



Risk Assessment Solutions

“Don’t Cure, Prevent”

Circular 01/08/2015

Subject: Concentrated Inspection Campaign (CIC) 2015 on Crew Familiarization for enclosed space entry - Important Port State Control Issue!

Accidents in enclosed spaces onboard ships have long been a source of serious injuries, fatalities etc. According to statistics, the root cause is not due to lack of guidance as is commonly perceived, but rather a failure to follow established procedures i.e. the ***Human Element plays a significant role***. In view of the aforementioned, the requirement to carry out ***enclosed space entry and rescue drills*** became mandatory in January 2015 (SOLAS Reg. III/19).

Further to the above and in connection to our “***Don’t Cure, Prevent***” policy, we would like to inform our Clients that from **1st September 2015 until 30th November 2015**, Paris MOU, Tokyo MOU, Black Sea MOU and Indian Ocean MOU will be conducting a joint ***Concentrated Inspection Campaign (CIC)*** on Crew Familiarization with the enclosed space entry procedures. More MOUs are expected to join this campaign as well.

The aim of the CIC is to ensure effective procedures and measures are in place to safeguard seafarers on board ships when entering and working in enclosed spaces and to check compliance with the applicable requirements of the SOLAS Convention.

For the purpose of interregional harmonization, a Questionnaire has been released by Paris & Tokyo MOUs containing a list of 10 selected questions to verify that crew members with enclosed space entry duties are familiar with the relevant equipment and have received effective training to carry out their duties and at the same time be able to identify the hazards associated with the task of entering into enclosed spaces.

Taking a step further, ‘***Prevention at Sea***’, in an effort to assist our Clients and the Shipping Industry to ensure that efficient procedures are in place, being implemented effectively by the Mariners on board and they are fully cognizant and capable of identifying potential pitfalls, made the decision to release our checklist associated to the ‘Entry into Enclosed Space & Rescue’ mandatory requirements.

‘***Prevention at Sea***’ would like to advise our Clients, in order to avoid potential complications, to review their procedures and to ensure that everyone onboard is familiar with their duties, relating to enclosed space entry.

For more details, do not hesitate to contact us!

We remain at your disposal,

Prevention at Sea

Enclosed Space Entry Official Checklist

Paris MoU & Tokyo MoU

Vessel Name:

IMO Number:

Inspection Port:

Date of Inspection:

A/A	INSPECTION CHECKLIST	YES	NO	N/A
1	Are there measures in place to test the atmosphere of an enclosed space to confirm it is safe to enter?			
2	Are crew members responsible for testing the atmosphere in enclosed spaces trained in the use of the equipment referred to Question 1?			
3*	Are the crew members familiar with the arrangements of the ship, as well as the location and operation of any on board safety systems or appliances that may be called upon to use for enclosed space entry?			
4*	Are crew members responsible for enclosed space emergency duties, familiar with those duties?			
5	Is the Training Manual available on board and its contents complete and customized to the ship?			
6*	Is there evidence on board that enclosed space entry and rescue drills are conducted in accordance with SOLAS Chapter III/ Reg. 19?			
7	Have the ship's crew participated in an enclosed space entry and rescue drill on board the ship at least once every two months in accordance with SOLAS Chapter III/ Reg. 19.3.3?			
8*	Are crew members responsible for enclosed space entry aware of the associated risks?			
9*	During the CIC, the PSCO is to observe an enclosed space entry and rescue drill. Did the drill comply with the requirements of SOLAS Chapter III, Regulation 19.3.6?			
10	Is the ship detained as a result of a "NO" answer to any of the above Questions?			

COMMENTS:

SIGNATURE(S)

Note 1: Questions with an asterisk indicate Code 30 may be issued

Note 2: For PMoU, Questions No. 1 & 2 are for information purposes only.

Note 3: For TMOU all questions apply.

Note 4: Each question should be answered and only one box ticked for that question.



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Enclosed Space Entry Operation Risk Assessment

Prevention at Sea

Rev 02/Date 03 Febr '15

In order to calculate the 'PaSea' risk factor, indicate 'X' in the 1st or the 2nd column, as applicable.

A/A	Assessment Criteria Checklist	YES	NO	PaSea factor	Score
SMS Procedures					
1	The ship's Safety Management System (SMS) includes procedures for entering enclosed spaces concerning the safety of personnel and the ship (refer to paragraph 7 of the ISM Code).				
2	The ship's Safety Management System (SMS) includes a training scheme for the use of atmospheric testing equipment in an enclosed space and schedule of regular drills onboard.				
3	Procedures & records exist that the atmospheric testing equipment is properly calibrated/certificated and relevant evidence found on board.				
4	Records exist that the crew members are trained as appropriate in enclosed spaces safety, including familiarization with on board procedures for recognizing, evaluating and controlling hazards associated with the entry into enclosed space.				
5	An enclosed entry permit system (Record form) has been implemented in ship's Safety Management System & includes all information as per the Appendix to the IMO Resolution A.1050 (27).				
6	During internal audits of the ship's Safety Management System (SMS), performed by the Company, it is verified that the established procedures are complied with in practice and are consistent with the safety strategy adopted by the Company.				
PRE - ENTRY PREPARATION ASSESSMENT					
1	Is a Job Hazard Analysis (JHA) or a Risk Assessment (RA) being carried out taking into account the unique surrounding & prevailing conditions and the space status? Do the mitigating measures derived from the JHA or RA cover all the identified hazards (obvious or hiding)?				
2	Is the enclosed space being ventilated (by mechanical means whenever applicable) and proper arrangements were made for ventilation throughout the task and during temporary breaks? Do arrangements exist to re-test the atmosphere before re-entering?				
3	Are all openings (i.e. open manholes etc.), being guarded and properly signed?				
4	Will the space be isolated (if deemed necessary) by considering the ship's piping or electrical diagram?				
5	Will suitable lights be positioned outside the entrance and inside the space (as applicable)?				
6	Will the space atmosphere be tested before entry by a competent & trained Officer and found within acceptable limits? Will frequent atmosphere checks be scheduled during task?				
7	Will the relevant rescue equipment be available at an easy accessed point ready for immediate use? Does the rescue equipment consists of first aid kit, stretcher (flexible preferably), lifeline of adequate length, torches of approved type, full body harnesses, EEBD, Breathing apparatus & mask, eye protection mask (as applicable)?				

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8	Will the BA bottles, mask & EEBD be checked for adequate air supply and quantity? Will the breathing apparatus be checked for low pressure audible alarm and that the mask is under positive pressure and not leaking?				
9	Is a tripod and winch gear available (when deemed necessary) which will be utilized in the recovery during the rescue process?				
10	Will the relevant firefighting equipment be prepared and available for immediate use (whenever applicable)?				
11	Will a competent watchperson be assigned to remain vigilant, be in constant attendance at the entrance (when deemed necessary) & maintain communication with the team entering the space? Will a rescue team be assigned?				
12	Will the people engaged in the entering the space operation be wearing their PPE & equipped with portable gas detector(s) and torches of approved type (if applicable)? Will the rescue team and the attendant be equipped with same in case of an emergency?				
13	Do procedures exist to establish a communication language & emergency communication signals?				
14	Will the OOW i.e. (Bridge / Cargo Control Room/ Engine Control Room) be informed about the entry into enclosed task and communication been established?				
15	Will a warning sign be provided in work stations involving equipment (i.e. valves, electrical boards etc.) where their status is vital for the persons entering the space? Will the warning signs be self-explanatory and in a language commonly understood?				
16	Is the hospital properly equipped for emergency situations? Has the equipment been verified (expiration dates, damaged equipment, missing medicines etc.)?				
17	Will the relevant permits be issued & signed?				
DURING ENTRY/TASK					
1	Will the atmosphere be tested regularly whilst the task is in progress?				
WHEN TASK IS COMPLETED					
1	Will the personnel, equipment and material be accounted for?				
2	Will the entrance(s) be closed and properly sealed/ tightened?				
3	Will the various systems which will remain turned off/blinded in order to isolate the space return to normal operation?				
4	Will the OOW (e.g. Bridge/ Cargo Control Room/ Engine Control Room) be notified that the task is completed and all signals been removed?				
HUMAN ELEMENT ASSESSMENT (INTERVIEW WITH WATCHPERSON & RESCUE TEAM)					
1	Are the seafarers in position to name at least 8 'enclosed spaces' on board in accordance with the definition of IMO A27/Res 1050? Enclosed space means a space which has any of the following characteristics: 1. limited openings for entry and exit; 2. inadequate ventilation; and 3. is not designed for continuous worker occupancy, and includes, but is not limited to, cargo spaces, double bottoms, fuel tanks, ballast tanks, cargo pump-rooms, cargo compressor rooms, cofferdams, chain lockers, void spaces, duct keels, inter-barrier spaces, boilers, engine crankcases, engine scavenge air receivers, sewage tanks, and adjacent connected spaces. This list is not exhaustive and a list should be produced on a ship-by-ship basis to identify enclosed spaces.				

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2	Is the Seafarer (or Team) responsible for completion of the Job Hazard & Risk Assessment capable of recognizing, evaluating, measuring, controlling, eliminating or mitigating risks? Interview the Job Hazard & Risk Assessment process. Is the responsible person aware that the ventilation procedures for an adjacent connected space may be different from the procedures for the ventilation of the enclosed space itself?				
3	During the assessment process, will the responsible person (or team) assume that the space to be entered is considered hazardous until positively proved to be safe for entry?				
4	Do clear instructions exist that no person will enter or open an enclosed space unless authorized by the master or the nominated responsible person and unless the appropriate safety procedures are in place?				
5	Is the person in charge aware that measurements at many different levels may be necessary to obtain a representative sample of the atmosphere? On the affirmative, how the PIC will ensure safe testing of the space? (i.e. use of flexible hoses or fixed sampling lines etc.). Is the PIC aware of the minimum level of OX, LFL, and OEL (as applicable)? For entry purposes, steady readings of all of the following should be obtained (IMOA27/Res1050): 21% oxygen by volume by oxygen content meter; Note: National requirements may determine the safe atmosphere range. - not more than 1% of lower flammable limit (LFL) on a suitably sensitive combustible gas indicator, where the preliminary assessment has determined that there is potential for flammable gases or vapors; and - not more than 50% of the occupational exposure limit (OEL)* of any toxic vapors and gases. (Alternatively mention PEL)				
6	Are the rescue team members aware of their duties? Are they clear to all members and have these been assigned before the entry into enclosed space permit?				
7	Will the PPE and rescue equipment be inspected by a competent person? What checks will be made? Ask for detailed description.				
8	Has the watchperson been assigned in the past with similar duties and he is aware of his duties? Is he fit to provide assistance in case of an emergency?				
9	Will the established communication language & emergency signals during entering space be understood by all persons involved? Request from a crew member to design a warning sign and demonstrate same to another crew member. Is the result satisfactory?				
10	Will other operations taking place on board which may affect the entry into enclosed space operation be considered?				
11	Is the watchperson capable of identifying, recognizing, evaluating potential escalating risks?				
12	Are the interviewed personnel (members of rescue team & persons assigned to the task) familiar of the associated hazards? Ask them to name 3 obvious hazards that could be expected and 3 hiding hazards (likely to be faced) when entering or during their stay in the enclosed space. Do they discuss about them during relevant drills?				
13	Is the watchperson aware that in case of an emergency he MUST assess the conditions in order to communicate the nature of the emergency situation properly and he must not enter the space before help has arrived and until situation is evaluated further?				
14	In case of an emergency and entering the space, what actions will be taken by the rescue team? (i.e. enter the space safely, check / provide an air supply must be first priority then secure the head of the injured person etc.). Are they aware how to transfer the injured person in order not to cause more damage?				
15	How many people will be involved in the task, entering the space? Does guidance exist? (The number of persons should be the minimum compatible with the work to be performed)				
16	Are the members of the rescue team experienced and fit to provide assistance in case of an emergency?				



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