

Handling, transportation and Storage procedure for Optical Fiber Cable Drums

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Abstract

This document provides the guidelines for handling and storage of Optical fiber cable drums. These guidelines can apply to all 'outside plant Optical fiber cables.

Keywords

Drum flanges, shaft, spreader beam, forklift, storage



General

This document provides the guidelines for handling, Transportation and storage of Optical fiber cable drums. These guidelines can apply to all 'Outside Plant Optical Fiber Cables'. This document provides information for handling of various reels/drums at various places from receiving in stores till shipment to the site for installation.

Proper handling of cable reels/drums decreases probability of accidental damage of cable, material & personnel. All optical fiber cables are sensitive to damage during handling, storage and installation. Such damage can degrade cable performance to the extent that replacement becomes necessary.

Optical Fiber Cable is a valuable product. If handling is not done properly, the drum and in turn the cable may get damaged. At times, damage might not be discovered until the installation process, where repairing the cable gets extremely difficult and also expensive.

There are a number of key safety issues that are important to keep in mind while handling the Optical Fiber Cables as follows:

Keep the cable drum/reel protected with outer covering till the time it is used at site

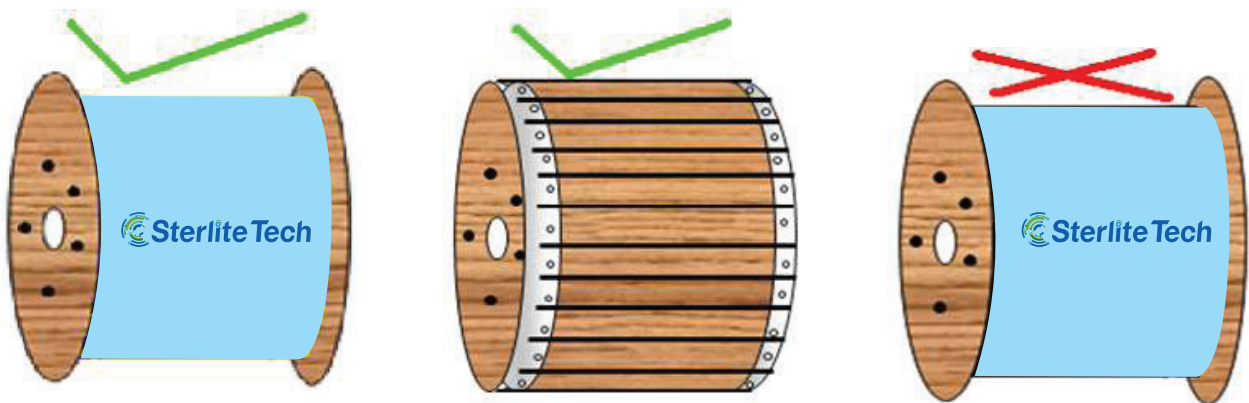


Fig1 a) Sterlite has developed an alternative packing plastic

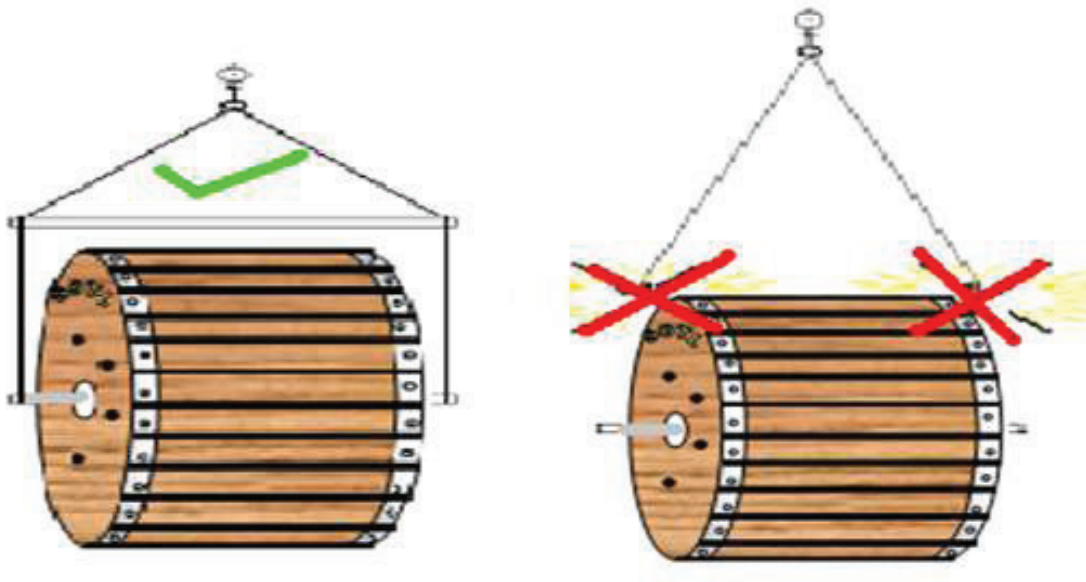
b) Drum covered with wooden lags

c) Drum left uncovered



Lift the drums without damage

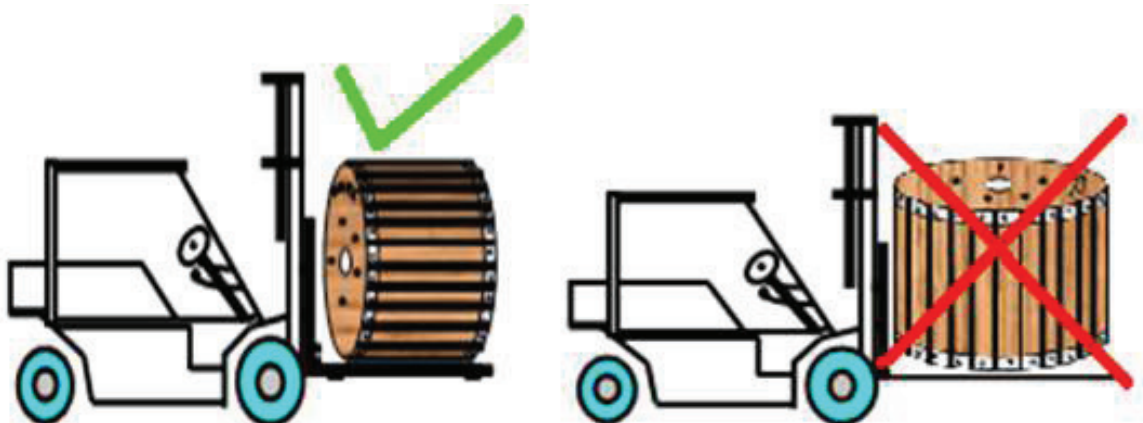
When lifting the drum; use a shaft through the centre of the drum and a spreader beam. In case spreader is not used the rope may damage the flanges of drum which can cause cable damage.



Handling with Forklift

Ensure the drums to be moved in upright position and the fork must be longer than the width of the drum. When moving the drums, tilt the truck mast so that the drum remains in the fork and the points don't touch the ground. Raise the forks of the forklift at least 6-8 inches from ground surface.

Don't release the forks until the truck has stopped completely. Keep sufficient space between the drums so that forks don't damage the other drum.



Keep the Drum in upright position

The drum is designed to be handled in upright position. It may not sustain if lifted laying flat. When stored in upright position, the cable layers do not get entangled during uncoiling.

Note: Always store and move the drums in upright position. In no case, should the drums be stored 'on the flat' that is with flange horizontal.

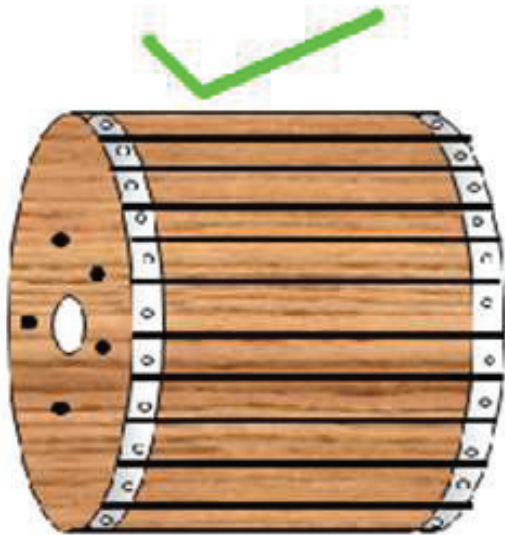


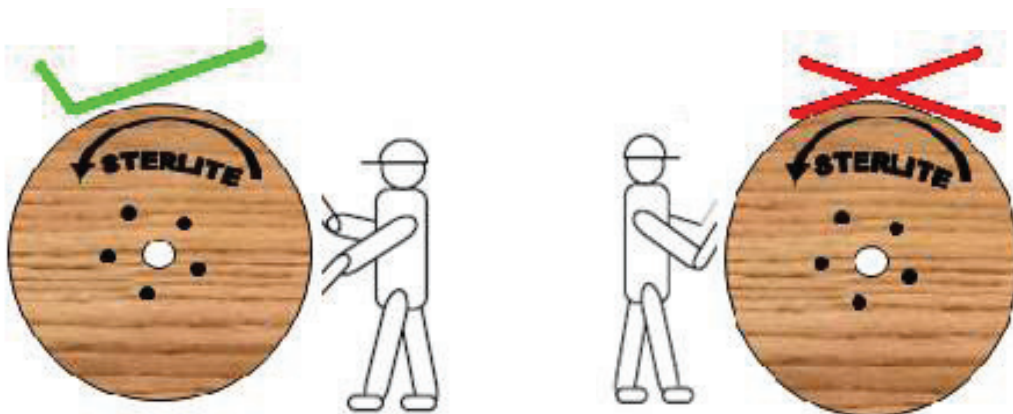
Fig 2 a) Drum on flange edge



b) Drum on the Flange Side

Roll the drums only as per the direction marked on the drum flanges

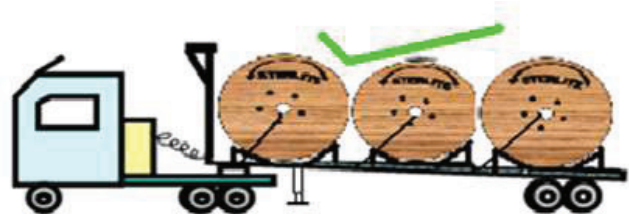
When the drums need to be rolled due to some reason, always roll the drums in the direction of arrow marked on the drum flanges. This way the cable over the drum will not loosen. However, this does not mean that the drum can be rolled freely for any distance. Limit rolling distance 5-10 meters. Once placed in position, use proper stopper to prevent drums from rolling.



Drum transportation, Unloading and Storage



1. During transportation, the cable drums should not be kept in Flat position; it crushes the down the layer of the cable, resulting in fiber breakage.



2. The cable drums should always be kept in upright position and be tied with a Chain or Belt with wooden blocks should be kept in between the flanges of each drum to avoid any jerks/ movements during transportation.



3. While unloading truck it is important that the cable drum should not be dropped directly on the floor. The weight of Drum & cable may cause deflection of Drum flange resulting flattening, deformation or damage of cable.

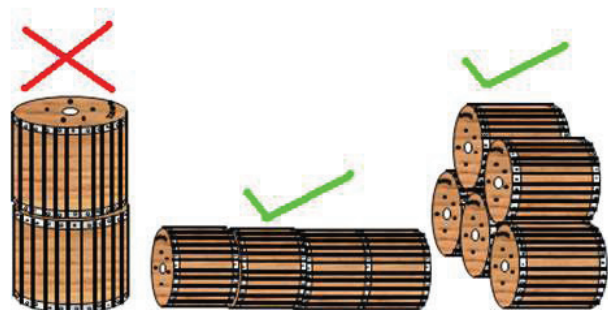


4. The drum must be rolled from truck on to receiving platform, which should be in same height as the tailgate of the truck. An alternate is to use forklift to unload drums from truck.

Note: If inclined ramps are used, roll the drums over it; but don't allow them to roll out of control. Roll each drum away from the bottom of the ramp before handling the next drum.

5. The drums should always be stored in an upright position. Storage of drums in an alternative position can lead to winding defects.

6. If storage place is limited and it becomes necessary to stack, then stack the completely wrapped on their flanges. Stacking is allowed only for the drums whose flange diameter is 1250mm or less. Do not store drums on Flat flanges



7. Optical fiber cables are wound on wooden drums. Due to environment surrounding, drum gets degraded over a period of time. To avoid such degrade in the wood during its storage period, in-house storage is recommended. If drums are stored outside, storing surface should be hard & no moist soil should be in contact with wood, this avoids generation of harmful insects responsible for wood degradation. During heavy rain, the drums should be closed by polythene to keep the Drum moisture content around 18% to 25%.

