

Dangerous Spaces

When is a space dangerous?

A recent incident has highlighted the potential dangers posed by seemingly safe spaces. A bulk carrier on passage with a fumigated cargo of wheat had to medically evacuate two of its crew who became overcome by fumes from the fumigant in number 1 cargo hold whilst they were working in the forecandle store, which was adjacent to the hold.

The potential presence of dangerous atmospheres should always be borne in mind even when working in what is seemingly an innocuous, well ventilated space. It is simply not the case that the only risk posed is either by ships' tanks, holds or void spaces. If it is possible for there to be connectivity between spaces, for example via ventilation systems, there is need to verify that a space is safe for entry before any work is undertaken in it.

Section 17.1.3 of the Code of Safe Working Practices for Merchant Seamen (published by the Maritime and Coastguard Agency, UK) states that where there is an unexpected reduction or loss of ventilation of continuously ventilated spaces, these spaces should be dealt with as being dangerous. If there is any doubt as to whether the space should be considered as dangerous then it should be assumed that it is until the atmosphere has been verified as safe. Even where initial testing provides a satisfactory result, monitoring and ventilation should be maintained whilst work is being carried out within that space.

Any space which can potentially be starved of oxygen should be risk-assessed by the ship's officers before work is allowed to be carried out in that space.



All of the ship's crew should be familiar with the ventilation system and where the intakes and exhausts are located. Consideration should be given to marking on a set of ship's plans which intake supplies which spaces, and where the ventilation exhausts for spaces are located. This would then alert the ship's crew to any potential problems with regard to vented vapours or fumes entering spaces such as a store. It would also be of benefit should there be a fire onboard the vessel as a thorough understanding of the ventilation system is essential in dealing with the incident effectively.

Wind direction across the ship should also be carefully considered especially where the vessel is steaming at a speed and direction relative to the wind which might cause exhausts or vapours to be carried back across the vessel's deck. The Officer of the Watch should always be aware of the direction of the relative wind, if work is being carried out in an enclosed space. Where wind direction may become an issue in respect of ventilation then

alterations of course, if navigationally possible, should be considered or the work interrupted until the risk abates.

Members' attention is also drawn to the content of Risk Alert 16 published in June 2010, and the relevant section of The Code of Safe Working Practices for Merchant Seamen.

<http://mcga.gov.uk/c4mca/coswp.pdf>

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