## **PERMIT TO WORK SYSTEM** (A Familiarization on Safe Working on Board of a Ship)

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#### ABSTRACT

A job has the potential of causing serious injuries or death. It is necessary to formalize agreed upon work procedures. This prevents the instructions from being missed, forgotten or misinterpreted. It also works as a checklist to ensure that all the hazards, protective measures, work procedures and the general requirements are reviewed with and understood by the assigned worker(s). A work permit serves as a record of the authorization and the completion of the specific work. The authorization must be provided by the competent person after all the necessary conditions have been met. The purpose of this study is to familiarize permit to work system on board of a ship for a safe working environment. The data collecting method use is library research. All parties, the company, the officers and the assigned worker(s) have to commit and comply to all procedures and the requirements of the permit to work system. It has been provided by the regulator. It should be used as needed and required.

Keywords : System, Work permit, Safe working, Board, Ship

### Introduction

An accident does not mean that someone has to be injured. Damage to property or near miss is also called an accident. An accident is an unplanned or unexpected event arising from a number of causes. It has the potential to cause injury and must be controlled (https://www.hseblog.com/).

The Health, Safety and Environment (HSE) regulation is to set down a system for the safe control of work which provides for maximum safety of both personal and plant. The work permit system is devised to allow work to be carried out safely within the restricted and municipal areas. It is essential to have safety management. It requires the establishment of an effective system of investigating and reporting all events that could cause or have caused physical harm to the people, damage to the property, reduction in production and harm to the environment.

A work permit is a written form used to authorize the jobs that endanger workers to the serious hazards. It recognizes the work to be done, the hazards involved, and the necessary preparation and the precautions for the job. Examples of the jobs needing work permits are those requiring employees to enter and work in confined spaces, to repair, maintain, or inspect the electrical installations or to use the large or the complex equipment (https://www.hseblog.com/). The purpose of it is to establish, analyse fact and circumstances, and also determine causes and remedial actions. It is not intended to fix or to find fault with the people, but to help control and minimize accidental losses.

Permit to work serves some functions, such as; prescribes the nature and extend of work, prescribes the condition (isolation, gas test, etc.). It have to be observed, records the place in which process personal for a specified time and allowed to work, given written permission for work to be done, bring all party

attention to the steps that have been taken and that shall be maintained to make the area/plant safe for working.

The objective of permit to work system is to ensure that a written permission and authorization is given to carry out the defined work. Whether it is potentially hazardous and that all possible measures have taken to maintain the safety of the person and equipment in all areas of operation.

#### Discussion

Based on Code of Safe Working Practices for Merchant Seamen Consolidated Edition, 2010 there are many types of operation on board ship where the routine actions of one person may inadvertently endanger another or when a series of action steps need to be taken to ensure the safety of those engaged in a specific operation. In all instances it is necessary, before the work is done, to identify the hazards and then to ensure that they are eliminated or effectively controlled. Ultimate responsibility rests with the employer to see that this is done.

The permit to work system consists of an organized and predefined safety procedure. A permit-towork does not in itself make the job safe, but contributes to measures for safe working.

The particular circumstances of individual ships will determine when permit-to-work systems should be used. In using a permit to work, the following principles apply :

- (a) The permit should be relevant and as accurate as possible. It should state the location and details of the work to be done, the nature and results of any preliminary tests undertaken, the measures undertaken to make the job safe and the safeguards that need to be taken during the operation.
- (b) The permit should specify the period of its validity (which should not exceed 24 hours) and any time limits applicable to the work which it authorizes.
- (c) Only the work specified on the permit should be undertaken.
- (d) Before signing the permit, the authorizing officer should ensure that all measures specified as necessary have in fact been taken.
- (e) The authorizing officer retains responsibility for the work until he has either cancelled the permit or formally transferred it to another authorized person who should be made fully conversant with the situation. Anyone who takes over, either as a matter of routine or in an emergency, from the authorizing officer, should sign the permit to indicate transfer of full responsibility.
- (f) The person responsible for carrying out the specified work should countersign the permit to indicate his understanding of the safety precautions to be observed.
- (g) On completion of the work, that person should notify the responsible officer and get the permit cancelled.
- (h) The person carrying out the specified work should not be the same person as the authorizing officer.

This Annex contains suggested minimum headings for a Permit-to-Work under the following categories:

- a. Work In Unmanned Machinery Spaces
  - *Note(i)* : The Authorising Officer should indicate the sections applicable by ticks in the lefthand boxes next to headings, deleting any subheading not applicable.
  - *Note(ii)* : The Authorising Officer should insert the appropriate details when the Sections for Other Work or Additional precautions are used.
  - *Note (iii):* The Authorized Person should tick each applicable righthand box as they make their check.
  - Note (iv): This Permit-to-Work contains 5 sections.

	Safety Locks	SECTION E – Clearance of Permit
SECTION A – Scope of Work	(Detail location fitted and identify lock set)	The work for which this permit to work was issued is now suspended* completed* and all people under my charge have been withdrawn and
Location (designation of space)	Additional Precautions to avoid danger have been taken by (Description)	completed and all people under my charge have been withoriawn and warned that it is no longer safe to work on the apparatus detailed in th permit to work.
	(Description)	All work equipment, tools, test instruments etc have been removed.
Plant Apparatus /Identification	Caution/Danger notices have been applied at all points of isolation, and	Competent person
(designation of machinery / equipment)	Safety Signs appropriately positioned.	(Name) (Signature)
	TREAT ALL OTHER APPARATUS AND AREAS AS DANGEROUS	(Time)
		SECTION F - Cancellation of Permit
Work to be done (description)		This Permit to work is cancelled.
		Authorising Person
		(Name) (Signature)
	SECTION C – Authorising of permit	(Time) (Date)
Permit issued to (name of person carrying out work or in charge of the work party)	Period of validity of permit (should not exceed 24 hours)	Safety Key No
	Authorising person	The work is completer 7 incompleter as tollows: (description)
Section B – Check List / Isolation Data	(Name) (Signature)	
Has a risk assessment of the proposed work been carried out?	(Time)	
The above apparatus is dead and has been isolated from the system at	SECTION D = Receipt of Permit	
the following points (Description)	I accept responsibility for carrying out the work on the apparatus detailed	
	on this permit to work and no attempt will be made by me or people under my charge to work on any other apparatus or in any other area.	
	I am satisfied that all precautions have been taken and that safety	
	arrangements will be maintained for the duration of the work.	
Circuit Main Earths have been applied to the equipment at the	Salety Key No	
	Competent person	
following points. (Description)	(Name)	
	Note: After signing the receipt, this permit to work should be retained by the person in charge at the place where the work is being carried out until work is complete and the clearance action simed	

## b. Entry Into Enclosed Or Confined Space

*Note (i):* The Authorizing Officer should indicate the sections applicable by ticks in the lefthand boxes next to headings, deleting any subheading not applicable.

*Note (ii):* The Authorizing Officer should insert the appropriate details when the Sections for Other Work or Additional precautions are used.

*Note (iii):* The Authorised Person should tick each applicable righthand box as they make their check. *Note (iv):* This Permit-to-Work contains 4 sections.

SECTION A - Scope of Work		7	□ 7 □ 8
Location (designation of space)		9 All equipment to be used is of appropriate type 10 Personal protective equipment to be used: Hard hat, safety harness as necessary	0 0 0 0 0 0 0 0 0 0 0 0 0 0
Plant Apparatus /Identification		<ol> <li>When breathing apparatus is being used</li> <li>(i) Familiarity of user with apparatus is confirmed</li> </ol>	□ II()
(designation of machinery / equipment)		<ul> <li>(ii) Apparatus has been tested and found to be Satisfactory</li> </ul>	□ 11(ii)
		SECTION C - Certificate of checks:	
Work to be done (description)		I am satisfied that all precautions have been taken and that arrangements will be maintained for the duration of the wo	
		Authorising person in charge	
		(Name) (Signature)	
		(Time) (Date)	
Permit issued to (name of person carrying out work or in work party)	-	SECTION D – Cancellation of certificate: The work has been completed*/cancelled* and all persons supervision, materials and equipment have been withdrawn	
SECTION B - Check List / Isolation Data		Authorising person in charge (Name)	
Has a risk assessment of the proposed work been carried	out?	(Time)	
Checklist	Terration (	Delete words not applicable and where appropriate state	
CHECKISC	Checked	The work is complete* / incomplete* as follows: (descr	
I			
2 Atmosphere tested and found safe	D		
3	<b>—</b> —— 3		
4			
entrance	D		
5	D		
6	G 6		
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(Maritime Coastguard Agency.2017)

# c. Machinery Or Equipment

Note(i) : The Authorizing Officer should indicate the sections applicable by ticks in the lefthand

boxes next to headings, deleting any subheading not applicable.

- *Note(ii)* : The Authorizing Officer should insert the appropriate details when the Sections for Other Work or Additional precautions are used.
- *Note (iii)* : The Authorized Person should tick each applicable righthand box as they make their check.
- *Note (iv)* : This Permit-to-Work contains 5 sections.

		Authorising person	
SECTION A - Scope of Work		(Name) (Signature)	
Location (designation of space)		(Time) (Date)	
		SECTION D - Receipt of Permit	
Plant Apparatus Ildentification (designation of machinery / equipment)		I accept responsibility for carrying out the work on the apparatus detail on this permit to work and no attempt will be made by me or people under my charge to work on any other apparatus or in any other area. I am satisfied that all precautions have been taken and that safety arrangements will be maintained for the duration of the work.	
		Safety Key No Received* /Applied*	
		Competent person	
Work to be done (description)		(Name)	
Permit issued to (name of person carrying out work o		Note: After signing the receipt, this permit to work should be retained by the person in charge at the place where the work is being carried out un work is complete and the clearance section signed	
SECTION B - Check List / Isolation Data Has a risk assessment of the proposed work been carried out?		SECTION E - Clearance of Permit	
		The work for which this permit to work was issued is now suspended* completed* and all people under my charge have been withdrawn and warned that it is no longer safe to work on the apparatus detailed in thi permit to work. All work equipment, took, test instruments etc. have been removed	
	Checked	Salety Key No Received* /Applied*	
Removed from service/solated from sources of power or heat	<b>_</b> I	Competent person (Name)	
All relevant personnel informed Warning notices displayed	□ 2 □	* Delete words not applicable and where appropriate state: The work is complete* / incomplete* as follows: (description)	
SECTION C - Authorising of permit			
Period of validity of permit (should not exceed 24 ho I am satisfied that all precautions have been taken and t	· · · · · · · · · · · · · · · · · · ·		

(Maritime Coastguard Agency.2017)

#### d. Hot Work

- *Note(i)* : The Authorizing Officer should indicate the sections applicable by ticks in the lefthand boxes next to headings, deleting any subheading not applicable.
- *Note(ii)* : The Authorizing Officer should insert the appropriate details when the Sections for Other Work or Additional precautions are used.
- *Note (iii)* : The Authorized Person should tick each applicable righthand box as they make their check. *Note (iv)*: This Permit-to-Work contains 5 sections

SECTION A - Scope of Work		SECTION C – Authorising of permit Period of validity of permit (should not exceed 24 hours)
Location (designation of space)		I am satisfied that all precautions have been taken and that safety arrangements will be maintained for the duration of the work.
<b>D</b>		Authorising person
Plant Apparatus /Identification		(Name) (Signature)
(designation of machinery / equipment)		(Time)
		SECTION D - Receipt of Permit
Work to be done (description)		I accept responsibility for carrying out the work on the apparatus detailed on this permit to work and no attempt will be made by me or people under my charge to work on any other apparatus or in any other area. I am satisfied that all precautions have been taken and that safety arrangements will be maintained for the duration of the work.
		Competent person
		(Name)
Permit issued to (name of person carrying out work or in charge of the		(Time)
work party) SECTION B - Check List / Isolation Data		Note: After signing the receipt, this permit to work should be retained by the person in charge at the place where the work is being carried out until work is complete and the clearance section signed
		SECTION E - Clearance of Permit
las a risk assessment of the proposed work been ca	med out?	The work for which this permit to work was issued is now suspended* /
	Checked	completed* and all people under my charge have been withdrawn and
American of demonstration of the state of th	<b>—</b> ———	warned that it is no longer safe to work on the apparatus detailed in this permit to work.
Area clear of dangerous material and gas-free	□ 1 □ 2	All work equipment, tools, test instruments etc have been removed
Adjacent areas checked		Competent person
Ventilation adequate	<b>_</b>	(Name) (Signature)
ire watchman posted /instructed	□	(Time)
quipment in good order	□	* Delete words not applicable and where appropriate state:
Fire appliances in good order and accessible	<b></b> 6	The work is complete <sup>®</sup> / incomplete <sup>®</sup> as follows: (description)
Personal protective equipment:	<b>—</b>	
Hard hats, overalls, leather gauntlets/apron,		
safety spectacles, visor etc		

(Maritime Coastguard Agency.2017)

## e. Working Aloft/Overside

- *Note(i)* : The Authorizing Officer should indicate the sections applicable by ticks in the lefthand boxes next to headings, deleting any subheading not applicable.
- *Note(ii)* : The Authorizing Officer should insert the appropriate details when the Sections for Other Work or Additional precautions are used.
- *Note (iii)* : The Authorized Person should tick each applicable righthand box as they make their check.
- *Note* (*iv*) : This Permit-to-Work contains 5 sections.

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		Work overside: 7	SECTION E - Clearance of Permit	
SECTION A - Scope of Work		- advise duty officer/engineer	The work for which this permit to work was issued is now suspended completed* and all people under my charge have been withdrawn an	
Location (designation of space)		Idebuoy and line ready      Personal protective equipment required:        safety helmet      . safety hemmes and line attached to a strong point.	warned that it is no longer safe to work on the apparatus detailed in permit to work.	
Plant Apparatus /Identification		- server has been and me assumed to a strong point     - ifigatest     As necessary, all tools to be taken aloft secured by     Immund/ bas/ bet	All work equipment, tools, test instruments etc have been removed. Competent perion (Name)	
(designation of machinery / equipment)			(Time)	
		SECTION C - Authorising of permit Period of validity of permit (should not exceed 24 hours)	* Delete words not applicable and where appropriate state: The work is complete* / incomplete* as follows: (description)	
Work to be done (description)		I am satisfied that all precautions have been taken and that safety arrangements will be maintained for the duration of the work. Authonising person		
		(Name)		
Permit issued to (name of person carrying out work or in work party)		SECTION D - Receipt of Permit I accept responsibility for carrying out the work on the apparatus detailed on this permit to work and no attempt will be made by me or people		
SECTION B - Check List / Isolation Data		under my charge to work on any other apparatus or in any other area.		
Has a risk assessment of the proposed work been carried o	out?	I am satisfied that all precautions have been taken and that safety arrangements will be maintained for the duration of the work.		
Duty Officer informed Warning notices posted Equipment in good order Work on Lonneb: - advice Duty Engineer - loolter whetle, if appropriate Work neur Radar Scamera/Radio Aerisk - isolate natur and scamerafica room notified - notices placed to stop use of naturhadio	Oreclest           0           1           0           2           1           3           0           4           0           5           0           0           6           0           0	Competent person (Name)		
Rev100Page 13		MSCP01/Ch16/Rev1.02/Fage 14	MSCP01/Ch16/Rev1.02/Page 15	

(Maritime Coastguard Agency.2017)

## f. General Electrical (Under 1000 Volts)

- *Note(i)* : The Authorising Officer should indicate the sections applicable by ticks in the lefthand boxes next to headings, deleting any subheading not applicable.
- *Note(ii)* : The Authorising Officer should insert the appropriate details when the Sections for Other Work or Additional precautions are used.
- *Note (iii)* : The Authorised Person should tick each applicable righthand box as they make their check.
- *Note (iv)* : This Permit-to-Work contains 6 sections.

SECTION A - Scope of Work	Additional Precautions to avoid danger have been taken by	SECTION E - Clearance of Permit
Location (designation of space)	(Description)	The work for which this permit to work was issued is now suspenc completed <sup>4</sup> and all people under my charge have been withdrawn warned that it is no longer safe to work on the apparatus detailed
Plant Apparatus Adentification	Caution/Danger notices have been applied at all points of isolation, and Safety Signs appropriately positioned.	permit to work. All work equipment, tools, test instruments etc have been removed
(designation of machinery / equipment)	TREAT ALL OTHER APPARATUS AND AREAS AS DANGEROUS	Competent person (Narre)
Work to be done (description)		SECTION F – Cancellation of Permit This Permit to work is cancelled.
	SECTION C - Authorising of permit	Authorising Person (Name)
Permit issued to (name of person carrying out work or in charge of the work party).	Period of validity of permit (chould not exceed 24 hours) hours I am satisfied that all precadiors have been taken and that sately arrangements will be maintained for the duration of the work.	(Time)
Section B - Check List / Isolation Data	Authorising person         (Signature)           (Name)         (Signature)           (Time)         (Date)	The work is complete* / incomplete* as follows: (description)
Has a risk assessment of the proposed work been carried out?	SECTION D = Beceipt of Permit	
The above apparatus is dead and has been isolated from the system at the following points (Description)	I accept responsibility for carrying out the work on the apparatus detailed on this permit to work and no attempt will be made by me or people under me charge to work on any other apparatus or in any other area.	
	I am satisfied that all precautions have been taken and that safety arrangements will be maintained for the duration of the work.	
Safety Locks (Detail location fitted and identify look set)	Safety Key No Received* /Applied* Competent person	
	(Name)	
	Note: After signing the receipt, this permit to work should be retained by the person in charge at the place where the work is being carried out until work is combete and the clearance section simed	

(Maritime Coastguard Agency.2017)

## g. Electrical High Voltage (Over 1000 Volts)

- Note(i) : The Authorizing Officer should indicate the sections applicable by ticks in the lefthand boxes next to headings, deleting any subheading not applicable.
- *Note(ii)* : The Authorizing Officer should insert the appropriate details when the Sections for Other Work or Additional precautions are used.
- *Note (iii)* : The Authorized Person should tick each applicable righthand box as they make their check.
- *Note (iv)* : This Permit-to-Work contains 6 sections.

Additional Precautions to avoid danger have been taken by (Description) Caution/Darger notices have been applied at all points of isolation, and Safery Signa appropriately positioned.	The work for which this permit to work was issued is now augended completed <sup>47</sup> and all people under my drage have been withdrawe arc warred that it is no longer safe to work on the apparatus detailed in th permit to work. All work equipment, tools, test instruments etc have been removed.
TREAT ALL OTHER APPARATUS AND AREAS AS DANGEROUS	Competent person         (Signature)           (Name)         (Signature)           (Time)         (Date)           Sality Key No         Received* /Applied*
	SECTION F – Cancellation of Permit This Permit to work is cancelled. Authorising Person
SECTION C - Authorising of permit Period of validity of permit (should not exceed 34 hours)	(Name) (Signature) (Care) (Signature) (Care) (Signature) (Care) (Safaty Kcy No (Care) (Safaty Kcy No (Care) (Safaty Care) (Safat
(Name)         (Signature)           (Time)         (Date)           SECTION D – Receipt of Permit	
I accept responsibility for carrying out the work on the appartuu detailed on this permit to work and no attempt will be made by me or people under my charge to work on any other apparatus or in any other area. I an satisfied that all precautions have been taken and that safety arrangements will be maintained for the duration of the work.	
Safety Tay No	
	SECTION C - Authoriaing of permit Period of validity of permit (whold not exceed 24 hours) — hours I herdy declars that the above equipment is dead and looited from all loe conductors. Authoring permon (Signature) — (Signature) — (One) —

(Maritime Coastguard Agency.2017)

The officers and the assigned worker (s) have to committed and complied to all procedures. It is to ensure the health, safety and welfare of its employees and the public in general. Details of any remaining hazards and precaution need to be taken. Therefore, it should be clearly understood that adherence to the system does not in itself guarantee freedom form risk. The supervisor and person involved in the task shall ensure that safe practices prevail throughout the work period.

#### Conclusion

Every employee has a responsibility for his/her own safety and for the safety of others. It is also a duty to the employer by working safely and following the specified codes of practice, using the protective equipment provided, complying with all safety procedure, reporting defects and accidents also assisting in subsequent investigations. Follow the site rules and regulation for safe system of work, read any work permit condition and obey them. Complying to all statutory requirements relating to health, safety and welfare means providing and maintaining a safe and healthy working environment, ensure all employees received adequate training in the safety aspects of their work and also make all necessary safety devices and protective equipment together with information relating to the health safety available.

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