

**Bills Committee on Shipping Legislation  
(Control of Smoke Emission) (Amendment) Bill 2014**

**Follow-up actions arising from the discussion  
at the meeting on 29 April 2014**

**BACKGROUND**

At the last meeting held on 29 April 2014, the Administration is requested to provide the following information –

- (a) in relation to the means to measure, regulate and control the emission of smoke / dark smoke by vessels, information regarding any latest technology / methodology (other than the use of a Ringelmann Chart) which has been adopted by any major port (including the respective ports of Singapore, Busan, Dubai, Rotterdam, Hamburg, Los Angeles, Antwerp and Long Beach) in its waters and, if there is any such means, details of the means;
- (b) if the Ringelmann Chart has been adopted by any major port to control and regulate dark smoke emission, information on any means and/or equipment which have/has been employed together with the Chart by the concerned authorities to enforce the law; and
- (c) details on the investigation, enforcement and prosecution procedures concerning the offence of emission of dark smoke which is proposed to be regulated, including steps that would be taken, supplementary aids which would be used and manpower involved.

**FINDINGS AND RESPONSES**

**Control of dark smoke emission from vessels by overseas authorities**

2. To follow up the requests in paragraph 1(a) and (b) above, the Marine Department (MD) has made enquiries with the port authorities of 22 well-developed and major seaports around the world including –

12 ports in Asia-Pacific and North America

Singapore, Tokyo (Japan), Busan (South Korea), Kaohsiung (Taiwan), Jakarta (Indonesia), Port Klang (Malaysia), Colombo (Sri Lanka), Laem Chabang (Thailand), Melbourne (Australia), Los Angeles (the US), Long Beach (the US) and Montreal (Canada);

### 7 ports in Europe

Felixstowe (the UK), Rotterdam (the Netherlands), Antwerp (Belgium), Hamburg (Germany), Le Havre (France), Helsinki (Finland) and Algeciras (Spain);

### 2 ports in the Middle East

Jeddah (Saudi Arabia) and Dubai (United Arab Emirates); and

### 1 port in South Africa

Durban.

MD has also consulted the European Commission (EU) on any common standards and methods in controlling and assessing dark smoke emission from vessels that are applicable to its member countries.

3. So far, MD has only received responses from the relevant authorities in the UK, Hamburg (Germany), Rotterdam (the Netherlands), Melbourne (Australia), Singapore and the EU with respect to how they control dark smoke emission from vessels.

4. The port authority of **Hamburg** and the **EU** have responded that their controls are focused on the emission of sulphur dioxide and / or nitrogen oxides from vessels rather than on the opacity or darkness of smoke emitted. The port authority of **Melbourne** has advised that it has not set any smoke emission limit from mobile sources including ships. As for **Rotterdam**, according to its port authority, if its inspectors see a ship emitting too much smoke or receive complaints about excessive smoke emission, they will visit the vessel and request that immediate actions be taken to rectify the problem, which is usually a result of human error or is a technical issue, by for example, stopping the engine. In the very unlikely scenario that the smoke cannot be reduced immediately or has caused a lot of trouble, a fine will be imposed. The Rotterdam authority does not use the Ringelmann Chart or other tools in the process. The port authority of **Singapore** does not use the Ringelmann Chart either since according to its legislation, smoke emission from vessels is prohibited only where the smoke is “in such quantity or density as may, in the opinion of the Authority, be a nuisance or an annoyance”. We understand that the Singapore authority is reviewing its legislation to address the enforcement difficulties in proving that the smoke emission constitutes “a nuisance”. As for the **UK** which prohibits smoke emission from vessels that is as dark as or darker than Shade 2 on the Ringelmann Chart, its maritime authority has advised MD that they are not aware of any prosecution cases heard by the court in the past ten years and they have no relevant enforcement experience to share.

5. In summary, from the responses gathered so far, the Ringelmann Chart is the only tool known to have been used by overseas port authorities where there are regulations controlling the darkness of smoke emitted from vessels.

### **Investigation, enforcement and prosecution procedures by MD**

6. The Harbour Patrol Section (HPS) of MD is responsible for enforcement against dark smoke emission from vessels as stipulated under the Merchant Shipping (Local Vessels) Ordinance (Cap. 548) and the Shipping and Port Control Ordinance (Cap. 313). Patrolling and enforcement duties are carried out by some 70 Marine Inspectors under HPS and a fleet of 25 patrol launches.

7. To enforce the law, the HPS conducts random visual survey of different types and sizes of vessels in the waters of Hong Kong throughout the year. The HPS also acts on complaints and carries out investigation to ascertain if there is sufficient evidence for taking prosecution actions against emission of dark smoke in violation of the law. In future, after passage of the Bill, the HPS would take enforcement actions where the intensity of emission is found to be as dark as or darker than Shade 2 on the Ringelmann Chart and that such emission has lasted for three minutes or more continuously. Details of the investigation, enforcement and prosecution procedures to be carried out by MD are set out in the paragraphs below.

8. During the random survey, MD's patrol launch would follow the vessel being surveyed. MD officers on board the launch would observe the emission, if any, from the vessel by comparing the level of darkness of the smoke emitted against the different shades of grey / black on the Ringelmann Chart, time the duration of the emission with a watch, and take a photo of the vessel with a digital camera. If the smoke emission requirement is breached, MD officers would board the vessel concerned to collect information and take statement from the vessel's master / coxswain about the vessel's operating conditions which may lead to the emission. The HPS would compile a prosecution case file containing all the evidence collected and submit the case file to MD's Prosecution Unit for examination. If the evidence is considered sufficient for taking prosecution action, summons / notice specifying a date for court hearing would be issued to the vessel's master / coxswain, the vessel's owner and / or his agent.

9. In the case where a public complaint has been received about dark smoke emission from vessel, MD's patrol launch would proceed to the spot and try to identify the vessel concerned based on the information provided by the complainant. If the smoke emission has continued upon arrival of MD's patrol

launch, MD officers would carry out the procedures set out in paragraph 8 above to record the darkness and duration of smoke emitted, take statement from the vessel's master / coxswain for future prosecution actions, etc. On the other hand, if the smoke emission has ceased and MD officers cannot identify the vessel concerned, they would arrange for an interview with the complainant to take statement about the particulars of the vessel, the darkness of the smoke emitted as compared against the Ringelmann Chart, the duration of emission, etc. Photos or videos of the emission taken by the complainant would serve as supporting information. MD officers would also approach the master / coxswain of the vessel concerned (if the vessel's name can be identified by the complainant) to take statement. Similar to what is set out in paragraph 8 above, the HPS would compile a prosecution case file containing all the evidence collected and submit the case file to MD's Prosecution Unit for examination and prosecution actions.

10. In all prosecution cases, the witness' statement is the single most important evidence. Photos or videos of the smoke emission would only serve as supporting information to facilitate a better understanding of the on-site situation. If there is not enough evidence to substantiate commission of an offence, MD would consider issuing a warning letter or advisory letter to the vessel depending on the darkness and duration of smoke emitted.

**Transport and Housing Bureau  
Marine Department  
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