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**BERMUDA MERCHANT SHIPPING INFORMATION NOTICE**

**Direct Opening from Cargo and Machinery Spaces into Sleeping Rooms**

Notice to all Ships and Vessel Owners, Ship Operators and Managers; Masters and Officers of Bermuda Registered ships

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Following the investigation of a fatality on a non-Bermuda Registered ship, this information bulletin is to increase awareness of the dangers of openings between cargo holds and the ship's accommodation or other technical spaces, via ducts, ventilation systems, cable runs or pipework.

The above mentioned fatality was caused by asphyxiant gas used as a cargo fumigant leaking into a crew member's cabin through an inadequately sealed cable duct running from the cargo hold to behind the cabin bulkhead lining.





The Bermuda Administration is concerned that such openings may be behind bulkhead linings and penetrations are not sealed adequately.

**Actions required:**

1. Ship Owners, Managers and operators should consider implementing a more vigorous inspection of the bulkhead penetrations to ensure that there can be no possibility of leakage from cargo to other spaces, including at the build stage and during subsequent installations.
2. Masters, Chief Engineers and Senior Management on board ships should be actively involved in locating and monitoring any penetration, especially at dry dock when new equipment may be fitted and systems may be modified. Ship owners, managers, operator, masters and chief engineers are to ensure that Class and Statutory Surveys are conducted in a timely manner and any defects identified are rectified promptly;

**Relevant Requirements**

SOLAS II-2/9.2.3.3 - *Fire integrity of bulkheads separating adjacent spaces. Boundaries between accommodation and cargo spaces should be A-0 and they are constructed as to be capable of preventing the passage of smoke and flame.*

Maritime Labour Convention 2006, Regulation 3.6(e) - *there shall be no direct openings into sleeping rooms from cargo and machinery spaces or from galleys, storerooms, drying rooms or communal sanitary areas; that part of a bulkhead separating such places from sleeping rooms and external bulkheads shall be efficiently constructed of steel or other approved substance and be watertight and gas-tight*

With respect to bulk carriers and fumigation amendments to the International Maritime Solid Bulk Cargoes (IMSBC) Code (resolution MSC.268(85)) - 3.6.2 *When a fumigant is used, such as phosphine gas, for fumigation-in-transit, due consideration shall be given to the severe toxicity of fumigants, taking into account that fumigants may enter into occupied spaces despite many precautions taken. In particular, in the case that fumigant leaks from a cargo hold under fumigation, the possibility should be kept in mind that it may enter the engine-room via pipe tunnels, ducts, and piping of any kind, including wiring ducts on or below deck, or dehumidifier systems that may be connected to parts of the cargo hold or compartments of the engine-room. Attention shall be given to potential problem areas such as bilge and cargo line systems and valves. In all cases, ventilation procedures on board the ship during the voyage, should be scrutinized with regard to the possibility of drawing in the fumigant gas such as by incorrect ventilation procedures and settings, vacuum creation due to incorrect closing devices or flap settings, air conditioning and closed loop ventilation of the accommodation. Prior to*



*commencement of fumigation procedures, it should be verified that ventilation flaps and closure devices are set correctly and that means of closing and sealing of all the bulkhead openings (such as doors and manholes) leading from the engine-room to piping tunnels/duct keels and other spaces that in case of leaks could become unsafe to enter during the fumigation are effective, confirmed closed and have warning signs posted.*

*3.6.3 Gas concentration safety checks shall also be made at all appropriate locations, which shall at least include: accommodation; engine-rooms; areas designated for use in navigation of the ship; and frequently visited working areas and stores, such as the forecandle head spaces, adjacent to cargo holds being subject to fumigation in transit, shall be continued throughout the voyage at least at eight-hour intervals or more frequently if so advised by the fumigator-in-charge. Special attention shall also be paid to potential problem areas such as bilge and cargo line systems. These readings shall be recorded in the ship's log-book.*

For more information please contact: [survey@bermudashipping.bm](mailto:survey@bermudashipping.bm)

**Chief Surveyor**

**Bermuda Shipping and Maritime Authority**