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MSC.1/Circ.1477  
9 June 2014

**GUIDELINES TO FACILITATE THE SELECTION OF PORTABLE ATMOSPHERE  
TESTING INSTRUMENTS FOR ENCLOSED SPACES AS REQUIRED BY  
SOLAS REGULATION XI-1/7**

1 The Maritime Safety Committee, at its ninety-third session (14 to 23 May 2014), having considered the proposal by the Sub-Committee on Dangerous Goods, Solid Cargoes and Containers, at its eighteenth session (16 to 20 September 2013), approved the *Guidelines to facilitate the selection of portable atmosphere testing instruments for enclosed spaces as required by SOLAS regulation XI-1/7*, as set out in the annex.

2 The Guidelines are intended to be read in conjunction with new SOLAS regulation XI-1/7 (Atmosphere testing instruments for enclosed spaces) upon its entry into force and the *Revised recommendations for entering enclosed spaces aboard ships* (resolution A.1050(27)).

3 Member Governments are invited to bring the annexed Guidelines to the attention of all parties concerned.

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## ANNEX

### **GUIDELINES TO FACILITATE THE SELECTION OF PORTABLE ATMOSPHERE TESTING INSTRUMENTS FOR ENCLOSED SPACES AS REQUIRED BY SOLAS REGULATION XI-1/7**

#### **Introduction**

1 These Guidelines are to facilitate the selection of a portable atmosphere testing instrument for enclosed spaces as required by SOLAS regulation XI-1/7. They are intended to be read in conjunction with this SOLAS regulation and the *Revised recommendations for entering enclosed spaces aboard ships* (resolution A.1050(27)). They are not intended to constitute a performance standard for such equipment.

2 It should be noted that, given a ship's specific characteristics and operations, additional atmospheric hazards in enclosed spaces may be present that may not be detected by the instrument recommended to be selected by these Guidelines, and in such cases, if known, additional appropriate instruments should be carried.

#### **General**

3 These Guidelines refer to the instrument that is used to test the atmosphere in an enclosed space before entry and at appropriate intervals thereafter until all work is completed. They do not refer to a personal gas detector that is intended to be carried by an individual whilst inside the enclosed space.

4 The instrument should be capable of remote sampling and detection for all gases that it is designed for, without interference from the atmosphere or other characteristics of the intervening space.

5 Upon activation, the instrument should perform a "self-test" which indicates that the instrument is functioning correctly.

6 Training requirements should be considered when selecting the instrument. Any atmosphere testing should be performed by trained personnel.

#### **Gases and vapours to be measured**

7 The instrument should be capable of measuring and displaying concentrations of:

- .1 oxygen;
- .2 flammable gases or vapours (% of LFL);
- .3 carbon monoxide; and
- .4 hydrogen sulphide,

8 The instrument should clearly and unambiguously show which gas or vapour it is measuring (noting that the display may be switchable or menu accessible).

9 If the instrument is fitted with an alarm function, it should activate at the appropriate level as determined by the flag State Administration.

### **Use of the instrument for atmosphere testing of enclosed spaces on board ships**

- 10 The instrument should be suitably protected, having due regard for the environment and temperatures in which it is expected to operate.
- 11 The instrument should be capable of being easily carried.
- 12 The instrument should be suitably protected from the ingress of dust and water.
- 13 The minimum battery life of the instrument (with fresh batteries of recommended type) should be 10 hours.
- 14 The instrument should be intrinsically safe.
- 15 The instrument display should be readable in all lighting conditions.

### **Calibration**

- 16 The manufacturers' instructions should have clearly defined calibration requirements.
- 17 If the instrument is fitted with an alarm or shutdown function that activates if the manufacture's calibration interval is exceeded, this should not stop the instrument from functioning during actual use and the unit should not restart once the alarm or function has been activated.

### **Instruction manual**

- 18 The instrument should be provided with a manual that describes its features and alarms and explains how to calibrate, operate and maintain it. The information in this manual should be available in the working language of the ship.
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