INFORMATION

KO-LINK LASHING, CALCULATION, SEIZING AND SECURING INSTRUCTIONS

Main purpose for using KO-LINK connector is to prevent the HMPE rope from cutting through the synthetic tow line / stretcher, and create a weak link between synthetic tow line / stretcher and HMPE pennant.

How to use
Choose type of KO-LINK to match the ropes to fit to (see technical data sheet H-16). Mount the KO-LINK into the eye of towline / stretcher and fix it with small lashing to the eye. Connect the towline or stretcher with lashing through the inner hotle of the KO-LINK, to the eye of the pennant (see figure 1 to 26).

Lashing
Best rope to use for lashing is LANKO®FORCE (R-9), with a working length of approx. 6 till 8m. (depending on link type). One plain end, the other end an eye of 15cm. The rope diameter used for lashing and creating the weak link is depending on the break load of the pennant and towline / stretcher. First make three reevings. Only at the last reeving pull the plain end through the eye. To secure the lashing, use the special knot (see illustrations to the right).

When the lashing and knot are installed, tension up the lashing, so the special knot can settle down. After this is done, tie a single knot behind it (see figure B) and cut off excess material.

The lashing is now finished (see figure C).

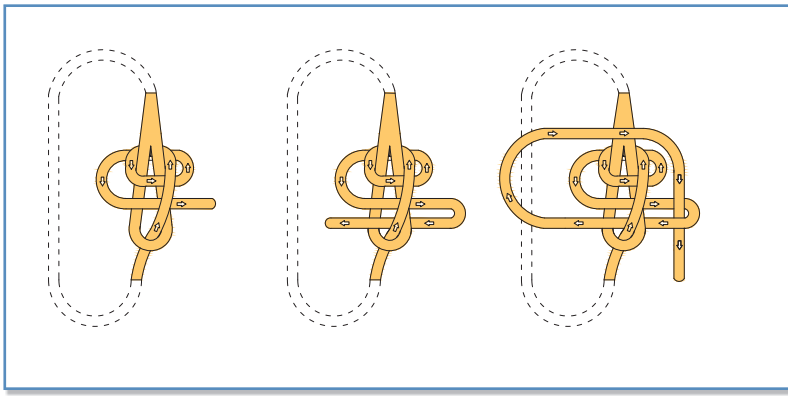

figure A

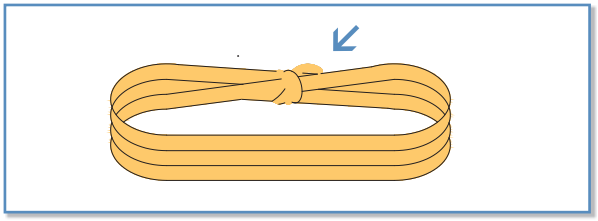

figure B

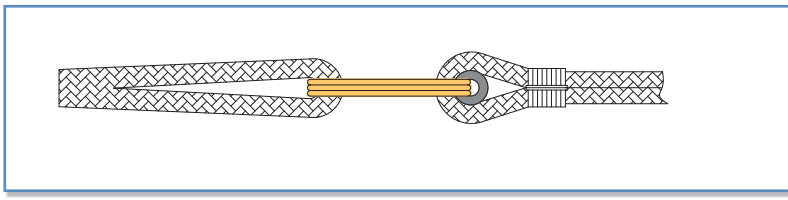

figure C

Calculation example
A towline with a MBL of 280 Mt should have a weak link at least 30% below MBL of rope. The lashing for connection should thus have a MBL of 196 Mt. A LANKO®FORCE rope diameter 24mm has a spliced MBL of 48,9 Mt. We have 3 windings around the KO-Link secured with the lashing knot as prescribed above.

When using the formula it results in: 48,9Mt x 3 (windings) = 146,7 Mt. Please multiply this by realization factor 1,3 being the 6 parts and knot efficiency resulting in the theoretical break of 190 Mt (146,7 x 1,3)

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Seizing

Advised rope to be used for seizing

KO-LINK Type 1 : 8mm, Nylon
KO-LINK Type 2 : 10mm, Nylon
KO-LINK Type 3 : 12mm, Nylon
KO-LINK Type 4 : 14mm, Nylon
KO-LINK Type 5 : 16mm, Nylon

Step 1: Mark position of seizing

- Place the KO-LINK into the bearing point of the eye and make mark A (1x KO-LINK length).
- Shift the KO-LINK to the inside of the eye and make mark B (so totally 1¾ x KO-LINK length).
- Place the KO-LINK back into the bearing point of the eye and tie the legs together at mark B, ensure that the securing hole of the KO-LINK is positioned in the middle and inside of the eye (figure 3).

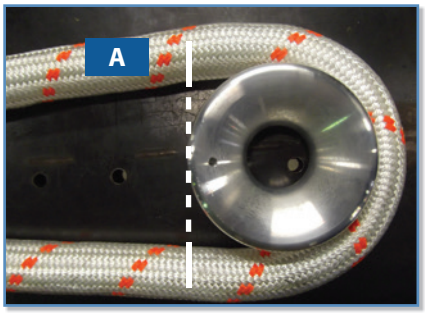

figure 1

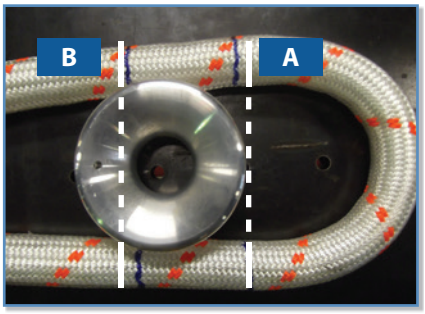

figure 2

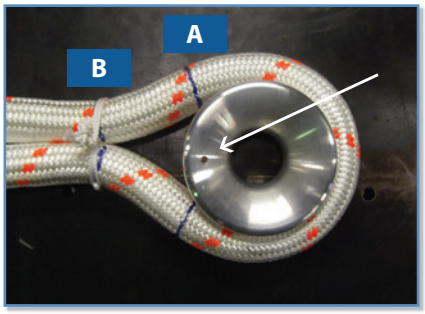

figure 3

Step 2: Secure beginning of seizing rope

- Measure out mark C (=15x seizing rope diameter)
- Pull the bitter end under a couple of picks of the braided cover (or under one strand in case of a single braided rope), beside mark C, leaving enough rope to make a clove hitch.
- Make a tight clove hitch.
- After making the clove hitch, secure the bitter end under a couple of picks of the braided cover.

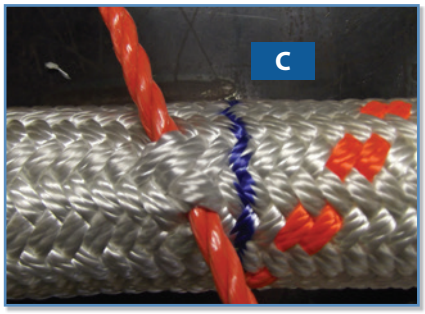

figure 4

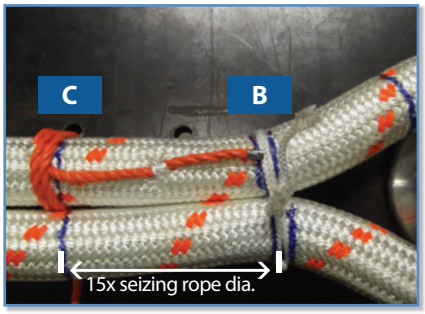

figure 5

Step 3: Winding

- Start winding the rope around both legs, always keep tension on the rope during winding.
- Make 15 full windings.
- More force to the seizing rope could be applied by using a small tube or rod.

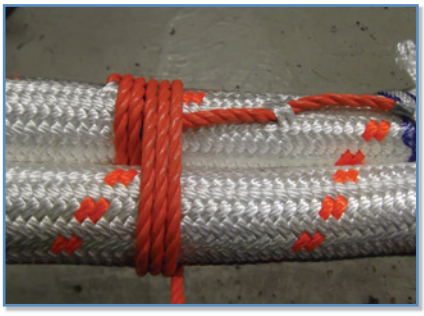

figure 6

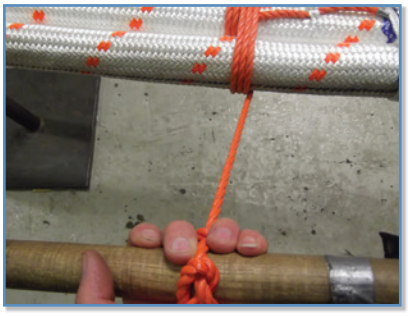

figure 7

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• Hammer down the rope, after every 3 windings made.
• After completing 15 full windings, remove the small securing rope, keeping the seizing rope under tension.

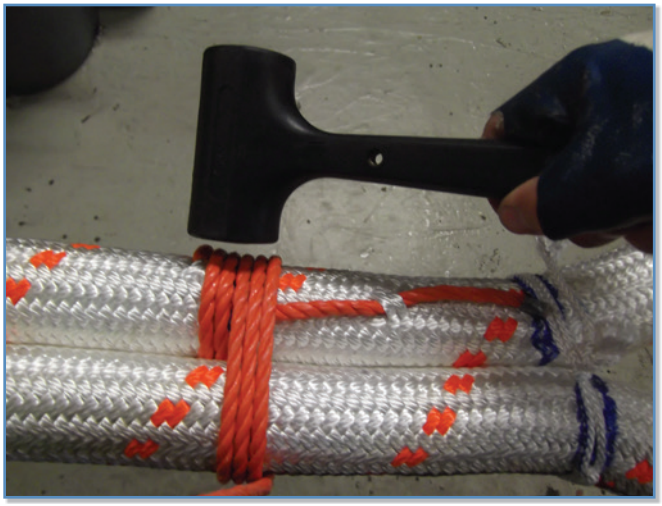

figure 8

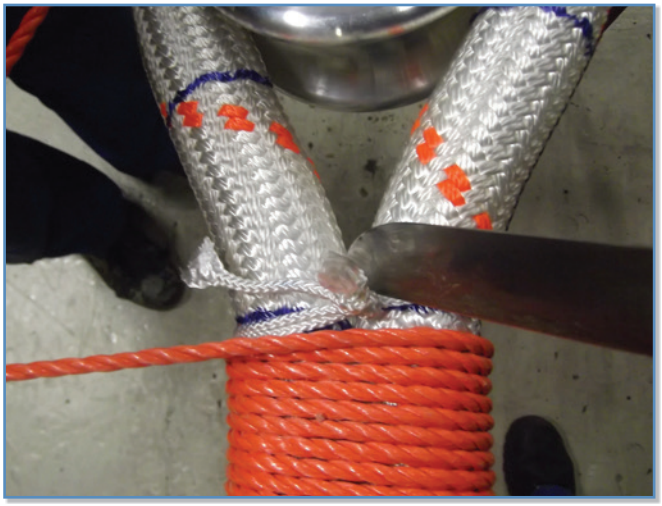

figure 9

Step 3: Winding
• Make a figure 8 around both legs.

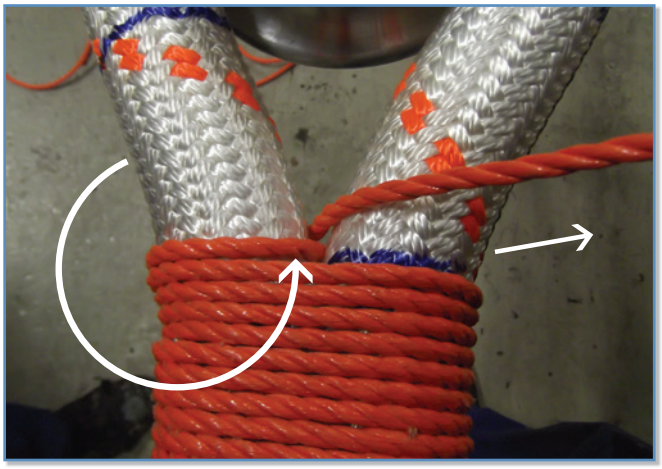

figure 10

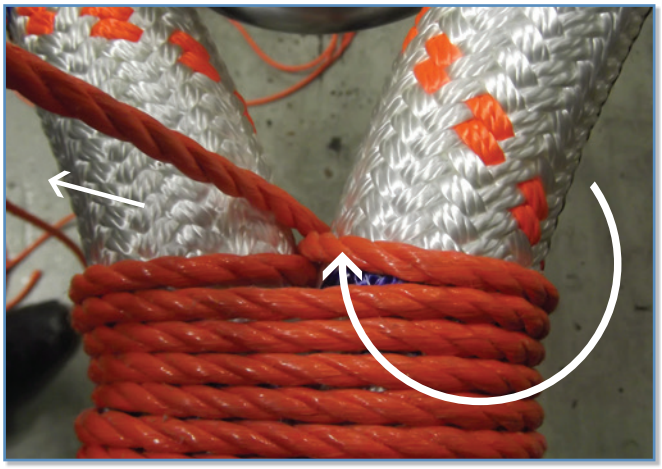

figure 11

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Step 4: Cross winding
- Cross wind the seizing rope with a minimum of 2 full windings around the previous 15 windings made.
- Apply as much as possible force onto the seizing rope, to be able to tightly install the cross windings.
- By the aid of a rod, more pulling force can be gained.

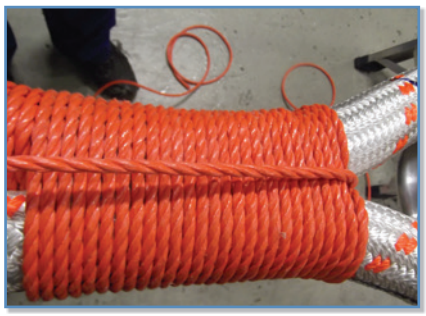

figure 12

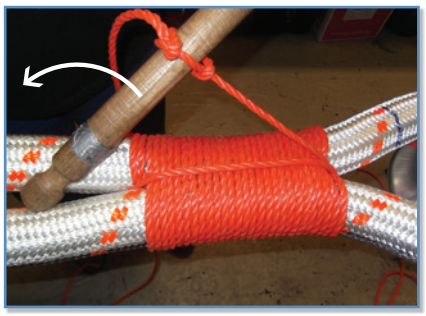

figure 13

figure 14

Step 5: Finishing the seizing
- Make a knot by going underneath the cross windings, from left to right (figure 15) pull the knot as far as possible between the legs (figure 16)
- Again make a knot by going underneath the cross windings, but now in the opposite direction, from right to left and work this knot also as far as possible between the legs (figure 16).

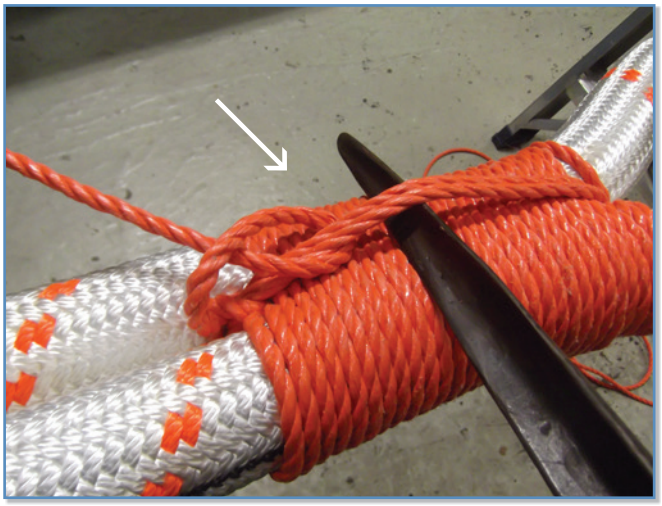

figure 15

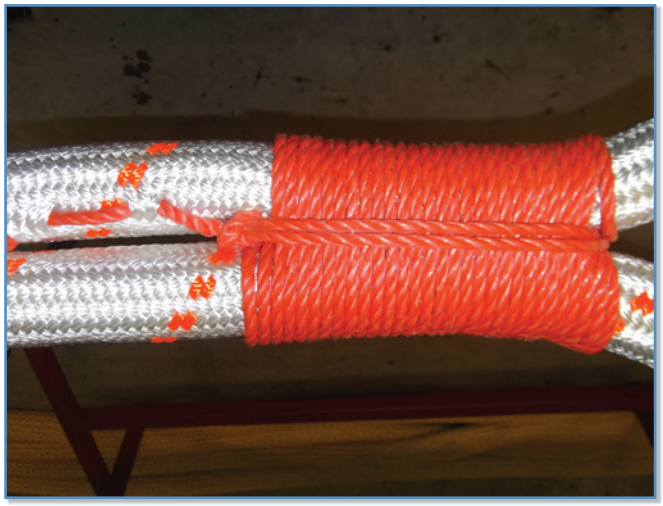

figure 16

- Make a single knot behind previous made knots
- Cut off any excess seizing rope material and secure small rope end into the rope jacket (in case of single braided rope construction secure under a strand).
- The seizing is now completed.

Securing

Advised rope to be used for securing

KO-LINK Type 1 : 6mm Lanko®force
KO-LINK Type 2 : 6mm Lanko®force
KO-LINK Type 3 : 6mm Lanko®force
KO-LINK Type 4 : 6mm Lanko®force
KO-LINK Type 5 : 6mm Lanko®force

Step 6: Securing

- Cut of approximately 2-3 meter Lanko®force rope and taper the ends by cutting ends at angle and tape.
- Pull the rope through the securing hole of the KO-LINK, leaving two equal lengths at both sides.

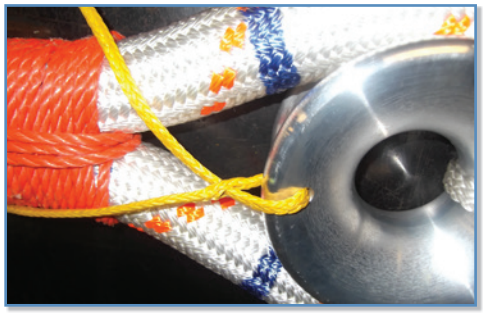

figure 17

- Pass one rope end through the rope body of the other end of the rope (figure 18).
- Tie two knots behind it (second knot in opposite direction, as first knot made).

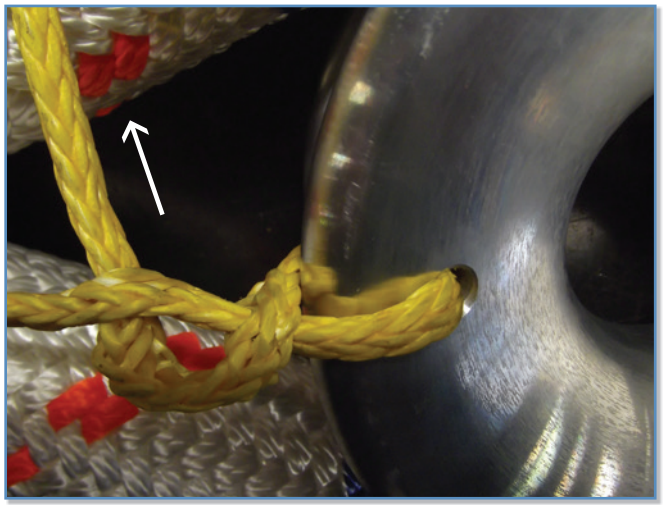

figure 18

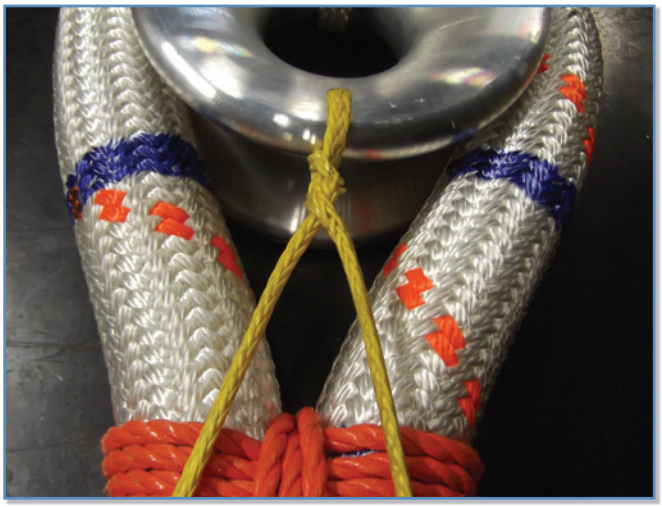

figure 19

INFORMATION

•Pull the bitter end under a couple of picks of the braided cover, or under one strand in case of a single braided rope (figure 20).
•Make a clove hitch, ensure there is a little bit of slack in the working end of the rope (figure 21).
•Make a knot by going underneath the clove hitch, from right to left (figure 22) pull the knot as tight as possible.

figure 20

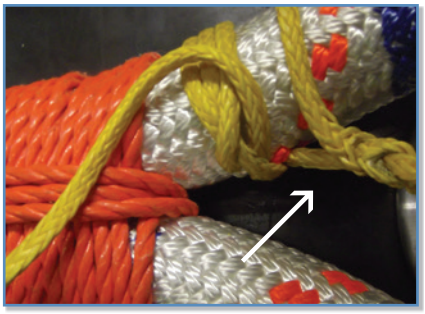

figure 21

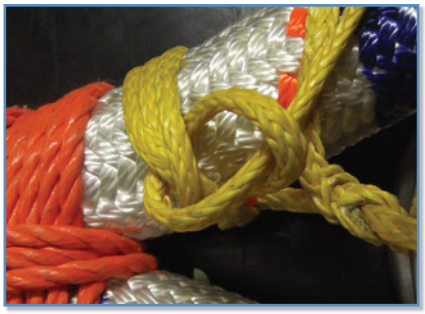

figure 22

• Again make a knot by going underneath the clove hitch, but now in the opposite direction (figure 23).
• Make a single knot, behind previous made knots and cut of excess rope (figure 24).
• Repeat the steps made in figure 20 to figure 24 for the other leg (figure 25).

figure 23

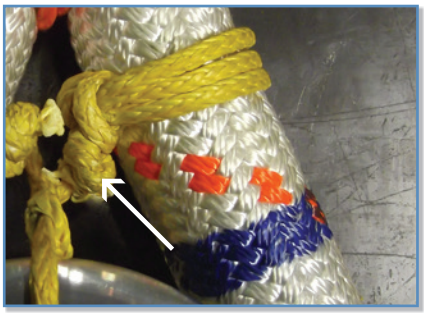

figure 24

figure 25

• The securing rope is now completed.

figure 26