INSTRUCTIONS

GENERAL PRODUCT HANDLING, STORAGE, AND TRANSPORTATION





The purpose of this document is to define the procedure for the handling, storing, transportation of cables produced by **Oman Cables Industry (OCI).**

2.0 **SCOPE**

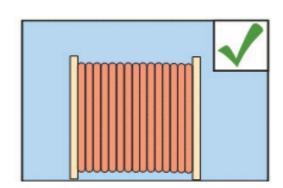
This document gives the guidelines for handling, storage & transportation of the cable drums.

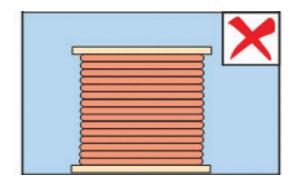
3.0 PROCEDURE FOR HANDLING

- 3.1 Do not lift the drum in flat position.
- 3.2 Use crane or forklift of proper capacity to handle the cable drum.
- 3.3 Do not lift the drum by putting the forks in between the flanges of the drum and do not lift the drums from barrel (drums must be lifted by using suitable rod through center spindle hole).
- 3.4 Adjust the distance between the forks to sit the flanges properly.
- 3.5 Roll the drum in the direction shown on the cable drum.



LIFT DRUMS ON FORK TRUCKS CORRECTLY



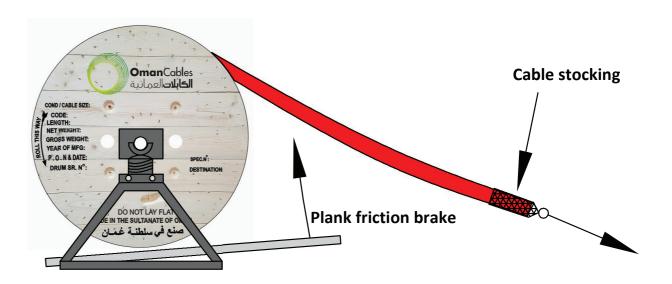


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- 4.5 As a special case, Cable drums can be stored under direct sunlight for max. up-to 06 months ensuring that there is no accumulation of water is there near the cable drums. However, keeping drums under direct sunlight may affect the quality & strength of the drums and hence, proper handling care shall be considered at site.
- **4.6** While transportation also care to be taken as above but in addition forklifts should be used for loading or unloading the cable drums in the truck.
- 4.7 It is a good practice to use pesticides at regular intervals in storage area to avoid termite & rodent attack on wooden drums.
- 3.6 Where re-winding is necessary, extreme caution must be taken during the process to avoid damage. The following must be adhered to:
 - When coiling from one drum to another always coil from the top of one drum to the top of the second drum.
 - The pay-off drum must rotate in the opposite direction to "ROLL THIS WAY" and the take-up drum must rotate in the same direction as "ROLL THIS WAY".
 - This operation is best done with sufficient distance between the two drums to avoid sharp changes of direction.
 - The proper bending radius to be maintained during rewinding cable/wire to other drum and in any case, the drum barrel diameter of new drum should not be less than that of existing drum from which the cables/wires rewinding is done to the other drum. In the case of cable cutting, cable ends must be secured with heat shrinkable end caps.
 - The winding must be done equally and uniformly with no over-riding of the coils or pinching on the sides of the drum.
 - The pay-off drum must have an adequate braking system to prevent the cable from becoming loose on the drum.



- 3.7 In the case of unwinding of cable from the drum, extreme caution must be taken during the process to avoid damage. The following must be adhered to:
 - The cable must always leave from the top of the drum.
 - The drum must rotate opposite to "ROLL THIS WAY".
 - The drum braking must be just sufficient to stop the drum rotating when the pull ceases.





4.0 PROCEDURE FOR STORAGE & TRANSPORTATION

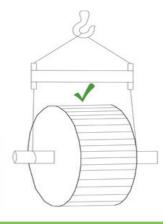
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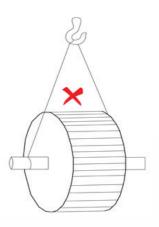




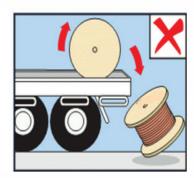


Do not lay drums flat on their sides, use proper wedges to prevent drums rolling.











SECURE DRUMS ADEQUATELY BEFORE TRANSPORTATION

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5.0 **CONTAINER LOADING**

- **5.1** Ensure containers (wall, floor, locks, door etc.) are free of damages and dirt before loading.
- **5.2** Cable drums shall be placed in rolling / vertical position.
- **5.3** Cable drums should not be placed in flat position.
- 5.4 A minimum gap of 100 mm required between the drum and container walls as well as between the drums.
- 5.5 All the drums must be secured with wooden wedges / stoppers, nailed on the container floor, to arrest the movement of the drums during transportation.
- 5.6 Drums up to flange dia. 1200 mm must be secured with minimum one lashing belt, with required breaking strength, per row.
- 5.7 Drums above 1200 mm up to 2200 mm flange diameter must be secured with 2 lashing belts, with required breaking strength, per row.
- 5.8 Drums above 2200 mm flange diameter must be secured with wire rope slings and turn buckles with required breaking strength.
- **5.9** Provide packing on both the bush holes to prevent breakage of belts / ropes due to sharp edges on the bush hole / plate.
- **5.10** Ensure weight distribution within the container is balanced.
- **5.11** Ensure optimal utilization of the container capacity.
- 5.12 Use wedges, lashing belts and wire ropes as per Annexure1- and Annexure-II.
- **5.13** Refer Annexure-II for loading positions.

ANNEXURE-I

Sr. No.	Flange Diameter of Drum (mm)	Wedge size (mm)			Lashing
		L	W	Н	
1	1200 - 700	220	90	100	Belt
2	1800 - 1400	350	230	130	Belt
3	2200 - 2000	550	230	230	Belt
4	3000 - 2400	550	230	230	Wire rope



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ANNEXURE-II (PICTURES)

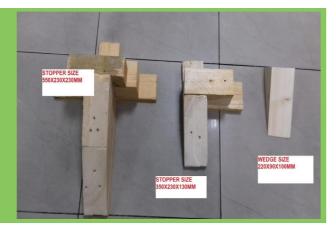
A) VERTICAL POSITION



B) ROLLING POSITION



C) WEDGE / STOPPER



6 UNLOADING CABLE DRUMS FROM CONTAINERS

- **6.0** Unloading by forklift.
 - Park the truck close to the offloading dock.
 - Switch on the dock leveler and place the lip of the dock leveler insider the container.
 - Remove the wooden stoppers and lashing belts of the drums.
 - Lift the drums with a suitable container model forklift with required load capacity and fork length.
- **6.1** Unloading by rolling.
 - Roll out the drums from the container to the loading dock and lift the drum using forklift / crane.
 - Use spreader beams while lifting with cranes.
- **6.2** Container grounding.
 - Lift the containers with crane / side loading truck with required load carrying capacity.
 - Roll out the cable drums and lift using a forklift / crane.
 - Put the lifting belts / chains through the bush holes.
 - Use spreader beams while lifting with cranes.
- **6.3** Unloading drums from Open top containers.
 - Drums can be rolled out from the containers and lifted with forklift / crane.
 - Lift the drum using a crane direct from the container.
 - Put the lifting belts / chains through the bush holes.
 Use spreader beams while lifting with cranes.



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