

Wire rope terminations for life-saving appliances

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Introduction

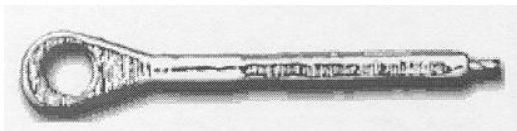
This MSN is intended to illustrate the different types of wire rope terminations and recommended uses for the different terminations that are acceptable to the Isle of Man Ship Registry for life-saving appliances (LSA).

There is no applicable maritime legislation that specifies the appropriate way to form the primary load bearing terminations of wire ropes used for lifeboat falls, recovery strops or hanging off pennants. The Ship Registry recognises that there are a number of alternative methods used to form these terminations and that the suitability of each type of connection for the intended service is varied.

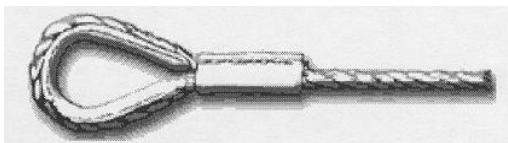
Section 1 Permanent terminations

Permanent terminations are supplied already formed on the wire rope by the manufacturer. They are suitable for all LSA applications provided that they have been certified for the maximum safe working load to be encountered.

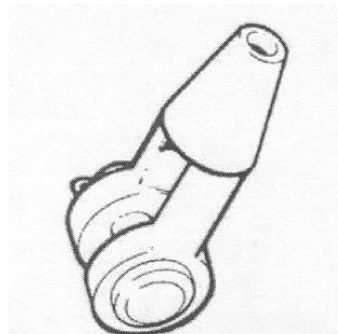
Figure 1 – examples of permanent terminations



Swaged eye



Standard thimble ferrule secured



Spelter socket

Maintenance of permanent terminations

Permanent terminations (as shown above) should be examined for broken strands or deformation of the wire where it emerges from the connection.

Section 2 Reusable terminations (wedge and socket type)

Wedge and socket type terminations have the advantage that they can be fitted by ship's staff and can be re-used when the falls are turned or replaced.

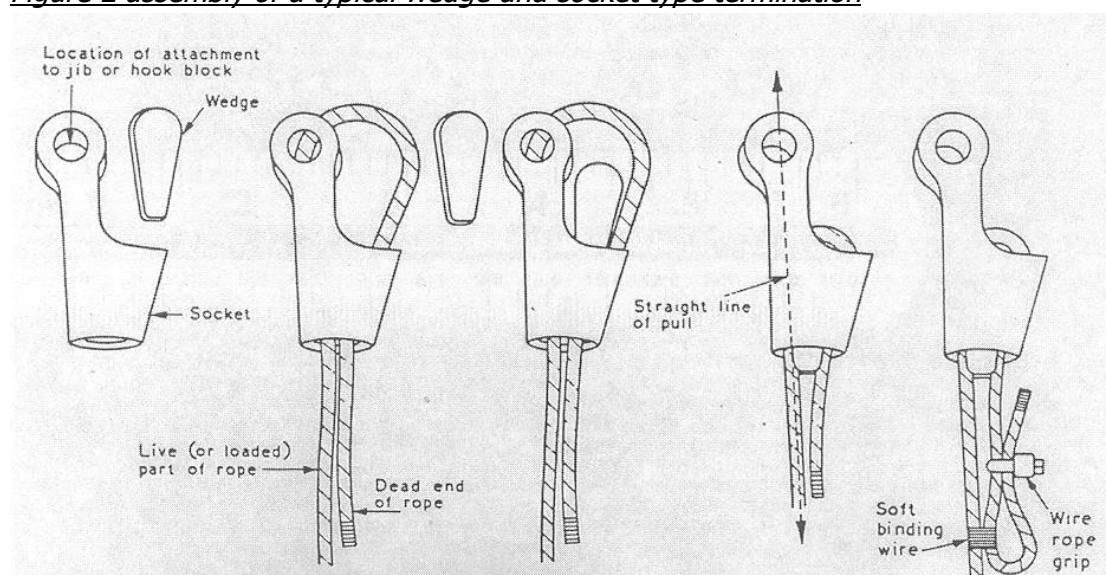
This type of fitting is also permitted for the formation of eyes at the termination for the lifeboat falls.

Their use is not recommended for cases where there is a possibility that the dead-end of the termination can come into contact with an obstruction and loosen the wedge.

When assembling the termination, the manufacturer's instructions must be followed.

A general guide to their assembly is shown below.

Figure 2 assembly of a typical wedge and socket type termination



The dead end of the rope is to be not less than 15 x the rope diameter in length.

The wedges and sockets are sized for a particular wire diameter and parts should never be mixed.

Maintenance of wedge and socket type terminations

The sockets should be periodically examined for tightness of the wedge and for any cracks.

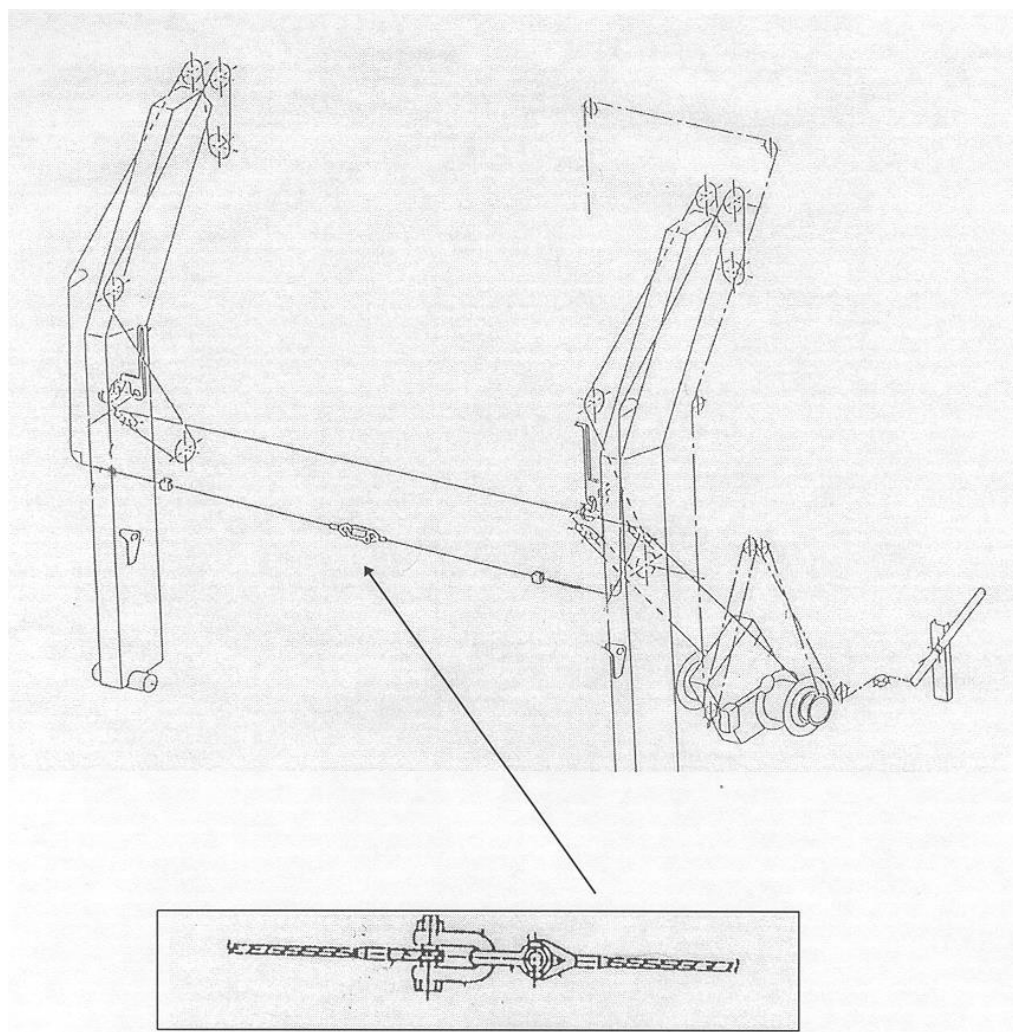
The rope is to be examined for broken wires or deformation where it emerges from the socket.



Section 3 Terminations of lifeboat falls

The figure below is an example of the type of termination for lifeboat falls that is accepted by the Ship Registry

Figure 3 lifeboat falls

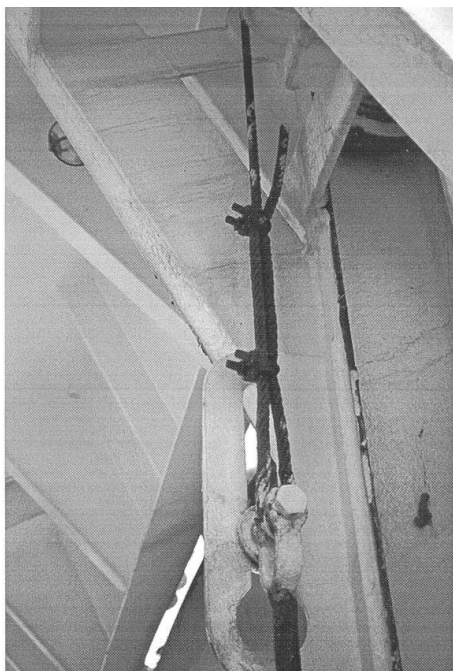


Section 4 Unacceptable terminations

Bulldog grips or cable grips are not acceptable for the forming of eyes in wire ropes on lifting wires in general, including lifting wires for LSA equipment.

Two examples of unacceptable terminations is shown in Figure 4 & 5 below:

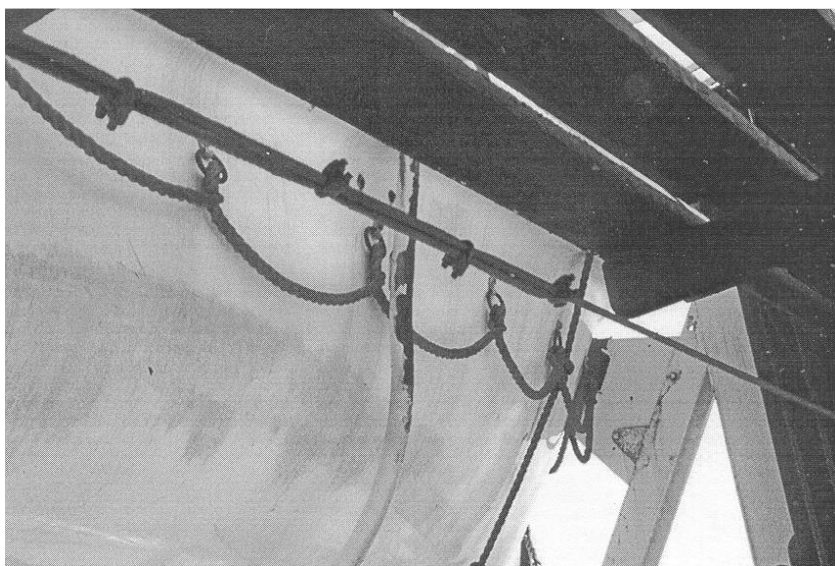
Figure 4



Unacceptable termination

This is by cable grips without a ferrule and the end of the wire rope is unsecured.

Figure 5



Unacceptable termination

The ends have been joined together directly. They should be formed into eyes with ferrules secured by wedge and socket terminations.

Please note - The Isle of Man Ship Registry cannot give legal advice. Where this document provides guidance on the law it should not be regarded as definitive. The way the law applies to any particular case can vary according to circumstances - for example, from ship to ship. You should consider seeking independent legal advice if you are unsure of your own legal position.

