

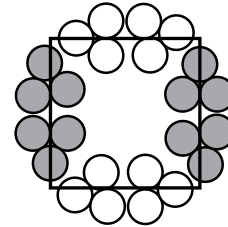
# 8x3-Strand Class II Eye Splice

Class II ropes are made in whole or part from any of the following high modulus fibers: HMPE, LCP, Aramid and PBO.

The eye splice is used to place a permanent loop in the end of a rope, generally for attachment purposes to a fixed point. An eye is also used to form the rope around a thimble, which is used to protect the rope, especially when it is to be attached to a shackle, chain, or wire rope.

## GETTING STARTED

8-strand ropes, also known as plaited ropes, are composed of 8 strands grouped into 4 pairs. 2 of these pairs turn to the left (shown in gray), and 2 pairs turn to the right (shown in white.) Seen in cross section, the 4 strand pairs form the sides of a square. The strands that are on opposite sides of the square will rotate in the same direction.

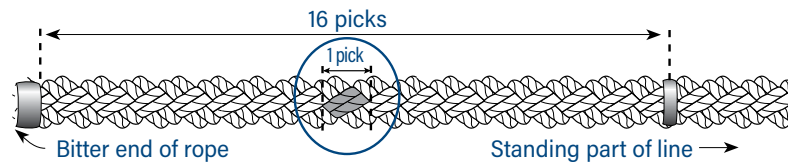


### TOOLS REQUIRED

A splicing fid or marlinspike, sharp knife or scissors, plastic or masking tape, marking pen.

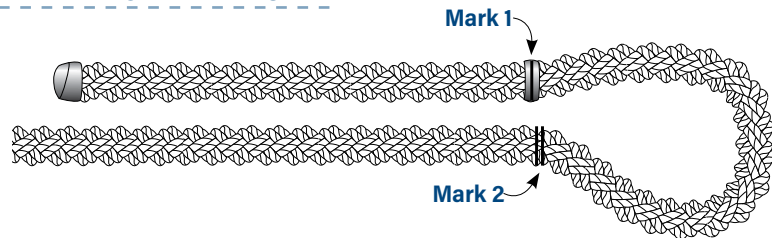
## STEP 1 COUNTING AND MARKING

From the end of the rope, count a distance of 16 picks and apply tape securely around the rope immediately after the 16th pick, as shown in the illustration. This is Mark 1. Apply the tape securely enough so that it will not move during the splicing procedure.



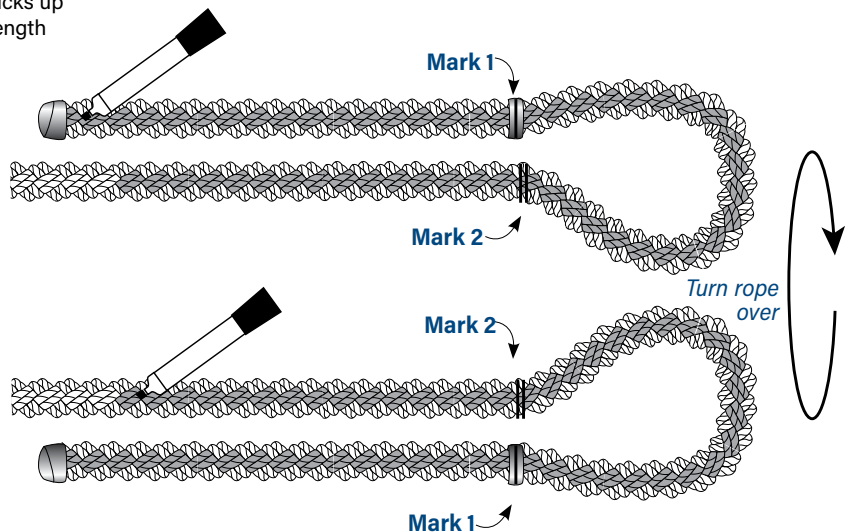
## STEP 2 MAKING THE EYE AND MARKING THE ROPE

Form the desired size of the eye, being careful not to add twist to the rope. Mark the rope adjacent to the tape. This is Mark 2.



## STEP 3 MARKING THE LEFT-ROTATING STRANDS

From the end of the rope; mark the first 16 picks up to the tape at Mark 1 continue marking the length of the eye and at least an additional 6 picks past Mark 2. Mark all strands that rotate left on both sides of the braided rope.



**Note:** The strands that rotate left (gray) can be marked for improved visual reference. 8-strand ropes are composed of 4 pairs of 2 strands each. 2 of the strand pairs rotate to the left, and 2 pairs rotate to the right. When marking the left-rotating strands, be sure to turn the rope over and mark the left-rotating strands on the opposite side of the braid.



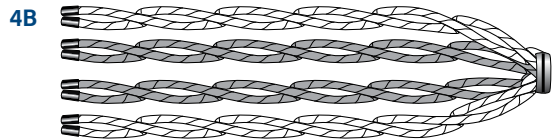
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## STEP 4 TAPING THE ENDS AND UNLAYING THE ROPE

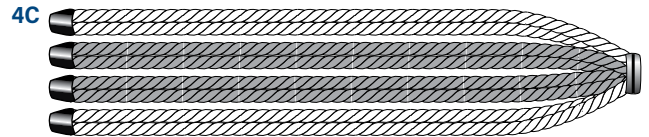
**4A** Tape the ends of each of the 8 strands individually.



**4B** Unlay the strand pairs all the way back to the tape at Mark 1. Keep the pairs of strands together while unbraiding.

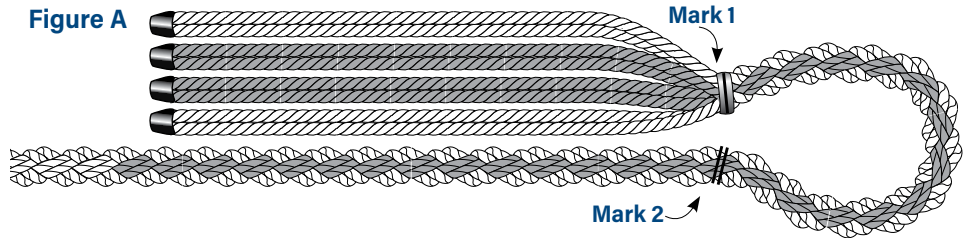


**4C** When unlaid, the strands in a pair will be twisted around each other. Untwist each strand pair so the 2 strands lie parallel to each other rather than twisting around each other. Tape the ends of each pair together.



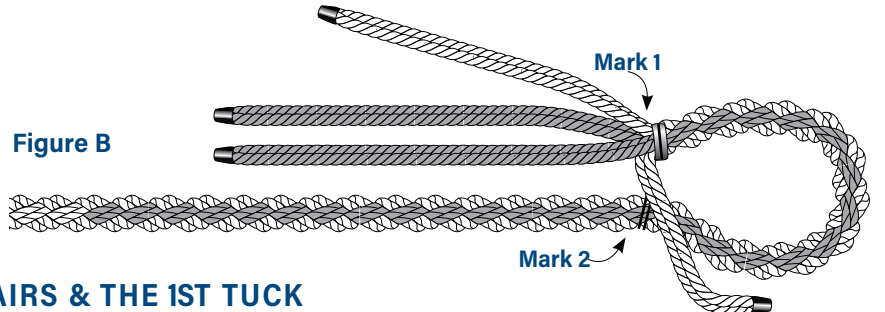
## STEP 5 POSITIONING THE STRANDS

Arrange the strand pairs as shown in Fig. A. One set of the marked (gray) strands is on the top; and the other marked (gray) strands are on the bottom. The unmarked (white) pair will be on the left and right.



## STEP 6 FORMING THE EYE

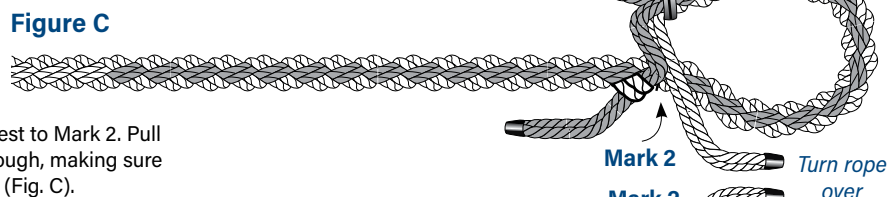
Physically form the eye, making certain there is no twist in the rope. Place the (white) pair that is closest to the standing part of the rope over the rope, at Mark 2, as shown in Fig. B. Be careful not to add twist to the rope.



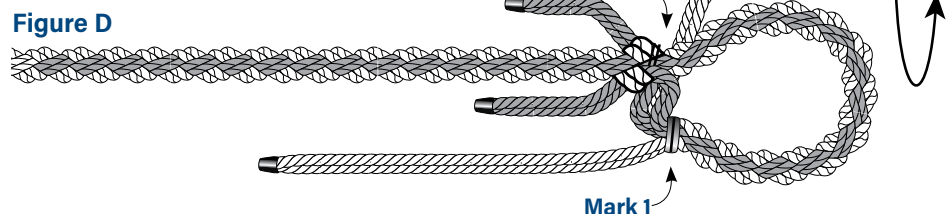
## STEP 7 ROUTING THE STRAND PAIRS & THE 1ST TUCK

**Note:** If necessary, use a fid or marlinspike to loosen the strands. The left rotating (gray) strands will be tucked under the right rotating (white) strands, and vice versa.

**7A** Beginning with the left rotating marked (gray) pair of strands on top, make your first tuck under the right rotating (white) pair of strands closest to Mark 2. Pull the strands completely through, making sure that the strands don't twist (Fig. C).



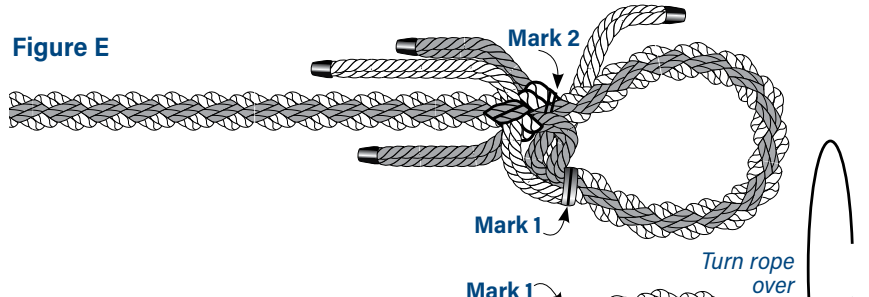
**7B** Turn the eye over and tuck the other marked (gray) pair of strands under the (white) pair of strands directly opposite the previous tuck (Fig. D).



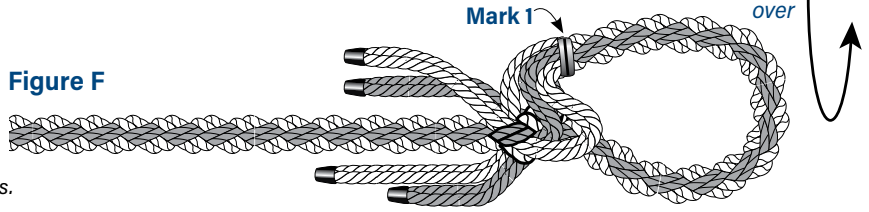


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**7C** Tuck the (white) pair of strands under the (gray) pair of strands closest to the first 2 tucks. Pull the strands snug, but not tight to avoid distorting the strands in the eye area. Again, make sure there is no twist in the strands (Fig. E).

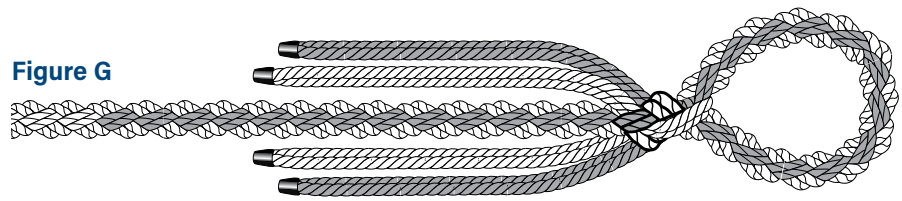


**7D** Turn the eye over and tuck the remaining (white) pair of strands under the remaining (gray) pair of strands in the standing part of the rope (Fig. F).



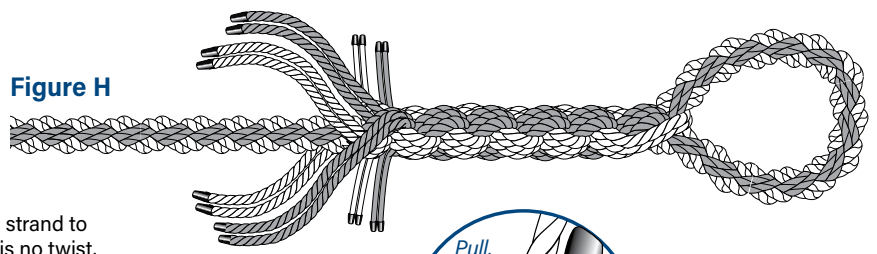
**Note:** A full tuck includes all 4 pairs of strands.

**7E** Remove tape and pull all 8 strands snug and correct any twist that may have been introduced during the tucking procedure. The first tuck is now complete (Fig. G).



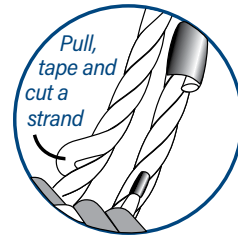
## STEP 8 COMPLETING THE TUCKS AND FINISHING THE SPLICE

**8A** Continue tucking the (gray) strands under the (white) strands and the (white) strands under the (gray) strands until at least 6 full tucks, with all 4 strand pairs, have been completed (Fig. H).

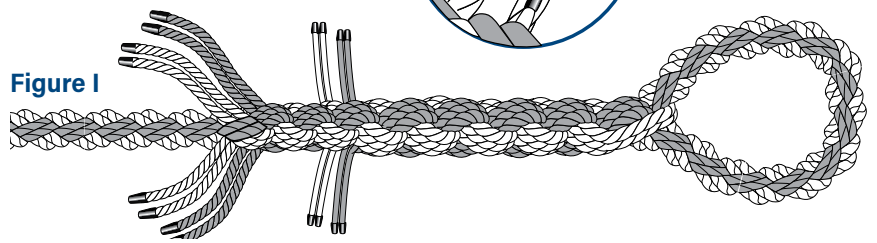


**8B** After each round of tucks, pull each strand to make sure they are snug and there is no twist.

**8C** Having completed 6 full tucks for each pair of strands you will need to reduce the strand volume by 1/3 before continuing the next set of tucks. To do this, cut 1 of the 3 strands out of each pair as shown (see detail at right.)



**8D** Continue tucking the remaining strands, with the (gray) strands under the (white) strands, and vice versa, for 3 more full tucks. The splice should look like Fig. I.



**8E** The tapering process continues by reducing the volume of the remaining strands by 1/2 (removing 1 of the 2 remaining strands.) Continue tucking the remaining strands for 3 more full tucks. Tape the remaining strands 8-10 inches from where they protrude from the rope body and cut off the remainder. The finished splice should look like Fig. J.

