

Provisional Local Vessel Advisory Committee

Review of the Control of Smoke Emission from Vessels

Purpose

1. The purpose of this paper is to seek members' endorsement of the recommendations appended in paragraph 7.

Background

2. To address the public concern on air quality in Hong Kong, the Marine Department (MD) undertook a review to evaluate the situation of air pollution in the marine environment, review the control of smoke emission from vessels, and explore ways to lessen dark smoke emission within her purview.

Present Situation

3. On land, the Environmental Protection Department (EPD), together with the Transport Department (TD) and the Hong Kong Police Force (HKPF) are imposing stringent measures to control emission of dark smoke from vehicles. These measures include taking prosecution action against vehicle owners and ordering them to present their vehicles for smoke testing, and retesting until the vehicles concerned pass the smoke emission standard stipulated. EPD is also taking parallel action on chimneys or relevant plants on land. As it is impracticable to use a measuring device, trained spotters will use a smoke colour/shade comparison scale known as "Ringelmann Chart" (See Annex I) to determine whether the installations concerned emit excessive dark smoke.

4. From time to time, MD has received complaints about vessels emitting dark smoke and special operations were mounted in an attempt to prosecute polluters. However, the prosecution action has not always been successful as the extant provision in the Shipping and Port Control Ordinance is a bit vague in defining the circumstance, quantity of smoke and duration of emission that constituting an offence.

5. In the course of the review, a study has been made on other major ports around the world on their experience and what they had been doing to tackle the smoke emission issue. It is learnt that the majority of them handle the issue when the emission is causing a nuisance or problem to the public, on a case by case basis which is similar to that of ours. It is also noted that some ports have engaged the Ringelmann Chart to determine the level of dark smoke emission.

Conclusion of the Review

6. After analysing various preventive and control measures, the review concluded that proper operation and maintenance of engines are the most effective measure for dark smoke reduction and that the extant legislation should be amended to clearly define the quantity and duration of smoke emission that constituting an offence.

Recommendation

7. Taking into consideration the conclusion of the review and the measures taken by EPD, TD, HKPF and other port authorities, it is recommended that :

- i) MD should, in addition to continuing to combat smoke nuisance, use Ringelmann Chart as reference to measure the extent of dark smoke emission. In this regard, Shade 2 of the Ringelmann Chart and a continuous period of 3 minutes should be adopted as the upper limit. In other words, any smoke emission darker than the Shade 2 for more than 3 minutes would constitute an offence. This new requirement would be made under the Shipping and Port Control Regulations, Cap. 313, and the proposed Merchant Shipping (Local Vessels) (General) Regulation, Cap. 548.
- ii) The current administrative requirement for locally licensed vessels to undergo smoke test during their statutory periodical inspection (survey) should be codified in the legislation. To encourage owners and coxswains to carry out proper maintenance of their vessels, an additional inspection would be required if they were caught emitting dark smoke in excess of the above limit. This new requirement would be made under the proposed Merchant Shipping (Local Vessels) (General) Regulation, Cap. 548.
- iii) The examination syllabuses of local certificates of competency should be expanded to place more emphasis on proper operation and maintenance of engines to reduce dark smoke emission. In parallel, MD should also continue to conduct educational seminars with the floating community and shipping companies, putting more weight on the reduction of dark smoke emission.

Presentation

8. This paper will be presented to members by Mr. F. L. Cheuk, Senior Marine Officer/Legislation and Prosecution.

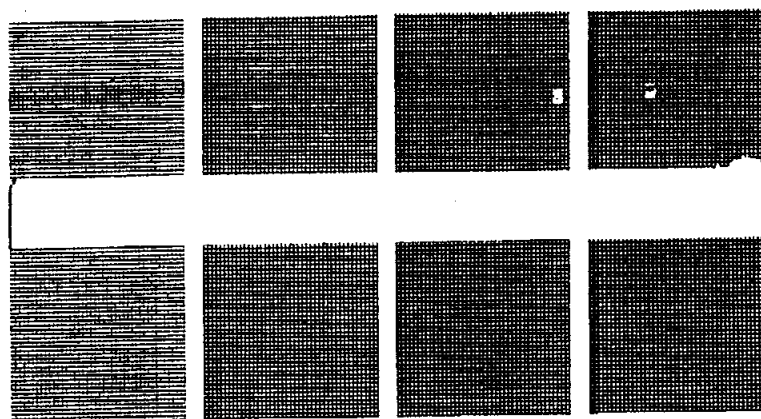
Vessel Traffic Services Branch

Marine Department

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Ringelmann Chart

力高文圖表



No.1
1號

No.2
2號

No.3
3號

No.4
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Micro-Ringelmann Chart

微型力高文圖表

