

INSTRUCTIONS FOR USING THE RISK ASSESSMENT FORM

- 1.** Envisage the task in hand and identify the hazards associated with carrying out the task. These hazards are to be listed and addressed individually in the risk assessment form.
- 2.** Once the hazard has been identified, based on the combination of the likelihood and severity/consequence of the hazard, the risk evaluation score is to be assigned using the risk evaluation matrix on the last page. For example, a hazard which has a likelihood of 'unlikely' and a severity/consequence of "harmful", the risk evaluation score would be (moderate risk).
- 3.** With the determination of the risk evaluation score, using the recommended response table on the last page, appropriate action is to be planned and implemented.
- 4.** Using the above example of a risk evaluation score of 4 (moderate risk), appropriate controls must be applied to the risk and these must be listed out accordingly in the form along with the person responsible for applying the control and the completion date.
- 5.** Once the controls have been applied, the risk must be reassessed as a whole taking into account the applied controls and once again using the risk evaluation matrix on the last page, a residual score must be obtained.
- 6.** If the residual risk on reassessment is 'Trivial' or 'Tolerable' (scores 1 and 2), then no additional controls are required and only effective monitoring of the task to ensure compliance with procedures is necessary.
- 7.** However, if the reassessment of the risk again is 'Moderate', 'Substantial' or 'Intolerable' and yields a score higher than 2, it implies that the applied controls are not sufficient to address the associated hazards and therefore do not bring the risk to a safe level. This would require additional controls to be applied and steps 4 and 5 to be followed once again.
- 8.** This process would continue until the residual risk is eventually brought down to an acceptable level (scores 1 or 2).
- 9.** Effective supervision of the task to be carried out is necessary to ensure that there are no unauthorized and unsafe diversions which could effectively change the entire risk assessment therefore making it inappropriate for the current task.

This form is for guidance purposes only and does not replace any company procedures or applicable statutory regulations.

VESSEL NAME:	ACTIVITY: Container operations	PERSONNEL INVOLVED IN THE TASK: Master, all officers and crew, Member's shore personnel
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HAZARD CATEGORY	POTENTIAL HAZARDS IDENTIFIED	RISK EVALUATION SCORE (refer page 9)	POSSIBLE CONTROL MEASURES REQUIRED (including existing & proposed)	ACTION		RESIDUAL RISK SCORE (Refer page 9)
				PERSON RESPONSIBLE	DATE COMPLETED	
Improper handling of containers	<p>Containers damaged due to improper handling of containers:</p> <ul style="list-style-type: none"> - During loading/unloading - By stevedores - Due to cargo shifting inside the container <p>Damage to the vessel's structure.</p> <p>Damage to 3rd party property, such as shore gantry, jetty, trailer trucks etc.</p>	Likely (3) x Harmful (2) = 6 Substantial (example only)	<ul style="list-style-type: none"> • All officers and crew must be familiar with the cargo loading sequence and stowage plan including peculiarities associated with carriage of Out Of Gauge (OOG) containers, if any. • Moorings to be tended to regularly to ensure vessel does not shift and cause difficulty to the gantry/crane operator. • Stevedores to be supervised properly and the deck officers/crew should not hesitate to manage them properly. • Grab lines to stabilise/restrict the movement of containers to be utilised. • Crane operators must be competent and special instructions given not to operate the crane in a rash manner. In cases where ship cranes are used, crane operators to be made aware of the operational limits of the cranes. • Inspection/Maintenance of lifting equipment including limit switches to be carried out diligently. • Twist locks to be removed from the tops of containers when loading to avoid containers being landed on top, resulting in holes being punctured into the unit. 	Master, all officers and crew.		Unlikely (2) x Slightly Harmful (1) = 2 Tolerable (example only)

<p style="text-align: center;">Improper stowage of containers</p>	<p>Containers not stowed as per the stowage plan resulting in:</p> <ul style="list-style-type: none"> - Poor stability - Difficulty in discharging as per port rotation - Undue stress on vessel's structure and associated equipment - Improper / Inadequate cargo segregation including IMDG cargo - Theft/pilferage of cargo from containers during the voyage 	<p>(To be assessed and completed)</p>	<ul style="list-style-type: none"> • Although cargo stowage planning is usually carried out by the shore cargo planners, same is to be verified by ship staff and not accepted per se. • Shore planning should not detract the Master's responsibility for safety of the vessel. • Stability to be calculated for every stage of the loading/unloading operation, including the loss of stability when lifting heavy containers with own crane. • Heavier containers to be stowed below and lighter ones and empties to be stored above for better stability. • Maximum permissible stack weight of containers not to be exceeded. • Port rotation of containers as per stowage plan also to be available to all officers and crew in advance. • Verified Gross Mass (VGM) of containers to be available on board. • Contents of containers and special requirements to be available on board prior commencement of loading operations e.g. under deck stow or reefer units. • Dangerous cargo to be identified and ship staff to ensure same is segregated and stowed/labelled in accordance with the IMDG code. • To prevent theft, where possible, containers should be stowed end to end with their doors inward such that there is insufficient space for them to be opened. <p>(cont'd..)</p>	<p>Master, all officers and crew.</p>		<p>(To be assessed and completed)</p>
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Improper stowage of containers		(To be assessed and completed)	<ul style="list-style-type: none"> • Open top containers should be used only for oversized and heavy cargo where front door loading is not possible to discourage theft. • Containers without seals or locks to be checked, sealed and logged accordingly. 			(To be assessed and completed)
Improper lashings on/in containers	<p>Containers shifting and damaging other containers and/or vessel's structure and associated equipment.</p> <p>Improper use of twist locks and/or the use of different handed twist locks in conjunction and without colour coding.</p> <p>Cargo damage/spillage within the containers and/or also contaminating cargo in other containers due to migration of spillage.</p> <p>Containers lost overboard.</p> <p>Containers that have been lost overboard posing navigational hazards to other vessels and ports.</p> <p>Containers lost overboard, causing pollution.</p> <p>Containers lost overboard resulting in loss of stability.</p> <p>Poor conditions of on-board cargo lashings.</p>	(To be assessed and completed)	<ul style="list-style-type: none"> • Containers to be lashed in accordance with the approved Container Securing Manual (CSM). • Crew to be familiar with the ship specific lashing requirements as per the CSM. • A detailed inventory including test certificates, where applicable, of all lashing material to be maintained on board. • Periodic condition checks on lashing material as recommended in the CSM to be adhered to; any lashing material not meeting the requirements to be replaced and removed immediately. All broken lashing to be located in an area where they cannot be utilised by mistake. • Use of only single directional twist locks recommended on board. In case of both right and left handed twist locks being used, same to be appropriately colour coded to avoid erroneous use. • Lashings on containers to be particularly checked on a daily basis and tightening carried out as required, especially before and after experiencing heavy weather. Same to be recorded accordingly. 	Master, all officers and crew		(To be assessed and completed)

Wet damage to cargo in containers	Wet damage to cargo in containers due to holed / damaged containers.	(To be assessed and completed)	<ul style="list-style-type: none"> • Condition checks to be made on empty containers at the yard prior stuffing, if possible including checking for a valid Container safety Approval Plate. • Condition check to include checking for holes, door sealing gaskets, locking arrangement and hinges on the doors, removal of irrelevant markings/placards pertaining to previous cargoes, roof bows in case of open top containers and condition of tilts (tarps) in case of containers with removable roof tilts. • During loading, ship staff must pay particular attention to the condition of containers being received on board. Any non-conformity must be reported and documented (container damage report) accordingly; same report must be countersigned by the loading foreman. Same applies for containers being damaged during the discharge process. • If a holed container is detected on-board after sailing, temporary repairs may be conducted. These should reflect in the container damage report, which is then sent to the owners/charterers. • Master to be made aware as he may reject a container if found unsuitable for carriage. • Hatch covers to be checked to be weather tight to prevent ingress of rain water into holds. <p>(cont'd..)</p>	Member's shore personnel Master, all officers and crew		(To be assessed and completed)
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Reefer container cargo damage		(To be assessed and completed)	<ul style="list-style-type: none"> • The proposed stowage position must be checked against vessel's reefer point locations and sufficient extension cables for providing power must be available if required. • It must be decided in advance whether ship staff or stevedores will carry out the reefer plugging / unplugging. • Reefer remote monitoring cables to be verified as connected where applicable. • Containers to be plugged into power at the earliest time and temperature to be recorded. Temperature/vent settings to be checked as per manifest. • Control box door firmly shut to prevent any water ingress and control damage. • Container to be checked for any abnormal noises, alarms, incorrect temperature on loading. If any anomalies noted, local agent/booking line to be informed. Any malfunctioning reefer containers should be off loaded in case satisfactory repair not possible within the duration of port stay. • Freshly stuffed reefer containers may be accepted with a letter of indemnity. <p>At Sea</p> <ul style="list-style-type: none"> • Reefer containers to be checked physically at least twice daily and recorded in the reefer log. Daily checks to include power supply, cooling water supply if applicable, correct temperature logged on chart and <p>(cont'd..)</p>			(To be assessed and completed)
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Reefer container cargo damage			<p>digital display, any power disruptions as per chart log, control box door sealing and any abnormal noise or vibration from the refrigeration unit.</p> <ul style="list-style-type: none"> • Spare parts and manuals for reefer containers to be maintained on board for urgent repairs if required during the voyage. Inventory of same spares to be maintained on board and replenished as consumed. • Appropriate training in maintenance of refrigeration units imparted to key staff. <p>During discharge</p> <ul style="list-style-type: none"> • Containers not to be unplugged from power source until just prior discharge. Only the reefers to be discharged to be unplugged and not inadvertently the whole bay. • Power cables and monitoring cables to be neatly secured so as to avoid any damage during cargo operations. • In case reefer containers are re-stowed on board, all loading checks to be carried out diligently. 			(To be assessed and completed)
Date:		Name/Rank/Sign:				

RISK EVALUATION MATRIX TO OBTAIN SCORE

		Severity/Consequence		
		Slightly Harmful (1)	Harmful (2)	Extremely harmful (3)
Likelihood	Highly Unlikely (1)	Trivial Risk (Score 1)	Tolerable risk (Score 2)	Moderate Risk (Score 3)
	Unlikely (2)	Tolerable Risk (Score 2)	Moderate Risk (Score 4)	Substantial Risk (Score 6)
	Likely (3)	Moderate Risk (Score 3)	Substantial Risk (Score 6)	Intolerable risk (Score 9)

THE TABLE BELOW INDICATES THE RECOMMENDED RESPONSE IN EACH CASE.

Trivial	No action is required.
Tolerable	No additional controls are required. Monitoring is required to ensure control is maintained.
Moderate	Efforts are required to reduce risk. Controls are to be implemented within a specified time.
Substantial	New work not to start until risk reduced. If work is in progress, urgent action to be taken. Considerable resources may be required.
Intolerable	Work shall not be started or continued until the risk has been reduced. If reduction is not possible, the activity shall be prohibited.

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