

**ENVIRONMENTAL, HEALTH AND SAFETY MANAGEMENT SYSTEM**

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## **1 PURPOSE**

- 1.1 This procedure is to implement the safe procedure to all activities involving unloading of heavy cargo in Offshore Marine Centre.

## **2 SCOPE**

- 2.1 To provide safe work procedure of unloading of heavy cargo in safe and orderly manner.

## **3 RESPONSIBILITIES**

- 3.1 It shall be the manager, safety personnel and supervisor responsibilities to ensure that personnel performing the task should take necessary precautions and used appropriate methods.
- 3.2 The management has to ensure that all personnel involved in unloading of heavy cargo operations comply with the requirements stated under the local legislation.

## **4 PROCEDURE**

### **4.1 Preparation Works**

#### **a) Welding / Gas cutting the lashing plates**

- Lashing plates allow the lashings to be secured to the deck of the marine vessel.
- The position of each lashing plate welded on the marine vessel must follow according to the PE's design.
- When welding the lashing plates, the following requirements must be complied:
  - A Hot Work permit must be applied and approved for works.
  - All welding and cutting equipment shall comply industry standards, and be maintained in good condition.
  - All Contractor welders or welding operators shall be qualified and certified for the work they will be doing.
  - An adequate amount of dry power fire extinguishers shall be located within close proximity to hot work areas.
  - A dedicated trained fire watcher shall be positioned at each hot work site or risk area. Fire watches shall ensure that hot work activities are shut down in a systematic way using the Hot Work Shutdown. When performing hot work, the fire watcher shall be

stationed at the workface to monitor for potential fire and personnel interface. He / She shall remain in position for 30 minutes after hotwork has taken place in order to ensure there are no late ignitions.

- Flashback arrestors are to be fitted on all oxy acetylene equipment preferably installed between the hose and regulator or where specified by the manufacturer.

#### 4.2 Transporting the cargo using SPMT / Prime movers

- a) All SPMTs and Prime-movers shall be in a safe and sound condition and shall be properly maintained
- b) A programme of regular, preventative maintenance shall be developed by the Contractor, as per the manufacturer's handbook, to ensure that all vehicles are systematically inspected, maintained and repaired as necessary.
- c) All OMC and Contractor drivers and operators of the vehicles shall be in possession of the appropriate licence to operate them.
- d) Before the movement of the loaded cargo, contractors must survey and plan the safest route and propose to OMC Safety Department. Warnings can then be sent out to various parties that may be working near the transportation route or they may be relocated to ensure minimal human traffic near the moving vehicles.
- e) During the survey, contractors should definitely check for overhead / lateral obstructions, uneven grounds, ground strength etc.
- f) Before loading the cargo onto the vehicles, contractors must ensure that the ground is flat, even and able to withstand the combined weight of both cargo and the transportation vehicle.
- g) When loading, the cargos must be taken in gradually, by monitoring the hydraulic circuit meters on the vehicles. Constantly check that there is no abnormal deflection in the meters. Supervisors must ensure that all personnel are to stand away from the loading operation in case of collapse.
- h) Once the cargos are secured onto the transportation vehicles, the vehicles can begin moving to the wharf. All operators of vehicles shall obey the OMC Security, traffic regulations and speed limits. The Contractor shall ensure sufficient banksmen wearing high visibility clothing and using flags is in attendance during such movements

#### 4.3 Using the RO-RO Ramp to load / unload cargo

- a) All operations must be carried out in fine weather conditions. Weather conditions shall be checked 24hrs before the operation.
- b) RO-RO ramps used must be constructed and positioned according to the PE design.
- c) Before positioning the ramps, the marine vessels must be moored and secured to the supplied bollards. Where deemed necessary, a second marine vessel shall be deployed to push the first vessel firmly in place to minimize movements.
- d) Once the ramps are lifted into place, they must be checked that they are securely fastened.
- e) All unnecessary personnel, machines, equipment and items that may cause obstructions are to leave the deck of the vessels or the ramps during the RO-RO operations.
- f) In cases whereby the operations are conducted at night, sufficient lighting must be provided on and off the vessels so that operators can see clearly.
- g) Fatigue is a critical occupational safety concern for shift workers, especially workers working in a RO-RO operation. Being fatigued creates a risk for anyone who undertakes an activity that requires concentration and quick response. Some recognizable signs of fatigue include:
  - Glazed eyes
  - Slurred speech
  - Dragging feet
  - Slower-than-usual movement
  - Slow reaction time
  - Inability to follow
- h) In cases whereby the operators are suspected of being fatigued, they should be removed from the operations.
- i) The Contractor shall ensure sufficient banksmen wearing high visibility clothing and using flags is in attendance during such movements.
- j) In cases whereby the transportation vehicle is to be loaded onto the marine vessel together with the cargos they carry, the vehicles' brakes must be sufficiently engaged once the vehicle is moved into position.

#### 4.4 Lashing / Securing the Cargo

- a) Lashings must be inspected prior to use to ensure that they are not worn or damaged. Worn and damaged lashings must not be used. Webbing straps with abrasions, fraying or knots in them shall not be used. Chains with bent links or ad-hoc joints should not be used.
- b) Cargos transported on road vehicles should be adequately secured with sufficient number of lashings, the appropriate type of lashings and in a manner that suits the cargos loaded.
- c) The securing of cargos must take into account the following additional dynamic criteria:
  - Weight of the cargo
  - Centre of gravity location above road surface
  - Suitability and availability of securing points on the load itself
  - Proximity of load and trailer securing points
  - Level and camber of the road system to be used
- d) The direction of lashings is equally important. Angles to the horizontal should be minimized to give more effective restraint, especially in the case of forward restraint.
- e) Crossed lashings across the trailer deck front and rear offer good lateral restraint.
- f) Good timber dunnage, plywood sheets or rubber mats should be used to ensure no steel-steel contact can occur between the cargo and the chassis members of the trailers / marine vessels.
- g) Flat trailer headboards should not be considered as part of a securing plan unless they have been assessed as being adequate to contribute to load restraint.
- h) Where a chain hook or ratchet hook cannot be attached to a lashing point, shackles may be used. Drivers should be dissuaded from using steel shackles as these are more susceptible to abuse damage and excessive corrosion.
- i) Great care should always be taken when releasing any lashing suspected of being under tension.
- j) Lashers should not remove vehicle-lashing assemblies until ensuring that brakes are set and personnel are clear of the vehicle's path.

k) Operators should not move vehicles until lashing assemblies are removed and personnel are clear of the vehicle's path.

## **5 RECORDS**

5.1 NIL

## **6 ATTACHMENTS**

6.1 NIL

## **7 REFERENCES**

7.1 NIL