

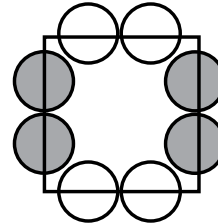
8-Strand Class II Eye Splice

Class II ropes are made in whole or part from any of the following high modulus fibers: HMPE, LCP (Liquid Crystal Polymer), 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 this 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.

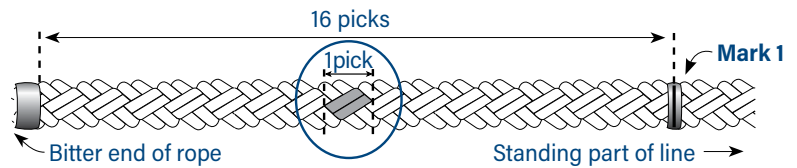


TOOLS REQUIRED

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

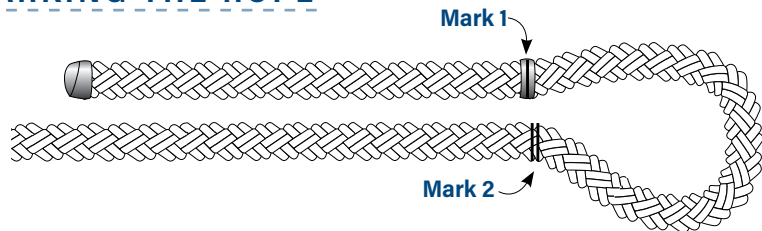
STEP 1 COUNTING AND MARKING

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

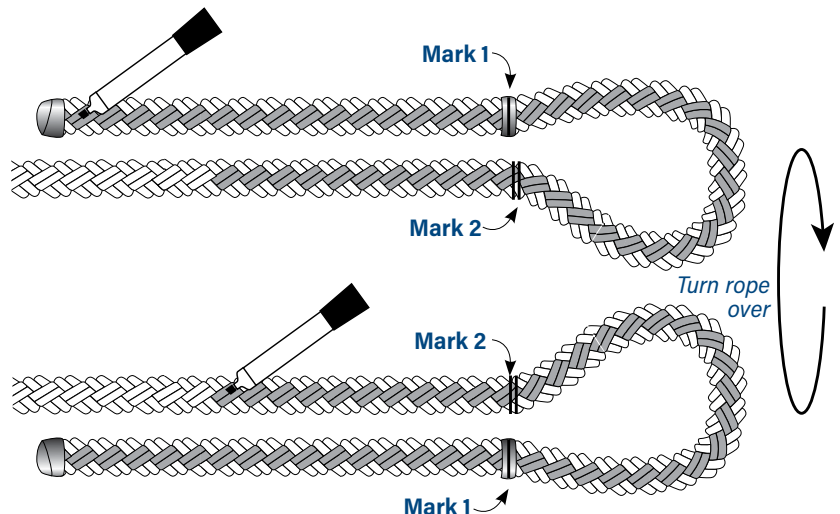
Form the desired size of the eye, being careful not to add twist to the rope. Mark the rope adjacent to the tape. This will be Mark 2.



STEP 3 MARKING THE LEFT-ROTATING STRANDS

From the end of the rope, mark the first 10 picks up to the tape at Mark 1. Continue marking the length of the eye and an additional 6 picks past Mark 2. Flip over the rope to 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 continue to mark the left-rotating strands on the opposite side of the braid.





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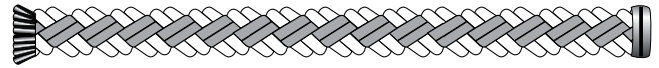
STEP 4 TAPING THE ENDS AND UNLAYING THE ROPE

4A Remove tape from bitter end of the rope, then re-tape the ends of each individual strand.

Individually taped ends

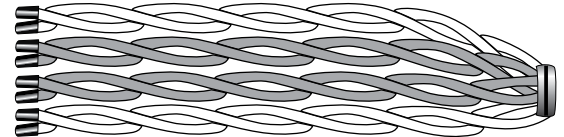
4A

Mark 1



4B Start unlaying strands in their respective pairs. It is important to keep each pair of strands together.

4B



4C After they are separated into pairs up to Mark 1, unravel each strand pair without allowing the individual strands to untwist or loosen. Retaining the twist of each strand is important to the resulting splice. Tape the ends of pairs together with a taper.

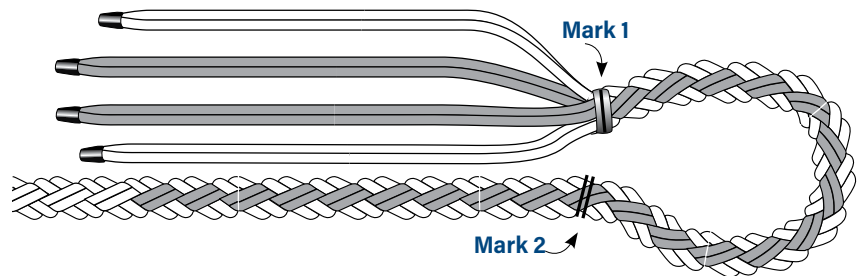
4C



STEP 5 POSITIONING THE STRANDS

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

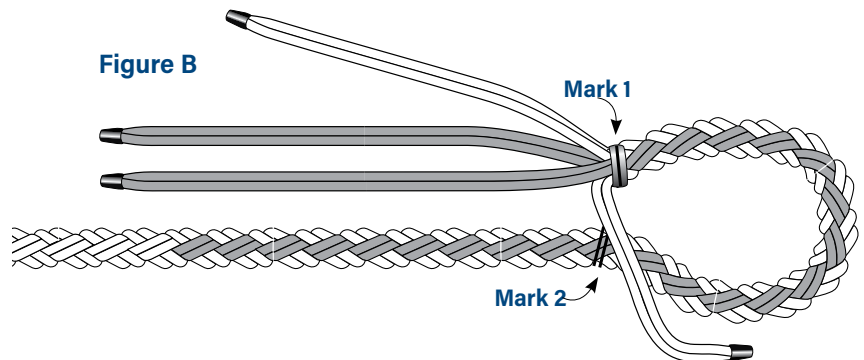
Figure A



STEP 6 FORMING THE EYE

Physically form the eye, making certain there is no twist in the rope. Take the right rotating (unmarked) pair that is closest to the standing part of the rope and lay it over the rope at Mark 2, as shown in Fig. B; being careful not to add twist to the rope.

Figure B



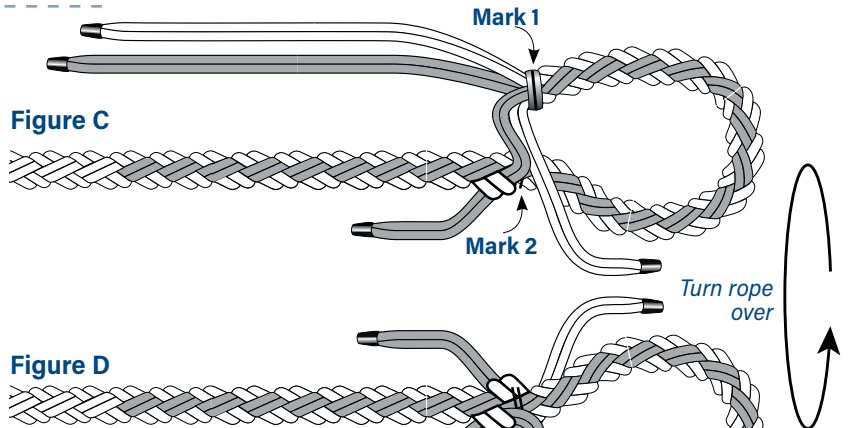


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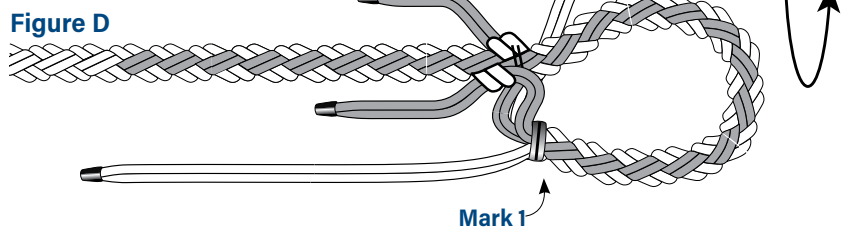
STEP 7 ROUTE TUCKING THE STRAND PAIRS

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.

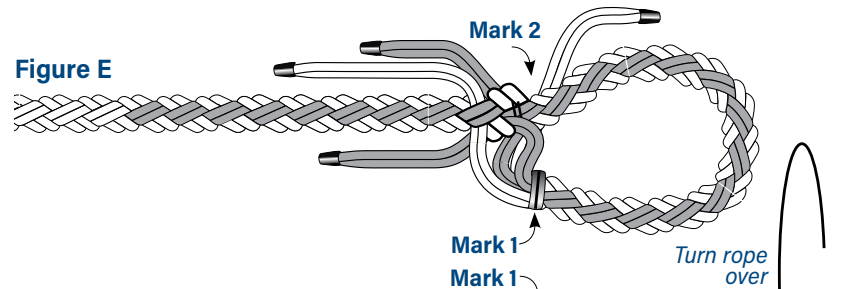
7A Now take the next closest (left rotating, marked) strand pair and begin to lay it across the rope at Mark 2, but this time tucking it underneath the right rotating (unmarked) strand pair on the side opposite from the remaining two strand pairs. Pull the strand pair completely through, making sure the strands don't twist (Fig. C).



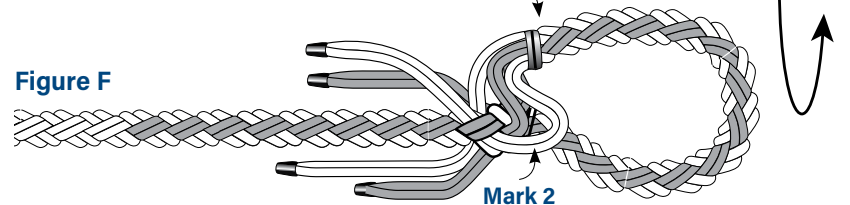
7B Turn the eye over and tuck the other left rotating (marked, gray) pair of strands under the right rotating (unmarked) pair of strands on the opposite side of the initial tucks in step 7A.



7C Tuck the right rotating (unmarked) pair of strands under the left rotating (marked, gray) pair that is even with 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 strand pairs (Fig. E).

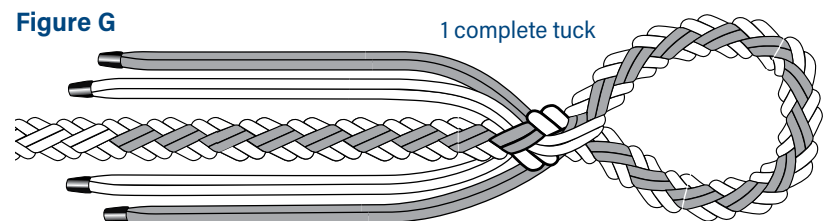


7D Turn the eye back over and tuck the remaining right rotating (unmarked) pair of strands under the remaining left rotating (marked, gray) pair of strands in the standing part of the rope (Fig. F).



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).



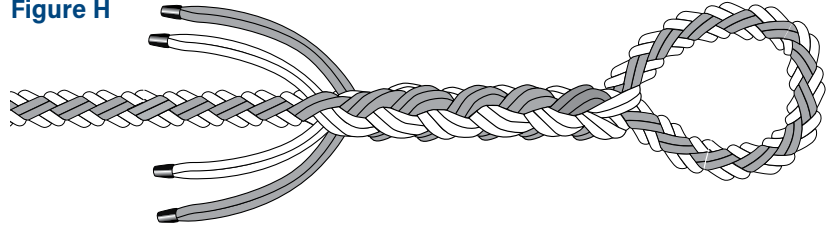


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STEP 8 COMPLETING THE TUCKS AND FINISHING THE SPLICE

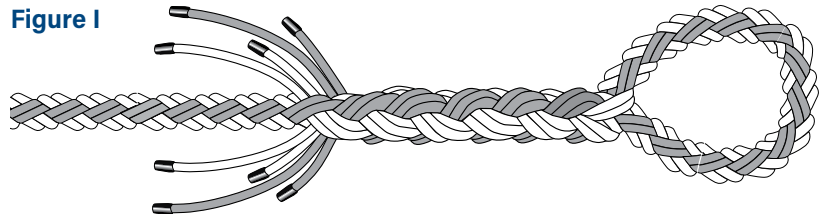
8A Continue tucking the left rotating (marked, gray) strand pairs under the right rotating (unmarked) strands, and vice-versa. Complete 6 tucks for each strand pair. The splice should look like Fig. H.

Figure H



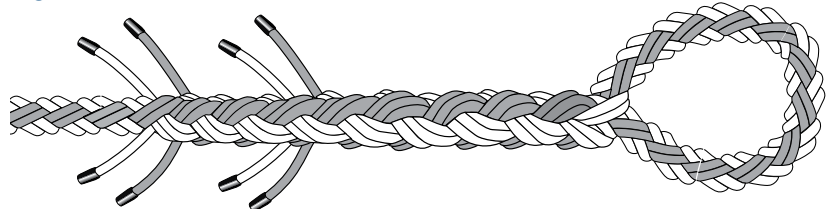
8B After each round of tucks, pull each strand to make sure they are snug and there is no twist. Remove the tape from each strand pair, and locate the strand closest to the eye in each strand pair. Tape 8-10 inches from where it protrudes from the rope body, and cut off the remainder. The splice should look like Fig. I.

Figure I



8C Continue tucking the uncut strands with the left rotating (marked, gray) strand pairs under the right rotating (unmarked) strands, and vice versa, for 3 more tucks. Throughout the tucking process, ensure that individual strands retain their level of twist and structure. Each strand should appear visually similar to the other strands making up the main rope body. The splice should look like Fig. J.

Figure J



8D Following the 3 tucks, perform a taper on the one remaining strand, reducing the volume by half. Count the number of yarns that comprise each strand and divide as evenly as possible. Tape 8-10 inches from where the strand protrudes from the body of one half of each strand and cut off the remainder from this half.

8E With the remaining 4 half-volume single strands, perform 3 full tucks. Tape the strands after they have been tucked and cut them off as done with previous strands. The completed splice should look like Fig. K.

Figure K

