



Lankhorst | *Ropes*

**LANKO®FORCE – 12 strand braided
rope with jacket, eye and thimble splice**

Splice Instruction

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LANKO®FORCE 12 strand braided rope with jacket, eye and thimble splice

Purpose

Sets out the instructions for the correct execution of splice eyes on 12 strands rope with jacket.

Scope

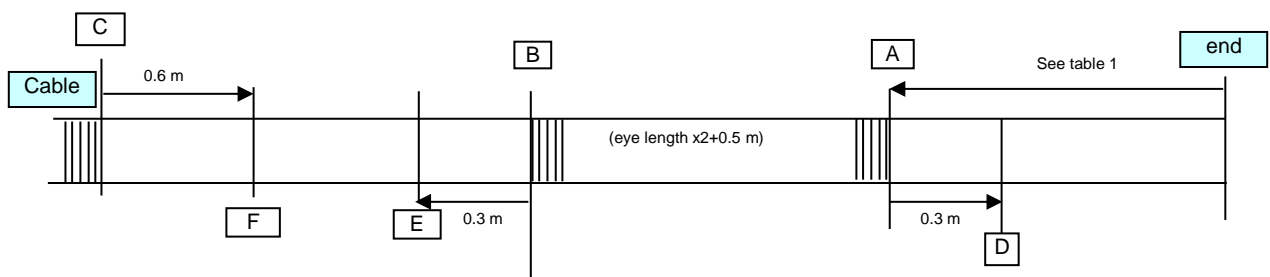
Applicable for the execution of splice eyes on 12 strands ropes with jacket.

Operative method

These instructions describe the traditional splice tucked 10 ½ times, with jacket. This splice is suitable for braiding one over one.

Step 1: the rope should be laid out in a straight line, making sure there is no twist in the rope

figure 1



Step 2: marking

To mark, start from the cut end of the rope to first mark **A** whose measure will be in the table 1 (see page 6). Second mark **B**, starting from the mark **A** (length of the eye $\times 2 + 0.5$ m for $\leq \varnothing 80$ mm). (length of the eye $\times 2 + 0.7$ m for $> \varnothing 80$ mm).

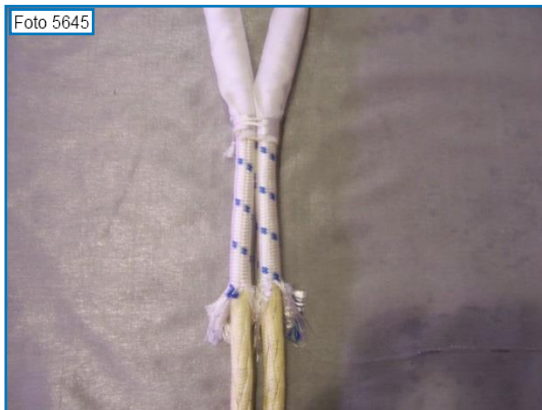
Ex. for eye 1 m: $1 \times 2 + 0.5 = 1.5$ m and for eye 2 m: $2 \times 2 + 0.5 = 4.5$ m

To make the third mark **C**, start from point **B** (see measures in the table 1 on page 6 and figure 1)

Step 3: add the PES sleeve

- To add the PES sleeve, it should have of length same to the distance between **A** and **B** + 0.5 m.
- Whip long 5 cm from point **A** to point **B**, from **B** to **A** and from **C** to the side of coil.
- From point **A** to the cut end, measure 0.3 m and mark point **D**; From **B** to **C** measure 0.3 m and mark **E**, and from **C** to **B** measure 0.6 m and mark **F**.

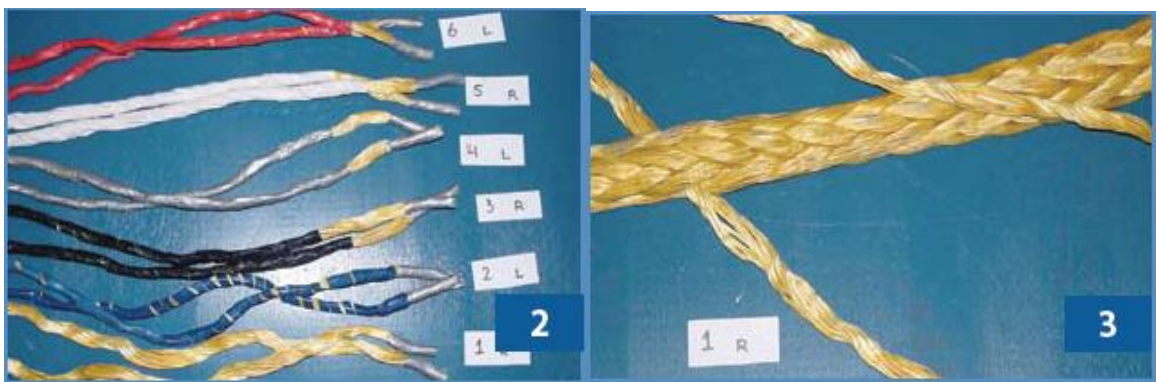
- Bend the rope to form the eye, with the PES sleeve on. Tie the two parts where the splice begins with a yarn (photo 5645).
- Cut and take off the jacket from point D to the tip and between point E and F (photo 5642). Undo the braids of jacket up to the whippings and undo the strands of the core (photo 5647). Wrap the tips of the strands with adhesive tape.



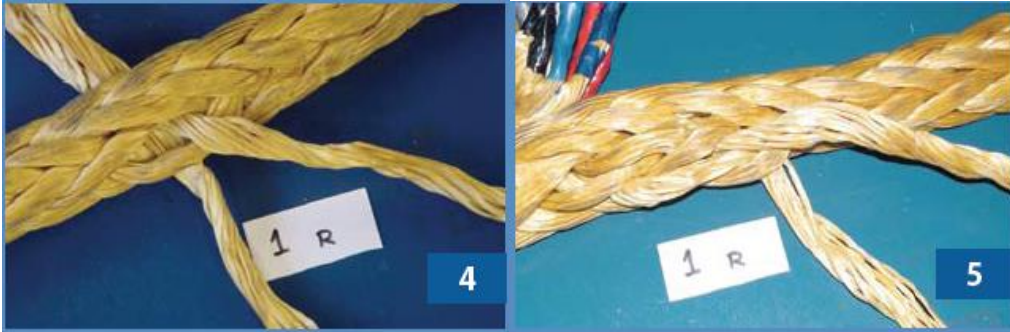
Step 4: splicing

Traditional splice 10 ½ tucks, follow the steps below.

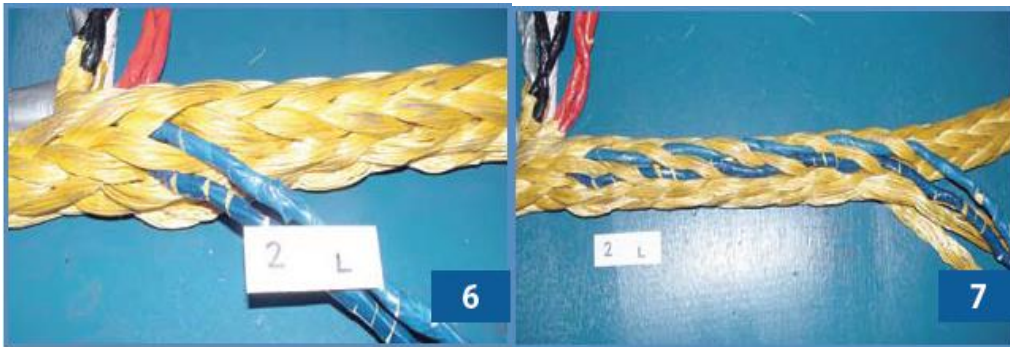
- Divide the 12 strands into 6 pairs: 3 pairs of left hand lay and 3 pairs of right hand lay strands (photo 2);
Note: Always tuck right hand lay strands under right hand lay strands and left under left.
- Tuck from the first pair (1R right yellow), the first strand under 6 strands (2 right, 2 left, 2 right) of the body (photo 3).



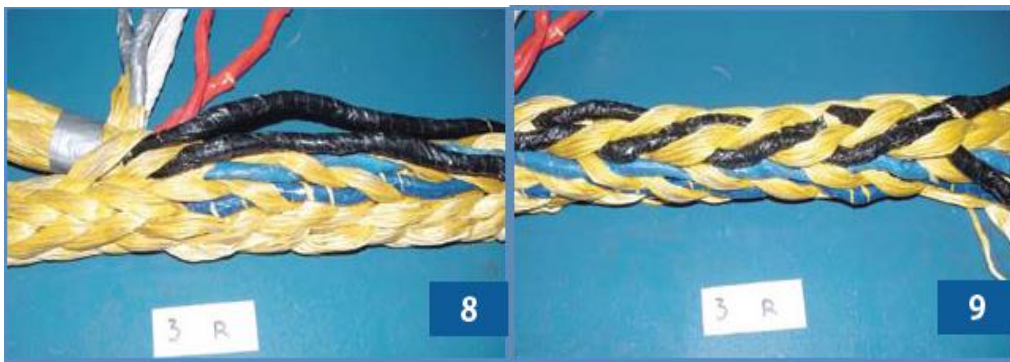
- Tuck the second right hand strand from this pair under 5 strands (photo 4).
- Continue tucking these strands under respectively the same fifth and sixth right hand strand of the body (over one, under one, over one) (photo 5).



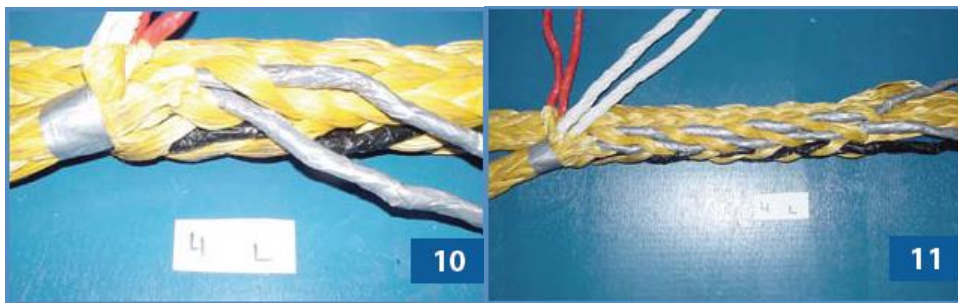
- Both strands are tucked in the same way 4 times in total.
- The second pair of strands (2L, left, blue) are tucked under the fourth and third strand of the body (photo 6). Continue here as well with tucking these strands over and under the same fourth and third strand of the body for 4 times in total (photo 7).



- The third pair (3R, right, black) are tucked under respectively the second and first strand of the body. Then follow the same procedure as described before (photo 8 + 9).



- The fourth pair (4L, left, grey) go under respectively the first and second strands of the body (calculated from the tucks made at F). Then follow the same procedure as described before (photo 10 + 11).



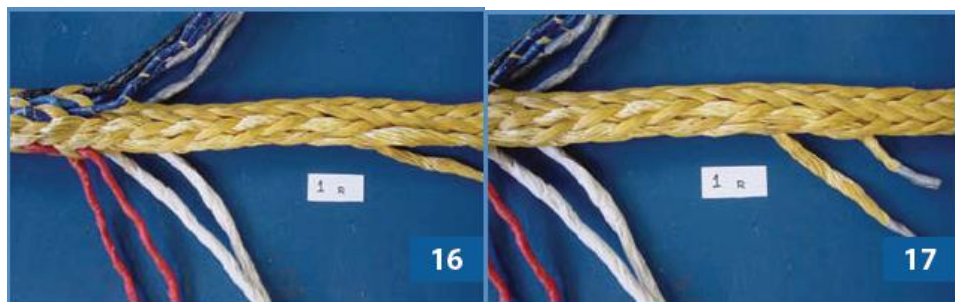
- The fifth set (5R, right, white) are both tucked under one strand, then follow the same procedure as described before (photo 12 + 13).



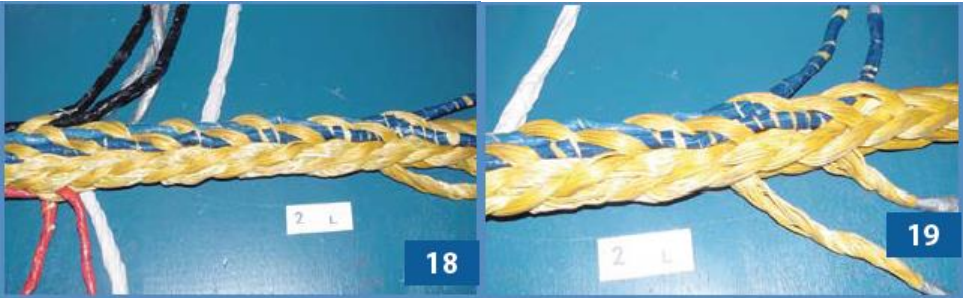
- The last pair (6L, left, red) is tucked under 2 and 3 strands, then follow the same procedure as described before (photo 14 + 15).



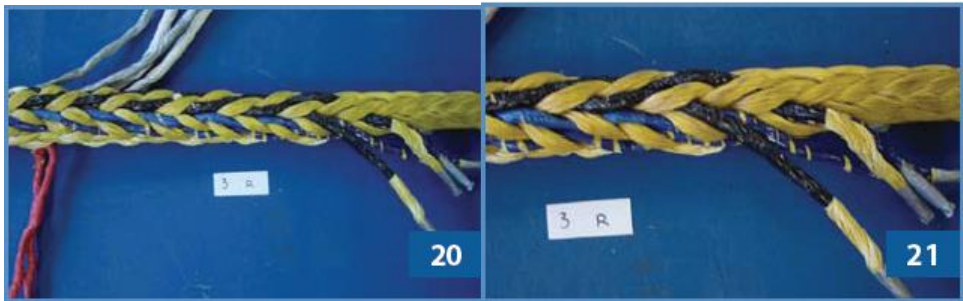
- Now we go back to the first pair of strands (1R, right, yellow). Continue to tuck this strand under one, over one until 10 full tucks are made (photo 16).
- To finish this pair, the second strand is tucked also under the next strand, we call this 1/2 a tuck (photo 17);



- Continue with the second pair of strands (2L, left, blue) and tuck the strands until one has made 10 full tucks and the other has made 10 ½ tucks (photo 18 + 19).



- Continue with the third pair of strands (3R, right black) follow the same steps as described before (photo 20 + 21).



- Continue this procedure until all strands are tucked into the body.

Table (splice 10 ½ tucks)

Ø Cable (mm)	1ª Mark (m)	2ª Mark (m)	3ª Mark (m)
28	1.35	length of eye (eye x 2)+0.5m	1.65
32	1.65	“	1.95
36	1.80	“	2.10
40	2.10	“	2.40
44	2.10	“	2.40
48	2.40	“	2.70
56	3.00	“	3.30
60	3.08	“	3.38
64	3.23	“	3.53
72	3.45	“	3.75
80	3.75	length of eye (eye x 2)+0.7m	4.05
88	3.75	“	4.05
96	3.83	“	4.13
120	3.98	“	4.28

Inserting the jacket

- The previous unbraided loose yarns of the jacket on the side of the eye are divided in 8 groups, put 4 groups to work on top and 4 down (photo 5754).



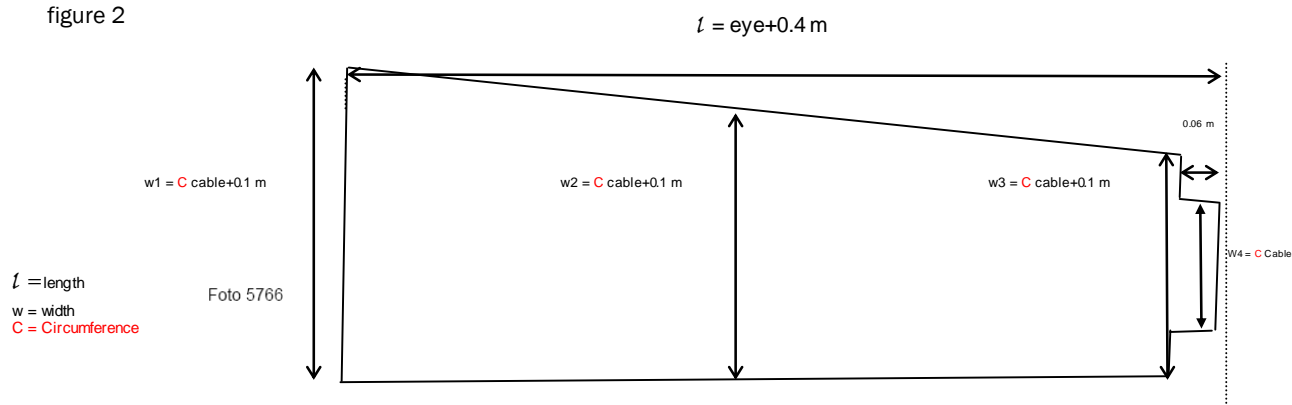
- The top groups are divided in two and they are braided along in the splice on opposite sides? (being sidelong in positions opposite) (photo 5756). Then turn the eye and braid the groups that were underneath in the same way.
- The previous unbraided yarns of the jacket at the end of the rope (behind the new splice end) are braided into the splice in the same way as described in the points before (photo 5757).
- Firmly wrap the whole splice using adhesive tape (photo 5678).
- Using braid Nylon Ø 7 mm, whip in 0.40 m starting from the beginning of the splice to the coil and in 0.50 m starting from the end of the splice eye (photo 5737).



Coverage

- The polyester cloth used for covering the still naked part of the just newly made splice, has to be cut by using a hot tool, this to prevent unraveling.
- The dimensions are the same to the length of the splice + 0.4 m (l) and the width (w) is the same as the circumference of the splice, +0.1 m, measure at 3 points, beginning (w1), half (w2) and end (w3).
- Cut out a small piece of 0.06 m length out at the end of the splice (w4) with the width of the circumference of the rope, in order to create a more nicely tapered transition from the covered splice to the single rope part.

figure 2



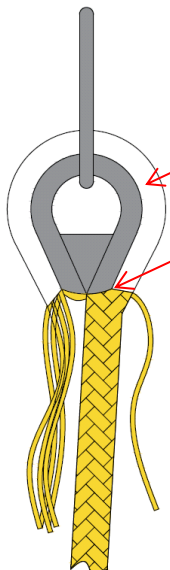
- To tie the covering to the splice with yarns, bend the hems inside to adjust the jacket to the splice (photo 5766). To mark the points of seam of 0.03 m in 0.03 m along the covering (photo 5739).
- Use braid nylon length 4 x (l covering) to sew the whole covering with two needles, (photo 5743).



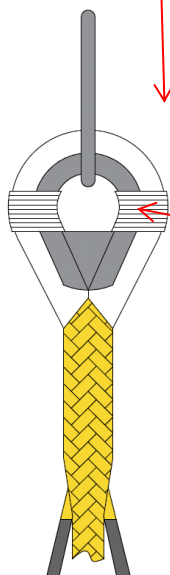
- The seam concludes with slipknot end in the two ends of the jacket (photo 5778).
- Whip the two ends of the jacket with polyester Ø 5 mm (photo 5776) and apply PU along the seam to the end of whippings (photo 5780).



Splice in a thimble



- Add a protective sleeve into the thimble area, to prevent possible cutting in.
- Tuck in the strands as tight and close as possible to the thimble.



- When all strands are tucked in twice, pull all strands as tight as possible, so the rope is closing in towards the thimble. It might be helpful to use a hammer during this process, to be able to (gently!) knock the rope completely into the thimble's groove.
- After finishing the splice, make two seizing's into the thimble (to prevent the thimble to pop out of the groove, when in use).