

**MARINE DEPARTMENT NOTICE NO. 74 OF 2003**  
**(Navigational and Seamanship Safety Practices)**

**Notice to Owners, Operators and Persons-in-charge**  
**of Locally Licensed Vessels – Precautions to be taken before entering**  
**tanks and other enclosed spaces**

**The Accident**

1. On 6 August 2002 two workers died from lack of oxygen as a result of entering a buoyancy tank on a locally licensed hopper barge. On investigation it was found that safety measures had not been taken for entering the buoyancy tank which had been closed for some time.

**Lesson learnt**

2. Entering a tank or an enclosed space without first taking the precaution of thorough ventilation and atmospheric test is extremely dangerous. There is no guarantee that the atmosphere inside the tank would still be life supporting after being closed for a long period and no person should be allowed to enter such a space without first ensuring that adequate oxygen is present.

3. Owners, operators and Persons-in charge of locally licensed vessels are reminded to take note of the attached Marine Department Notice No. [115A of 1992](#) in relation to the precautions to be taken before entering tanks and other enclosed spaces and to adopt appropriate safety measures before making their entry.

(S.Y. Tsui)  
Director of Marine

Marine Department,  
HKSAR Government

Date: 9 June 2003

Action File Ref.: MAI/P 901/080-2002

MARINE DEPARTMENT NOTICE NO. 115A OF 1992

Precautions to be taken before entering  
tanks and other closed spaces

Notices to Shipowners, Masters, Shipbuilders,  
Shiprepairers, Stevedores and Operators

Attention is drawn to the danger of entering a tank or closed space on board ship without first taking the precaution of thoroughly ventilating it. This danger exists whether the spaces are empty or are being used for the carriage of certain cargoes such as oil, grain, coal, potatoes, onions, organic substances or chemicals. A mishap most commonly occurs when persons go into an oil tank which has recently contained petroleum, or into a cofferdam, a water ballast tank, or a void tank which has been empty and closed for some time.

The lack of oxygen in an empty, insufficiently ventilated, closed tank is caused by rusting, which gradually extracts oxygen from the air, and by the presence of oil vapours which displace or contaminate the air. In cargo holds and storerooms carbon dioxide (CO<sub>2</sub>) may develop at the expense of the oxygen in the air because of chemical changes in the goods being carried. Poisonous gas may be produced by coal cargoes or bunkers and in spaces in which heating stoves or boilers are installed.

Ballast tanks, oil tanks, voids, storerooms, cargo holds, pump rooms and other spaces which may contain a dangerous concentration of suffocating or poisonous gas should always be thoroughly ventilated and the atmosphere inside tested before any attempt is made to enter, and it should be borne in mind that any gas in the compartment is likely to be heavier than air and may be localised. If there is any doubt about the atmosphere there should be someone standing by and a breathing apparatus, smoke helmet or smoke mask should be used and a lifeline carried.

It is recommended that, where applicable, warning notices should be posted at pump room entrances prohibiting entry unless authorised by a responsible officer and that similar notices concerning cargo tanks and other closed spaces should be posted in prominent places.

When there is a casualty in an enclosed space which might have been caused by gas or lack of oxygen, it is most unwise for anyone to go to his aid without first donning breathing apparatus, smoke helmet or smoke mask and carrying a lifeline. A rescuer who fails to do this will most likely be overcome himself and will jeopardise not only his own safety but also that of the man he hopes to save.

Additional copies of this notice may be obtained from the Marine Department Marine Industrial Safety Section, Room 2315, Harbour Building, 38 Pier Road, Central, Hong Kong.

A.C. PYRKE  
Director of Marine (Ag.)

Marine Department  
Hong Kong

Date : 13 August 1992

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