

Instructions for the use of: Wire Ropes

The information in this leaflet must be passed to the user of the equipment, who must be suitably trained in the use of this equipment

This document is issued in accordance with the requirements of Section 6 of the Health and Safety at Work etc Act 1974, amended March 1988 and the Supply of Machinery (Safety) Regulations 2008 (Machinery Directive). It provides instruction to the user with regards to the care and safe use of wire ropes.

This information is of a general nature only covering the main points for the safe use of wire ropes. It may be necessary to supplement this information for specific applications.

Additional advice on storage, handling installation, inspection and discard is available on request.

ALWAYS:

- Ensure the operator is properly trained to use wire rope
- Store and handle wire rope correctly.
- Check that you have the correct rope for the application.
- Check the rope against its test certificate.
- Remove rope from a reel or coil correctly without kinking.
- Ensure correct end terminations and rope anchors.
- Ensure correct location of the rope on the drum (if any)
- Inspect the wire rope for damage, wear, corrosion or abuse at the start of each work period.

NEVER:

- Try to shorten a wire rope by knotting.
- Drag wire ropes over sharp edges or abrasive surfaces.
- Repeatedly bend wire ropes over small radii.
- Shock load wire ropes.
- Use wire ropes at extremes of temperature without consulting the supplier.
- Use wire ropes with obvious signs of mechanical, corrosive or heat damage without the advice of a competent person.
- Use wire ropes that are excessively worn, damaged or corroded.

Storage and Handling of Wire Ropes

When manually handling wire rope, always wear gloves and protective footwear. It is recommended that heavy wire ropes are moved by means of a handling aid such as a fork lift truck.

Wire ropes should be stored in a clean, well-ventilated, dry, undercover location. If the site conditions preclude inside storage the rope should be covered with a waterproof material.

If ropes are to be stored for long periods, the reel or coil should be rotated periodically, particularly in warm environments to prevent migration of the rope lubricant.

Wire ropes should not be stored in areas subject to elevated temperatures as this may affect their future performance. In extreme cases the 'as manufactured strength may be adversely affected.'

Using Wire Ropes Safely

Wire ropes are used for a vast range of different purposes with different attendant risks. Running wire ropes are particularly hazardous and as a general rule should be guarded or personnel excluded from their immediate vicinity whilst the rope is in motion.

Broken wires may develop during the working life of the rope and present a safety hazard to unprotected hands. Similarly the cut ends of the wire ropes contain sharp wire ends and need to be handled with care.

Care must be taken when unfastening a wire rope from a reel or coil because of the inherent springiness of the product and the consequent danger when it is released of it striking people close by.

Take the utmost care when removing exhausted/failed wire ropes from equipment as they may be grossly distorted, springy and tightly coiled.

Other risks will be dependant on the application and should be quantified by a risk assessment carried out by a competent person.

In-service Inspection and Maintenance

The purpose of Inspection is to determine whether or not a wire rope may continue to be safely used in a particular application and coupled with appropriate maintenance can also extend the rope's working life.

An inspection should include attention to the condition of sheaves, drums and other parts of the equipment with which the ropes make contact.

Regular periodic inspection of wire ropes and the keeping of records, authenticated by a competent person is a requirement for almost every application using wire ropes for lifting purposes. The frequency of this activity is dependant on the severity of the application and governing regulations.

Useful recommendations may be found in published standards (e.g. BS 6570) and in suppliers' literature.

In the case of re-selling and /or hire of equipment, this information must be passed onto the end user

Further information can be obtained from:

- BS EN 12385 Steel Wire Ropes – Safety

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