

## 1. Purpose

The purpose of this procedure is to outline the preparation for an entry into any confined space for a person's breathing and hot work.

### 2. Responsibility

It is the responsibility of the Chief Engineer to ensure that all confined spaces are entered in a safe manner. It is the responsibility of the Mate on Watch to be aware of all confined spaces that are open and to ensure that this information is passed on to his/her relief.

#### 3. Reference

- a. Volume 1 SMM 7.8.1
- b. GasTech Gas Monitor Manual

### 4. General

#### Preparation for Entry

Any confined space must be assumed to not have sufficient oxygen in it and to be potentially explosive.

The Engineer in Charge shall first notify the Chief Engineer and Mate on Watch of their intentions and their permission. After opening the space, they must cordon off the tank's or confined space's opening so that no one can walk or fall into it. Next, a portable blower shall be placed at the opening or the ship's ventilation shall be manipulated to blow fresh air into and throughout the space for an adequate amount of time. Six hours is a good rule of thumb, but varying environments can/will require more or less time. Airflow through the tank or confined space shall be confirmed. After proper ventilation, the GasTech Gas Monitor shall be used to test for oxygen and explosive gases (see manual for instructions) or a certified chemist shall be contracted to confirm "Safe for Entrance, Safe for Hot Work". Remember, any pipe stanchion or enclosed structural section of the ship could contain explosive gases from leaking tanks or petroleum preservatives.

#### Entry

With a second person at the entrance, the person entering the space shall carry the gas monitor with the "comfort beep" turned on, so that adequate oxygen is confirmed. The monitor shall be used to check all areas of the tank or space to ensure there are no explosive gases if hot work is to be performed.

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# Securing Space

Prior to securing confined spaces, the space shall be checked thoroughly for tools, rags and personal items before closing. The Chief Engineer and Mate on Watch shall be informed when the space is closed again.

# Maintaining Safe Standard

Confined spaces need to be rechecked periodically to ensure that they are still safe for entry. Any time a space is open for more than 24 hours, it shall be checked prior to reentry. Any time the conditions in the space change, such as the spillage of a petroleum product in the space, the air condition shall be re-checked.

In port, the individual conducting the follow-up test must be a competent person. The testing usually is done by people from the shipyard's safety department. At WHOI, the shop has individuals that are qualified as competent persons.

## 5. Reporting

The Chief Engineer shall maintain a record of confined spaces entered.