



**Key Procedures / Checklists**

Place at: Key Wallet / Engine Control Room & Ship Office

**16. A. ENCLOSED SPACE ENTRY PERMIT**

DK/ER S.N. \_\_\_\_\_ of \_\_\_\_\_ (year)

**THIS PERMIT GRANTS PERMISSION FOR THE NAMED PERSONS TO ENTER THE NAMED ENCLOSED SPACE ONLY DURING THE TIMES STATED IN THIS PERMIT.**

**SECTION 1 of 4**

1. Space for which the Permit is issued: .....
2. Permit is valid: From [Date/Time] ..... To [Date/Time] .....
3. Purpose of Entry: .....
4. **Each person entering space** to acknowledge following and initial below:
  - I have received instructions and permission from the Master or Responsible Person to enter the enclosed space and entry will only be made through nominated entrance with an attendant posted.
  - I have agreed and understood the communication procedures
  - I have agreed upon a reporting interval of .....Mins
  - I am aware that the space must be vacated immediately in the event of ventilation failure or if atmosphere tests show a change from agreed safe criteria.
  - Section 2 of this checklist for entry into enclosed space has been read and understood.
  - I am aware that a copy of this permit must be posted at each entrance to the space being entered.

NAME/INITIAL

NAME/INITIAL

..... Yes <input type="checkbox"/> No <input type="checkbox"/>	..... Yes <input type="checkbox"/> No <input type="checkbox"/>
..... Yes <input type="checkbox"/> No <input type="checkbox"/>	..... Yes <input type="checkbox"/> No <input type="checkbox"/>
..... Yes <input type="checkbox"/> No <input type="checkbox"/>	..... Yes <input type="checkbox"/> No <input type="checkbox"/>

5. Attendant posted at the entrance, name/rank: .....
6. Section 2 of this permit satisfactorily completed by the **designated responsible person**. Yes  No

**Name/Rank of Designated/Competent/Responsible person supervising entry:** .....  
 [Designated Responsible person is to ensure **appropriate Risk Assessment RA No \_\_\_\_\_**, has been conducted to account for any circumstances that may have changed from the original assessment. Refer to RA file for initial assessment of enclosed space risks and list of identified spaces. Additional reference...IMO Res A.1050 (27)

**\*Authorizing person: Name/Rank & Sign:** .....

**Master Name & Sign:** .....

**Chief Engineer Name & Sign:** .....

*\*Pls take note. Designated/Competent/Responsible person should not be the same as the Authorizing person.*



**Key Procedures**  
**ENCLOSED SPACE ENTRY PERMIT (Safety check – pre-entry)**

**SECTION 2 of 4**

1. Has the space been thoroughly ventilated by mechanical means? Yes  No
2. Is continuous ventilation in progress and have arrangements been made for the space to be ventilated continuously throughout the period of occupation **and during work breaks?** Yes  No

[In dry cargo vessels, where more than one space is to be entered, all spaces including **ADJACENT SPACES** are to be ventilated fully and tested, then mechanical ventilation to be shifted to each space before entry and maintained during entry.]

3. Has the space been segregated by blanking off or isolating all connecting pipelines or yes  No   
 Valves and electrical power/equipment?
4. Has the space been cleaned where and as necessary? Yes  No
5. Pre-entry atmosphere check by Quad Gas Detector using Remote Sensing Tube **with ventilation stopped:**  
 Time taken for sampling If Battery driven pumps are used, approx. 10sec for each meter of sampling Hose  
 The Gas Detector being used has been calibrated within last 12 months? MM/YY ..... Yes  No   
 Measurement done by (Name/Rank) ..... Date/Time: .....  
**Oxygen (minimum 19%) ..... % vol                      Hydrocarbon (< 1.0%) ..... % LEL**  
**Carbon Monoxide (max 100 ppm) ..... ppm                      H2S (max 10 ppm) ..... ppm**  
*All safe limits as per US OSHA and UK HSE.*

**If any danger from other hazardous gases suspected, for which there is no measuring equipment onboard, or oxygen level cannot be established above 19%, then entry must be made with SCBA.**

**If measuring instrument does not have remote sensing tube, wear SCBA to enter tank for gas measurements.**

6. Have arrangements been made for frequent atmosphere checks while the space is occupied **and before reentry after each work break?** Record reentry readings separately (see section 4) Yes  No
7. Has communication between Attendant person at entrance and duty officer/bridge been established and tested? Method of Communication: ..... Yes  No
8. Communication between the Attendant person at the entrance and the personnel entering the space has been established and understood by all. Yes  No
9. Method of primary communication: ..... Secondary/Emergency method: .....
10. Reporting interval between Personnel in tank, Attendant and Bridge/PIC: ..... mins. **(Not to exceed 15 mins)**
11. Has the Emergency Rescue team, rescue and resuscitation equipment been made ready at the entrance? Yes  No
12. SCBA sets checked for adequate pressure? Yes  No
13. Access to the space is clear and adequately illuminated. Yes  No
14. Portable and safe lights, and all other equipment for the entry tested in good working Condition and inspected prior entry? Yes  No
15. Electrical cabling inspected for safety and proper insulation or cable and joints? Yes  No
16. All personnel clearly understand procedure for leaving space in an emergency. Yes  No
17. Are all entry personnel wearing the requisite protective clothing? Yes  No
18. Any special equipment or protection required to be worn: .....

**Responsible Person supervising entry:** Name/Rank: .....

Date: ..... Time: ..... Sign: .....

Note 1: If there is more than one entrance into the space, then all should be opened, and personnel instructed as to emergency use. Remarks: \_\_\_\_\_

Note 2: If Entry is for hot or cold work, the requisite permit is to be issued in conjunction with this permit. Remarks: \_\_\_\_\_

Note 3: **One copy of this permit is to be posted at each open entrance to the space.**

**Original Permit to be retained by Responsible Person and signed by him after completion of the job before filing.**



**SECTION 3 of 4**

Name/Rank person entering space	Date/Time Entered	Date/Time Out
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

**Work in the space has been completed on**      **Date:** .....      **Time:** .....

- A. All personnel, material and equipment have been withdrawn from the space.      Yes  No
- B. All debris, rags, timber/metal, etc., removed & space left clean and in safe condition.      Yes  No
- C. Space has been secured against entry (lids closed with all nuts & gaskets)      Yes  No
- D. Bridge/Duty Officer has been duly informed of above      Yes  No
- E. Designated Responsible person has verified A to D above      Yes  No

**Name of Responsible Person supervising entry – Termination of Permit:**

Name/Rank: ..... Sign: ..... Date: ..... Time: .....

**ADDITIONAL NOTES:**

- ◆ COPIES OF FIRST 3 PAGES ARE TO BE POSTED AT THE ENTRANCE OF THE SPACE TO BE ENTERED, BEFORE ENTRY IS MADE (IF ENTRY IS NOT MADE FOR PAINTING).
- ◆ IF THERE IS MORE THAN ONE ENTRANCE TO THE SPACE, WHICH CAN BE USED FOR ACCESS, THEN A COPY TO BE POSTED AT EACH ENTRANCE.
- ◆ ALL ENCLOSED SPACE ENTRY POINTS ARE TO BE RESTRICTLY CONTROLLED/ATTENDED.
- ◆ BECAUSE SPACE HAS BEEN CERTIFIED SAFE, IT DOES NOT MEAN IT WILL REMAIN SO, PARTICULARLY IF HOT WORK IS BEING CARRIED OUT.
- ◆ THE SAFE ATMOSPHERIC CONDITION OF A SPACE SHOULD BE CHECKED AND NOTED PERIODICALLY THROUGHOUT THE ACTIVITY AND AT EVERY ENTRY AFTER A BREAK TO ENSURE SAFETY OF PERSONNEL AND THE OPERATION.
- ◆ **NO ENTRY TO BE MADE WITHOUT THE PRIOR AUTHORIZATION FROM THE MASTER OF THE VESSEL.**

**PERMIT BECOMES INVALID SHOULD VENTILATION OF SPACE STOP DURING THE TASK OR ANY CONDITION NOTED IN SECTION 2 CHANGES SO AS TO POSE A RISK TO PERSONS OR VESSEL.**

*Any deficiencies must be reported immediately to Chief Engineer*

*by Order of Master*

**Master confirms that the Permit is complete and to his satisfaction: Sign.....**



## **16.B. PAINTING IN ENCLOSED SPACE**

Most of the paints, solvents and thinners are volatile and extremely flammable. If its vapors are mixed with air in the right proportion, fire and explosion may result when ignited. It should also be remembered that adding thinner to a paint may change the flash point of the diluted material and increase the explosive mixture in the space. Being heavier than air, an explosive concentration can accumulate at the bottom of a space, particularly if contained by deep frames or floor. Therefore, safety precautions must be observed when paints are being applied within a confined space, such in a tank or compartment.

Safety Precautions to be observed

- No welding, cutting or other hot work should be performed in a confined space or other side of deck or walls when spray painting in progress.
- Excessive paints should not be stored other than requirement for that shift.
- All unused and unfinished paints, solvents and thinners must be covered tightly with its lids.
- Do not mix paint inside the confined space and after completion of painting work, all containers of paint must be taken out from the compartments.
- Do not store paint, solvent and thinner in the confined space.
- Rags and other materials that have been soaked in paint, solvent and thinner shall be kept in a covered metal container.
- When spray painting is in progress a “NO HOT WORK” and a “NO SMOKING” sign should be displayed at the entrance of the confined space
- No matches, lighted cigarettes or cigarette lighters shall be taken into the area where painting is being done.
- All electric cables for tools, equipment and lights shall be inspected to ensure that the insulation is in excellent condition and free from cracks.
- Spray painting must not be carried out in enclosed spaces, unless in special circumstances when specific permission has been taken from office, and all prescribed safety precautions are taken. Spray painting to be done with approved equipment and PPE."
- Refer to COSWP Chapter 25 for guidance on proper and safe use paint spray equipment
- PPE used for painting in enclosed spaces should include impermeable clothing and a proper respirator for the painter's protection from potentially toxic substances. "Refer to COSWP Chapter 25 for proper use of PPE when painting in enclosed spaces
- Atmospheric testing equipment must be calibrated and recorded.
- The blow of the forced ventilation must be directed to bottom of enclosed space and extraction from opposite end especially while spray painting. Continuous and thorough ventilation shall be provided when painting in a confined area or enclosed space.

### **PERMIT TO WORK - PAINTING IN ENCLOSED SPACES**

This permit must be completed for all Painting works in enclosed spaces.



**PERMIT TO WORK - PAINTING IN ENCLOSED SPACES**

This permit must be completed for all Painting works in enclosed spaces.

Application for Painting works in enclosed spaces			
<b>Location of the work:</b>			
<b>Description of work:</b>			
Has an enclosed space permit been issued for this painting		Indicate:	Y    N    N/A
<b>Name of Responsible officer in attendance:</b>		<b>Names of the persons carrying out the work:</b>	

Permit begins		Permit expires	
Date:	Time:	Date:	Time:

Safety precautions		YES	N.A.
1.1	Is the relevant Material Safety Data Sheet (MSDS) for the painting and thinner to be used available and has it been understood?		
1.2	Has the Entry Into Enclosed Space Check List been satisfactorily completed?		
1.3	Is the relevant product data sheet of the paint and thinner to be used available and has it been read and understood?		
1.4	Are there sufficient air blower/extrator for the ventilating of the Enclosed Space?		
1.5	Are lights inside the Enclosed Space of explosion proof type and in good condition?		
1.6	Has the Frequency of testing (and recording) the Enclosed Space's atmosphere for both oxygen and explosive vapours been specified?		
1.7	Are delegated crew for job been briefed on safety requirements and the use of Personal Protective Equipment?		
1.8	Crew aware of paint pot life.		
1.9	Additional Precautions to avoid danger have been taken:		
	Description:		

Authorization for Painting works in enclosed spaces			
It is considered safe to start with the Painting works in enclosed spaces			
<b>Signature Master/Responsible officer</b>		<b>Signature persons carrying out work</b>	
On job completion , Has Ch.Off/Departmental head been informed:		Y	N    N/A
Work completed and area Safe			

<b>Signature Responsible officer</b>	<b>Date:</b>	
	<b>Time:</b>	

**A copy of this Painting works in enclosed spaces permit must be prominently displayed at the work area.**