



The silent and invisible killer onboard vessels

Accidents in enclosed spaces onboard vessels continue to be a source of serious injuries and fatalities. Despite decades of work to improve enclosed space entry by maritime safety organizations, training institutions, and vessel owners and operators, the risks have not been eliminated.

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The United States Coast Guard (USCG) recently issued Marine Safety Alert 04-19, "[Confined Spaces: Silent & Invisible Killers](#)". The risks associated with enclosed space entries are illustrated by a recent casualty where three persons were asphyxiated while working onboard a laid-up Mobile Offshore Drilling Unit (MODU). Once again, two additional persons were killed when trying to rescue a fellow crewmember – because they entered the space without wearing personal protective equipment and self-contained breathing apparatuses.

Although it may be mandatory to carry out enclosed space entry drills on board, it is also important to ensure that the drills are realistic. Those involved in a drill must understand that its purpose is to prevent accidents and not simply to tick the box to comply with regulatory requirements. According to the USCG, several studies have shown that humans often miss the obvious signs of a dangerous situation while under stress and because their focus is upon another effort or action that needs to be accomplished. In fact, more than 50% of the fatalities in enclosed spaces may have occurred during attempts to rescue coworkers.

While the quality and recency of the enclosed space entry training provided to the crew onboard the laid-up MODU is unknown, it appears that the hazardous nature of the operation was not fully appreciated by the crew and that they may have lost situational awareness during the process. The USCG therefore strongly encourages all who work onboard vessels in any role, whether they be senior shipboard officers or crew, riding crew, shore side managers, owners/operators, and other personnel to:

- obtain the necessary level of knowledge and training in enclosed space entry procedures including emergency and rescue procedures;
- ensure crews undergo periodic enclosed space entry training and participate in routine and practical onboard emergency drills;
- verify all required enclosed space entry and rescue safety equipment is onboard, maintained, tested and fully functional; and
- appreciate the dangers involved in enclosed space entry and to continuously educate yourself by further study.

Gard has produced a range of publications and videos that can be used to raise awareness of the issues involved in enclosed space entries. These materials can be downloaded from our [webpage on enclosed space entry training](#) , or by using the direct links below.

- [Full 8-minute video for crew awareness](#) (MP4 – 144Mb)
- [Gard%20AS%20-%20Case%20study%20-%20entry%20into%20enclosed%20space.pdf](#) (PDF).
- [Posters for display and creating awareness onboard ships](#) (PDF).
- [Gard alert on mandatory enclosed space entry and rescue drills as per SOLAS Regulation III/19](#)
- [Now may be a good time to review your enclosed space entry procedures](#)
- [“Warning - Enclosed spaces - Do not enter!” – a P&I incident report](#)

- [Full story of Alf Martin Sandberg's near fatal mistake](#)

Gard recommends that all relevant personnel are given proper training to help them recognise, evaluate and control hazards associated with entry into enclosed spaces. It is also important that relevant procedures encourage a more risk-based thinking in the planning of tasks onboard - and that the crew members who will be involved in the work are also involved in the risk assessment process. This to ensure a common understanding of the hazards and their consequences and to allow the work team to obtain an overview of the tools and safety equipment needed *before* they start the task.