



THE HANDING OF DRUMS OF CABLES

Reports of damage to cable resulting from the incorrect handling or rolling of cable drums occasionally comes to Olex New Zealand Limited attention. Olex New Zealand Limited therefore offers the following information that it is hoped will be of value to those concerned with the handling of cable.

The following passage is typical of the observations that come our way:

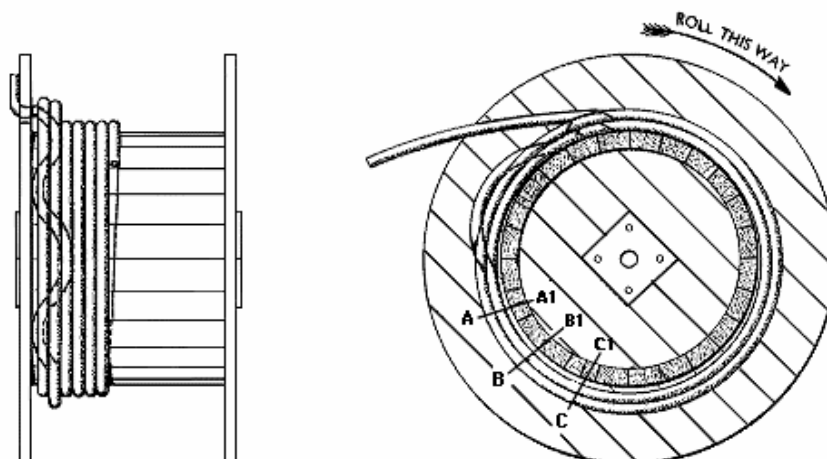
"Considerable anxiety was experienced while the cable was run off the drum, due to the inner end squeezing out and forming a loop, which was liable to catch in the timber supporting the drum. Fortunately, however, there was no mishap, and the laying was completed satisfactorily."

This 'anxiety' would have been avoided if an elementary rule had been applied and the end of the cable loosened off and, if necessary, re-secured. Had the cable not 'squeezed out forming a loop', the last few metres would have been severely damaged. If the length of cable on the drum is a long one, it might be necessary to loosen and re-secure the end two or three times during the operation of unwinding.

It has always been recognised that the inside end of the cable has a tendency to creep through the hole in the flange when the drum is revolved in the opposite direction to that originally employed when winding the cable onto it. The tendency for the inner end of a length of cable wound onto a drum to creep through the hole in the flange when the drum is unwound cannot be prevented.

The amount of creepage depends on the length of cable on the drum, the size of the cable, and the number of times the drum is revolved. The accumulated slack due to unwinding long lengths of cable may amount to several metres.

The sketch illustrates how the accumulated slack if forced into the sinuous shape on the barrel of the drum, or, up between the layers of cable above it. The resulting damage can be very serious.





Creepage of the cable on a drum occurs in the following manner:

1. The coils of cable, by their own weight and by the weight of successive layers above, are pressed down at the top of the barrel and lie clear underneath it.
2. As the drum revolves, although the underside of the barrel travels to the top, the slackness remains at the bottom effecting a movement of cable around the drum.
3. The points, A. B. C. on the cable and A1, B1, C1, on the barrel will come into successive contact as the drum rotates in the direction of the arrow, and the slackness will travel along the cable in the opposite direction (towards the top).
4. Because one coil will gradually merge into the next as the drum is turned the slack is transferred from coil to coil, in an outward direction, until it eventually runs out at the top, or free end, of the cable.
5. If the drum is rotated in the opposite direction to that of the arrow, the slack will be transferred in an inward direction until it arrives at the secured inner end of the cable and tries to force itself out of the hole in the flange of the drum. The process is cumulative and with long lengths of cable, many metres of slack may collect at the inner end.
6. If the inner end is not released the slack will
 - ◆ force itself out of the flange hole by forming a loop,
 - ◆ be forced into a sinuous shape on the barrel of the drum,
 - ◆ be forced between the layers of cable above it.

The correct direction for rolling the drum is indicated by an arrow on the external surface of the drum wall.

ROLLING

If the drum is rolled along the ground for any distance in the incorrect sense of rotation, the amount of slack formed on the inner end will, of course, be greater. All drums are marked with an arrow to show the correct direction of rotation for rolling along the ground. Slack cable occasionally becomes jammed in the flange-hole because the end has not been released, with the result that the accumulating slack, transferred from turn to turn, travels along the cable and eventually arrives at the inner end.

DRAWING OFF

When the drum is mounted on cable jacks, in order to draw off and lay the cable, it is rotated in the direction opposite to that indicated by the arrow. In this instance, the end passing through the flange must be slackened off and care taken to ensure that it is free in the hole. This will prevent the slack accumulating inside the drum by enabling it to pass out through the hole in the flange. No trouble or damage need then be anticipated.

Any customers of Olex New Zealand Limited experiencing difficulty with handling drums of cable should contact our nearest branch for further advice.