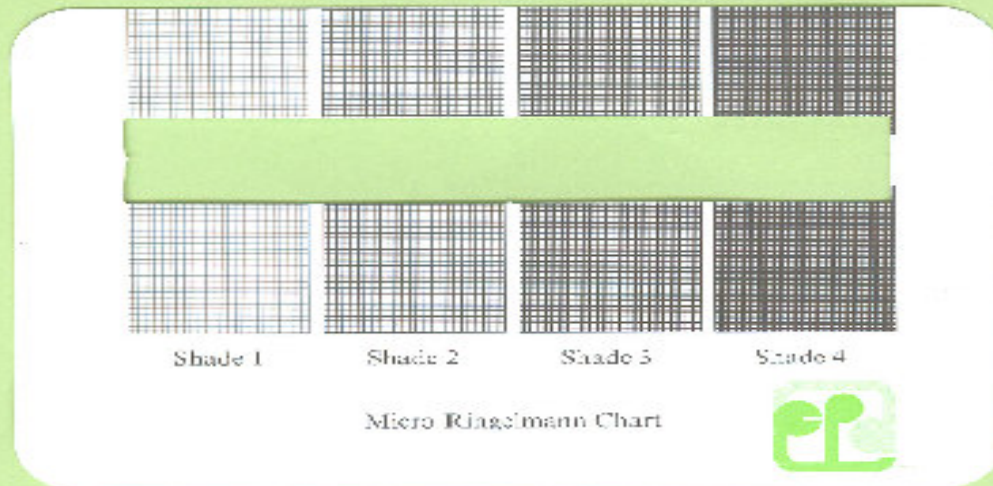
- (iv) A provision to specify that it is an offence for not complying with the direction / notice given under sub-paragraph (iii) above. The owner, his agent or the master of the vessel concerned should be held responsible for the offence and be liable to a fine of level 3 (i.e. \$10,000).

### **Recommendation**

- 6. Members are invited to endorse the proposal set out in paragraph 5 above.

Marine Department  
Port Control Division  
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## Ringelmann Chart



For ash tests, use this chart according to the following instructions:



1. Hold chart at arms length and view smoke through it by projection.
2. Be sure that light striking the chart is the same light that is shining on smoke being examined. (For best results, sun should be behind observer.)
3. Match smoke as closely as possible with corresponding grid on chart.
4. Enter density of smoke designated by numbers under each grid on record sheet at same time of each observation.
5. Repeat observations at regular intervals of 15 min. (2 min max.)
6. Note and record distance to stack, direction of smoke emissions, weather conditions and sky background.