

Safety tips for wire stoppers

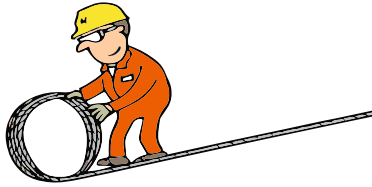
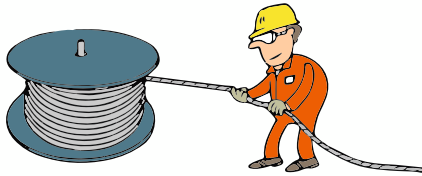
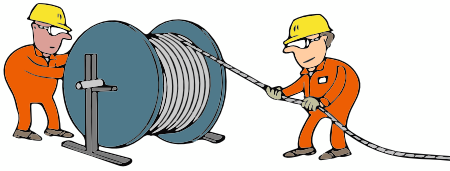
- The strength of a chain stopper should normally be about half the strength of the wire.
- The staple (that the stopper is secured to) should be in good condition with no corrosion.
- A fibre line should never be used as a stopper on wires because it does not grip the wire well enough.
- Do not leave a chain stopper attached to a wire after use.
- Do not stand across a line when applying a stopper.

Care of wires

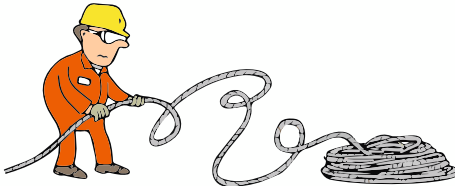
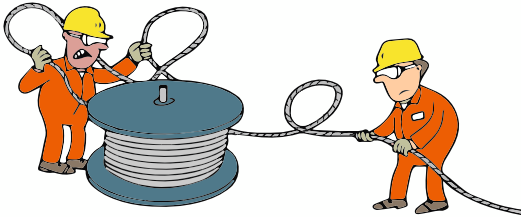
- Avoid leading wires around sharp edges or running them through a lead that is not in line with the winch drum, to prevent damage to the wire.
- Avoid crossing wires on the drum because this will crush or flatten them.
- Avoid kinking wires because this will open up the wire strands.
- Avoid leading wires around tight angles because this will weaken them and can cause them to break under a high load.

If you notice damage to a wire, report it!

RIGHT WAY TO UNCOIL WIRES



WRONG WAY TO UNCOIL WIRES



Removing wires from coils and reels

- Do not open a new coil of wire without a turntable or similar equipment.
- Removing wires incorrectly will cause kinking and damage.

Handling wires

Use specially designed steel hooks to handle mooring wires, to avoid touching the wire directly. Use the hook to pull the wire towards you. Hold it so it can be easily released, with the hook and wire springing away from you if the wire jumps.

Splicing wires

Wire eyes are usually formed with a ferrule applied mechanically by the manufacturer. Always alert your supervisor if an eye is damaged. Never splice a wire without specific guidance from a senior officer.

3.6 Synthetic fibre mooring lines

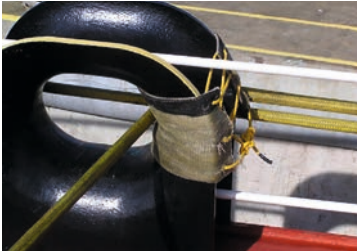
As described in section 3.1, there are two main types of synthetic fibre mooring lines:

- HMSF.
- Conventional synthetic fibres.

Make sure you know what type of line you are using. Each type has advantages and disadvantages and needs to be handled the right way. It is not always easy to tell what the fibre type is just by looking at a line, so check the certificates.

HMSF mooring lines

- Can be easily damaged by abrasion and sharp edges. Some type of chafe protection on fairleads should be used, or fairlead inserts (see photos below).
- Should not be used in fairleads that have been used for wires.
- Can be damaged by heat or hot surfaces, as well as by high load friction-generated heat on steel fittings (as well as the damage caused by abrasion).
- Can be affected by UV light if not jacketed.



Conventional synthetic fibre mooring lines

- Polyester: strong, durable, heavy, no particular weaknesses.
- Polyamide (nylon): strong, least stiff of all common materials, loses up to 15% of strength after being wet, damaged by exposure to UV light.
- Polypropylene: floats, less resistant to abrasion and cyclic loading than polyester, damaged by exposure to UV light, 100% polypropylene not recommended for mooring line use.
- Blends: blends of polypropylene, polyethylene, polyester, etc., can be made to provide a mix of good properties but they are not as durable as polyester.

Stoppers for synthetic fibre mooring lines

You should only handle synthetic lines that need to be stoppered-off and made fast on bitts if you have been trained on how to handle the stoppers.

Because there are several different types of synthetic fibre lines, make sure you use the right type of stopper.

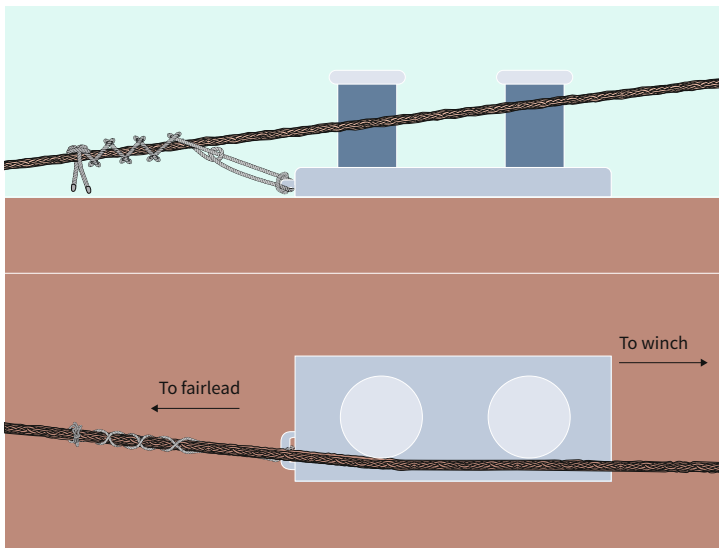
Polyamide, polypropylene and polyethylene mix lines are not stiff enough to be effective stoppers. HMSF ropes should not be used as stoppers as they are usually too slippery.

Ideally, stoppers should be:

- Made of polyester.
- Used on the double (criss-crossing the mooring line).
- Flexible and made of stiff material.
- About two metres effective length from the securing point.
- Thinner than the mooring line.
- About half as strong as the mooring line.

The stopper should have an eye at one end to secure it to a staple on the bitts or an eye pad on the deck close by. If there is no staple or eye pad, make the stopper fast with a turn and half hitch around the leading post of the bitts.

Make sure the line of the stopper is as close as possible to the mooring line, so that when the winch tension is slacked down, the mooring line is held as close to the original position as possible. The diagrams below show the right way to stopper-off a synthetic mooring line.



- Do not leave stoppers attached to synthetic fibre lines after use.
- Do not stand across a line when applying a stopper.