

Repair of net at sea

1. Equipment for repair of net at sea

Repair kit from ScaleAQ contains the following elements:

1. Patching needles
2. Scissors or knife
3. Patch in HDPE netting
4. Patchin thread no. 24 with breaking strength 105 kg



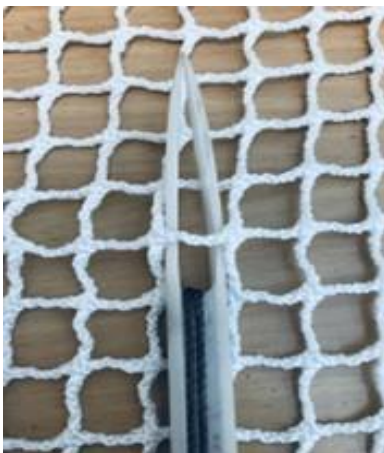
The patching thread used when lacing netting together or sewing the patch to the netting must have at least the same breaking strength as the netting. This requirement is especially important if the fish farmer does not have a repair kit.

If a thread with lower breaking strength is used, the thread **MUST** be double laid. Tie the thread securely to the needle as shown in the image above.

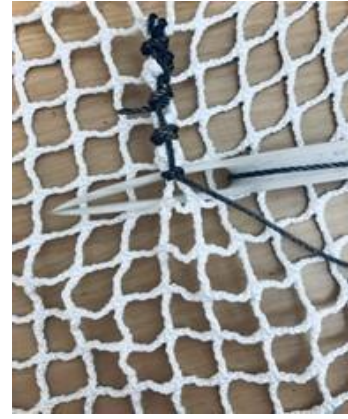
2. Type of knots

There are different types of knots for stitching and attaching the patch to the netting that will be described in detail by photos in Chapter 2.1-2.4.

2.1 Starting knot



2.2 Double half hitch



2.3 Finish knot

Use a double half hitch secured with a knot. It is important to leave a small length of thread when cutting, as shown in the last image below.



2.4 Two threads tied together



When both ends of the thread are tied together, they must be pulled tight, "tightened" as shown in the last image. This ensures that the knot is properly secured.

3. Methods for repairing the net at sea

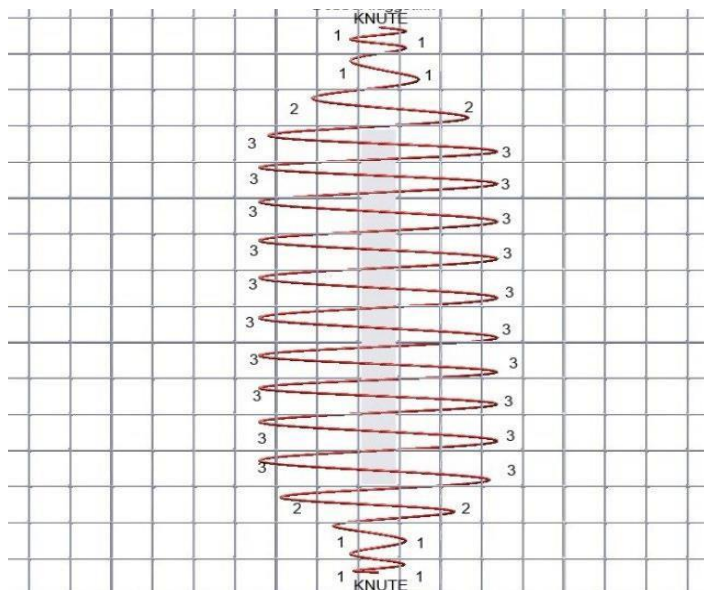
The two following methods are used when repair of the net at sea is necessary.:

- Stitching/lacing of small tears + patch
- Sewing a patch on the netting covering the damaged area

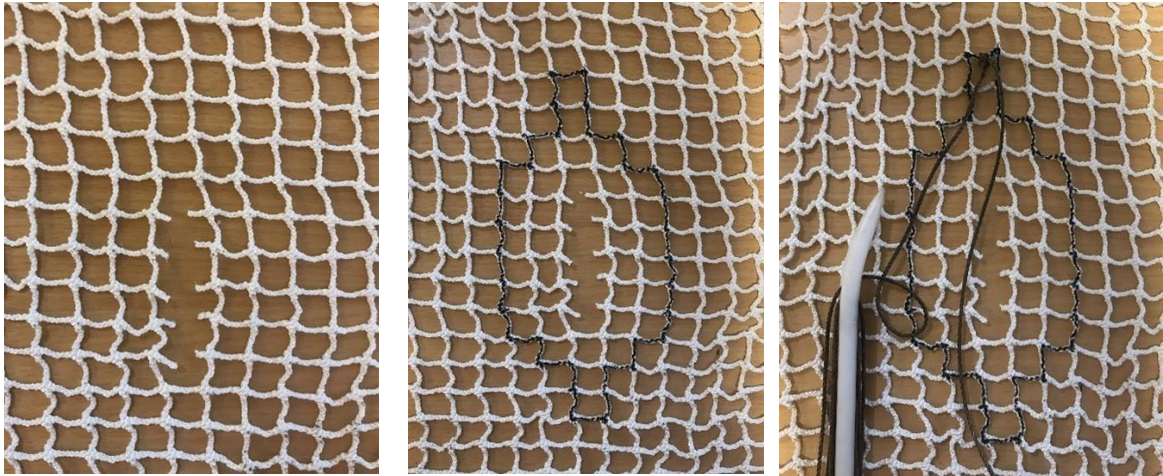
3.1 Stitching/lacing

Stitching/lacing + patching is a method used for **small** netting repairs where the tear has a maximum width of 2 meshes. After lacing the netting together, a patch made of HDPE netting must always be applied over the stitched area.

The stitching procedure is shown in the following three steps, and the image below illustrates which meshes should be sewn.



1. Start 3 meshes above the tear and tie a double half hitch/starting knot.



2. Make a double half hitch in each mesh. It is important to sew through at least two meshes on each side of the tear to prevent unraveling. For half-meshes smaller than 25 mm, the thread should go through each mesh once. For half-meshes of 25 mm or larger, the thread should go through each mesh twice.



3. Finish stitching the tear with a double half hitch 3 meshed below the tear, then go back 2 meshes and tie a double half hitch to secure the knot.



4. Attach a patch in HDPE netting to cover the laced area. Sewing procedure is described in Chapter 3.2.



3.2 Patch attachment

Attaching a patch to the netting involves sewing netting over netting. This method is used for both small repairs where the patch covers the stitched are and larger repairs where a damage wider than 2 meshes or an area with several larger tears needs to be covered. A patch made of HDPE netting must always be used, and the patch should be sewn on the outside of the net to make sure that the knots are on the outside of the net. The procedure is described in the following four steps below.

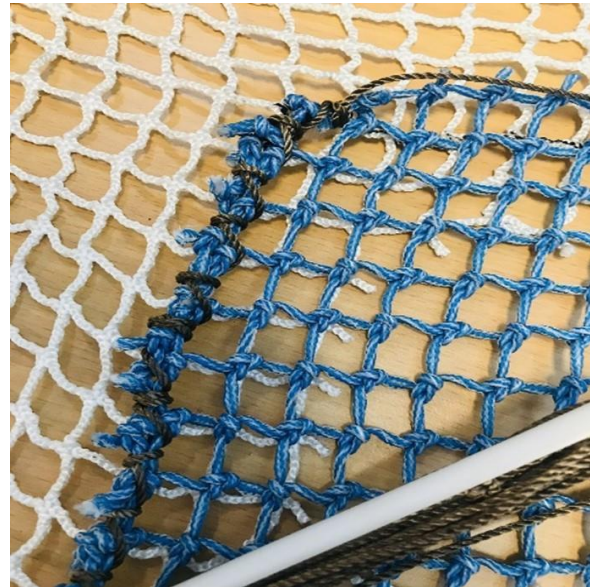
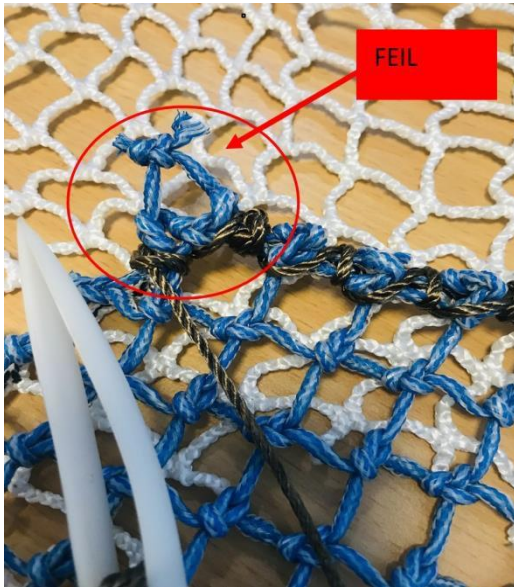
1. The patch is laid with a 2-mesh overlap.



2. Start in one corner with a double half hitch. Take 2 strands from the patch and 1 strand from the netting.



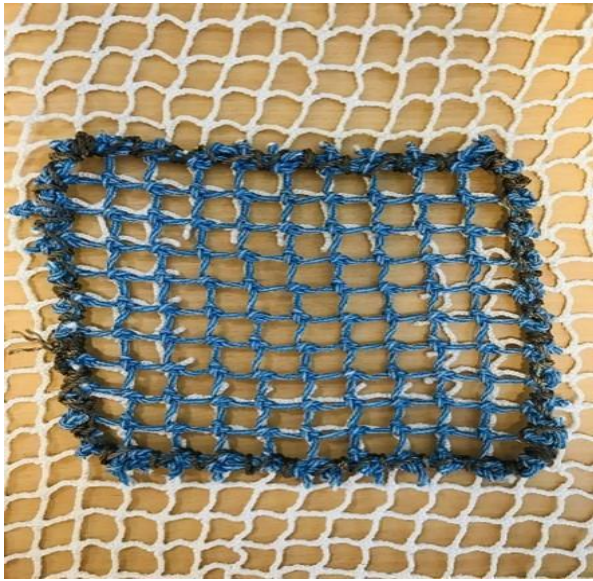
3. Sew the corner mesh of the patch and secure the patch with half hitches in each mesh, where the thread should go through each mesh twice. For every third mesh, use a double half hitch (triple knot).



4. Upon finishing, tie the threads together. Sew two meshes and tie a double half hitch to secure the knot.



Completed attachment of patch to netting covering a larger hole is shown in the photo below.



In case of several holes close to each other, a large patch in HDPE netting must cover all holes as shown in the photos below.

