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MANUAL HANDLING[1]

1. MANUAL HANDLING

The term 'manual handling' is used to describe any operation that includes any transporting or supporting of a load, lifting, putting down, pushing, pulling, carrying or moving by hand or bodily force.

The guidelines on Manual Handling provided in the Code of Safe Working Practices (COSWP), Chapter 10 should be followed. The COSWP provides guidance on reducing the risk of injury, techniques on good manual-handling and other information.

The Code of Safe Working Practices (COSWP) includes the illustration regarding safe weights for manual lifting in the Manual Handling section. It is to be reminded that these weights are not fixed and vary with the capability of the individual undertaking the task. The safe limits will be reduced if the action to be performed involves twisting or to be repeated over a short time period.

As far as possible, avoid the need for any hazardous manual-handling operations, which may cause injury to seafarers, e.g., by re-organisation of the work, or automating or mechanising the operation.

The ship staff should consider whether alternative means of doing the same job would reduce this risk. Proper use of mechanical means e.g., trolley, lifting appliances like cranes, chain blocks etc are to be considered as first preference.

The manual handling operation of following tasks should not be conducted without conducting the Risk Assessment and toolbox meeting, refer to CFM[2]. The Master and CEO are responsible for ensuring that Risk is assessed before assigning Manual Handling Task in their respective department.

- Handling of stores, provisions, spares, lube oil and chemical drums, etc which requires repetitive force and movement.
- Handling / shifting of heavy wire and rope coils, steel plates and pipes.
- Handling of heavy machinery parts like main engine components during maintenance
- Handling any weight more than 30 kg for men and more than 20 kg for women

[1] W 39 / 2023
[2] W 03 / 2024

2. TILE (TASK, INDIVIDUAL, LOAD AND ENVIRONMENT)

Prior to undertaking a manual handling task, consider the following four factors: Task, Individual, Load and Environment (known under the **TILE** acronym) to ensure a thorough evaluation of the task and its associated risk when carrying out Risk Assessment.

1.1. **TASK** - *the nature of the manual handling task:*
Think about the activity. Does it involve; twisting, stooping, bending, reaching up, pushing/pulling, positioning the load, sudden movement, limited rest or recovery periods, team handling, seated handling?

1.2. **INDIVIDUAL** - *the abilities of the individual or group of people who are completing the manual handling task:*
Who will be carrying out the activity. Are they suffering from health problems, physically unsuitable to carry out the task, wearing unsuitable clothes or other effects, inadequately experienced, trained or equipped.

1.3. **LOAD** - *the characteristics of the load that needs to be handled:*
What is the object being moved. Is it heavy, bulky, unwieldy, or difficult to hold, unstable or harmful; hot, cold, sharp, or dangerous if dropped.

1.4. **ENVIRONMENT** - *the layout of the environment in which the manual handling task is performed:*
The area in which the load is being moved. Does the space allow for safe height and good posture to be maintained, is the surface slippery, uneven, or unstable, is there variation in the level of the deck, is movement or posture hindered by personal protective equipment or clothing and is there adequate lighting?
Working environment (e.g., ship movement, confined space, high or low temperature, physical obstacles such as steps or gangways) is to be considered.

Other relevant factors (e.g., the age and health of the person, the frequency and duration of the work) shall also be considered. A full list of factors to be considered is given in COSWP Annex 10.1 - Factors to be considered.

3. HAZARDOUS MANUAL HANDLING TASK

A hazardous manual task is a task requiring a person to lift, lower, push, pull, carry or otherwise move, hold or restrain any person, animal or thing involving one or more of the following:

- repetitive or sustained force
- high or sudden force
- repetitive movement
- sustained or awkward posture, or
- exposure to vibration.

These hazards directly stress the body and can lead to an injury.

Hazardous manual handling task can be identified based on the Risk Assessment.

Manual handling of heavy spare parts/equipment/boxes/stores, steel plates and pipes, handling weights in confined space, handling mooring rope and crane wire coils etc are the tasks that have the potential to cause musculoskeletal disorders and are to be considered hazardous which may occur by:

- Gradual wear and tear of joints, ligaments, muscles and inter-vertebral discs, caused by repeated or continuous use of the same body parts, including static body positions.
- Sudden damage caused by strenuous activity or unexpected movements, such as when loads being handled move or change position suddenly.
- A combination of mechanisms, for example body tissue that has been weakened by cumulative damage may be vulnerable to sudden injury by lower forces.

4. SECURING OF LOOSE GEAR AND STEEL PLATES/PIPES

Unsecured stores, equipment, steel plates/pipes and other loose gears pose a danger to the safety of the vessel by violent contact with the ship's equipment or fittings during heavy weather. All loose gear is to be properly secured before vessel proceeds to sea.

The loose gear is to be stowed in a location away from the delicate ship's fittings (where possible) and should not prevent safe access to emergency equipment and are properly secured against the athwartship and fore & aft shifting due to movement of the vessel.

Steel plates and pipes may require welding of the stand and support at their stowage location to prevent shifting during adverse weather in addition to wire lashing.

The strength of the securing devices e.g. wire, rope, pad eyes etc should be in conformance with the weight of the loose gears. The securing arrangement is to be re-checked by responsible officer, at regular intervals and before onset of the heavy weather.

Heavy loose gear should be placed on dunnage to prevent shifting.

Particular care is to be taken for the storage of lube oil and other oils in drums. They should be well secured with suitable rope or wire lashings on pallets rather than directly on the deck and where possible within a containment area. The top of the drum should be covered to prevent potential water standing and subsequent ingress and contamination.

Lashing shall be checked by CNO for all loose gear stowed on deck and deck stores, and by the 2EO for all loose gear stowed in engine room space and steering gear compartment.