

Shrouds, dead-eyes and ratlines

On a real vessel the shrouds would be put up before the running rigging and many modellers follow this sequence. On Sherbourne I attached the stays and the running rigging first because real fingers and even tweezers have difficulty reaching the belaying pins. Tying some of the ratlines was difficult but even in retrospect I think it was better to do it this way.

The shrouds have a deadeye seized to the lower end and then a lanyard from this deadeye to the one on the chainwale on the hull tensions the shroud. The descriptions in the reference books of how the lanyard is tied are quite precise and largely consistent with each other, only Petersson shows them handed the other way. If you have ordinary right hand twist thread for the shrouds then the description below is correct; it should be reversed if you have found or made left hand twist thread.

The first step in fixing the shrouds is to route them between the various ropes of the running rigging. The ropes which lead to the forward belaying pins are ahead of the shrouds and the ones which go to the aft pins go to the other side of the shrouds. The shrouds themselves should be identified carefully so that they do not cross over each other at the mast head.

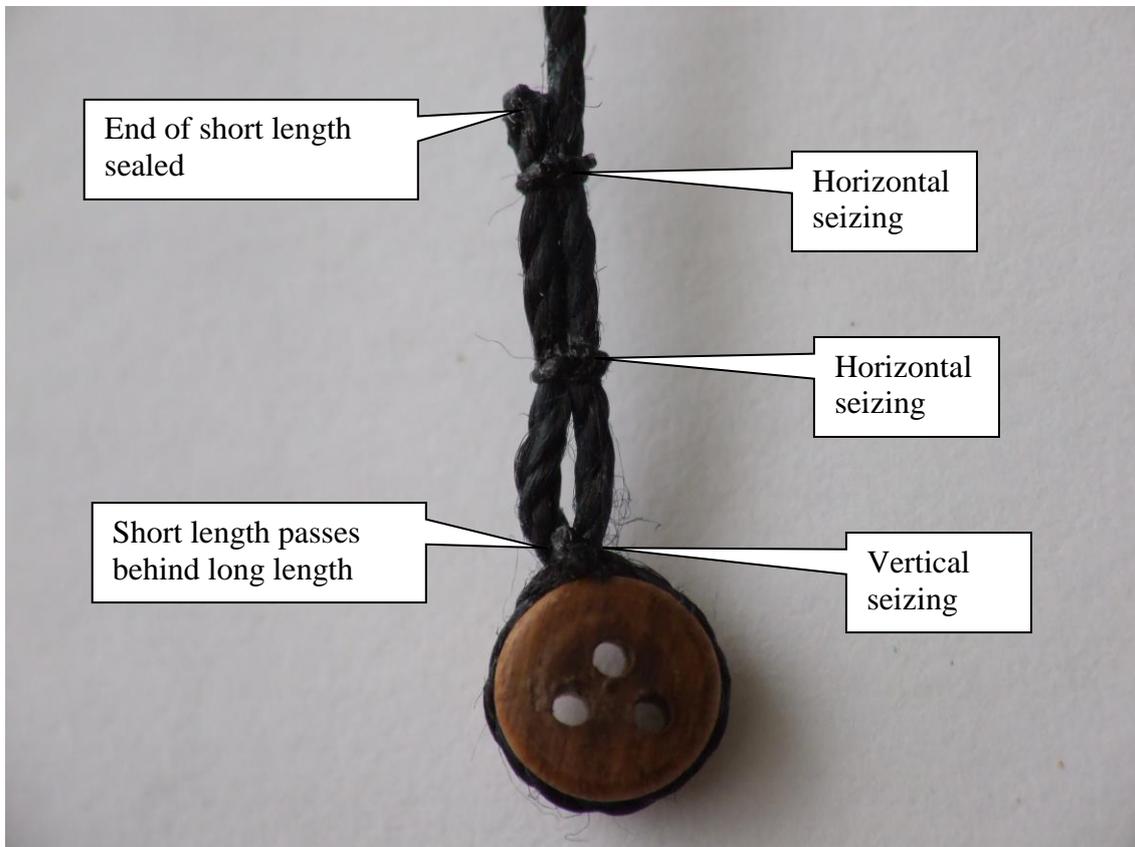
The deadeyes should all be at the same height and I used ordinary staples (12.5mm or half inch) to achieve this. A pair of staples is put through the upper pair of holes in the lower deadeye and held in place with blutack. A loose deadeye is then put over the other end of the staples and again held with blutack. The shroud is now brought down on the left hand side of the deadeye (looking from outboard) taken round the deadeye and up behind itself. Hold the ends with a clip and put a simple overhand knot of black sewing thread around the shroud where it crosses. The loop of the knot should be vertical. The shroud is now adjusted so that it has a little tension, it does not need much since it will be tightened later. The knot is tightened and supplemented by a couple of extra turns and another knot and a drop of cyano acrylate.

The first tricky part was to get even tension in the shrouds This can be tested by giving them a little twang and seeing how they vibrate. The second tricky part was to bring the knot close to the deadeye so that there is only a small triangular space between them. With hind sight this could be done by using slightly longer staples and initially making the knot at the side of the deadeye. When it is secure and the staples are removed the deadeye drops a bit further and the knot travels to the top. Next time.



Deadeye blutack. The staples set the height of the upper deadeyes

The short end of the shroud is now brought up parallel to the fixed, long length and seized to it in two places about 5mm and 10mm from the deadeye. I used black sewing thread for this with a couple of turns, a reef knot and a drop of cyano acrylate. The two parts are tight to each other at the top but there is a small gap between them from the deadeye to the first horizontal seizing. The short end extends about 1mm to 2mm above the top seizing and I hardened it with cyano acrylate before trimming to length. The end of a real shroud would have had a tarred canvas cap over it and the cyano acrylate gives a smooth finish.

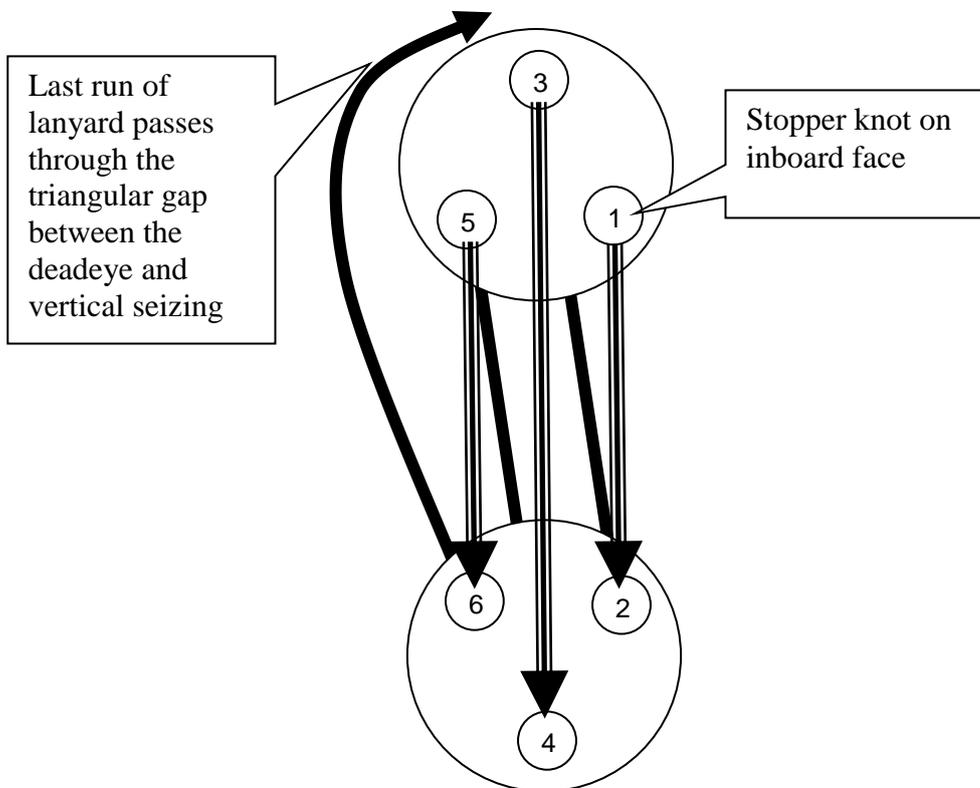


Deadeye seized. View from outboard, it is the same on port and starboard

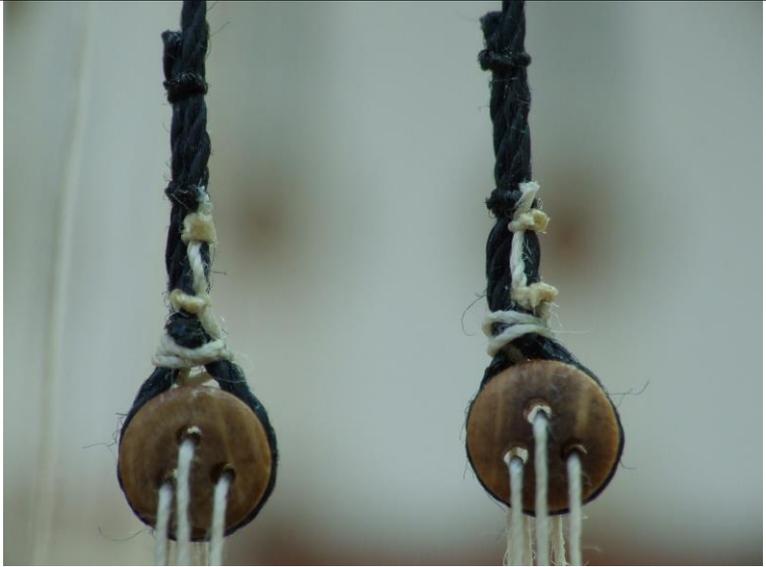
I tied (I think the technical term is rove) the lanyards in pairs, port and starboard, and began from the front and worked aft. The first two deadeyes have the staples taken out and the blutack is cleaned off. The others are left in place for now so that you do not have find which is which again.

I started with about 30cm of 0.25mm natural thread and tied a stopper knot at one end. I found that a simple figure-of-eight knot is not big enough and slips through the hole in a deadeye and instead I used an Ashley stopper knot. This is a modern invention but is much easier to tie than authentic double wall knots and looks symmetrical. The other end of the thread is then passed through the right hand hole of the upper deadeye from the inboard side. It is pulled through and then taken through the other holes in the right sequence and finally passed through the triangular hole between the top of the upper deadeye and the shroud. The lanyard is now worked through the holes to tighten it until the shroud is reasonably taut. I found that the deadeye is about 3mm lower than it was with the staples but it depends on the relative tautness of the two stages.

The end of the lanyard now needs to be secured. The loose end is taken to the left and back and under itself where it comes over the deadeye and under the shroud. Bring it round the right to the front and fix with a drop of cyano acrylate. It is then taken around both the shrouds for several turns; I found that two full turns was enough but you may prefer to see more. Fix with a drop of cyano acrylate. The loose end is now led upwards and is seized to the right hand branch of the shroud on the outboard side. I used 0.1mm natural thread for the seizings but white or cream sewing thread would do. The lower seizing is just above the turns of the lanyard and the upper seizing is just below the middle seizing on the shroud.



Lanyard for deadeye, view from outboard

	<p>Deadeye outboard. The final seizing of the lanyard can be seen</p>
	<p>Deadeye inboard. The stopper knot is on the left of the upper deadeye</p>
	<p>Deadeyes port. They are at the same heights and the seizings all face the same way</p>

Ratlines

At this point in my model making a friend asked how much I had left to do. I was able to say that I had finished seizing the deadeyes and was about to rattle down the shrouds. He is a keen sailor but had no idea what I meant.

The ratlines are tarred, thin rope which is an aid to climbing the shrouds. I used black sewing thread though the kit recommends 0.1mm natural thread which is blackened afterwards. The real ratlines, according to Lever, have an eye spliced at each end which is seized to the end shrouds while the join to the intermediate shrouds is with clove hitches. This is far too complicated for a model at this scale and I used a reef knot at one end then clove hitches for all the other knots.

The spacing between the ratlines is between 12 and 18 inches. On the model this translates to about 6mm and it is useful to make a template to show the spacing. I prepared a page on the computer which used 15 point Times New Roman font to draw parallel lines. The printed page was cut in half vertically then folded in half vertically and glued to stiffen it. The shape was now trimmed so that it would sit behind the shrouds with its bottom edge touching the chain wale. The edge of the sheet is parallel to the aft-most shroud which makes the lines parallel to the water line. The sheet is clipped to the shrouds so that it will not slip and the knotting can begin.



Ratlines close. The amount by which they sag is not quite constant but it is less obvious when the ruled template is removed

I started with the lowest row of the ratlines which is just above the seizings around the deadeyes. I tied black sewing thread with a reef knot around the left shroud leaving the short end to the left and the long length to the right over the other shrouds. This was

then tied to the next shroud with a clove hitch ensuring that the ratline is not so taut that it pulls the shrouds together. The ratline was tied to the next two shrouds in the same way with clove hitches and the knots closed up with tweezers where necessary. I then put a drop of cyano acrylate onto each knot and held the ratlines down before it set to ensure that they would have a slight sag. The ends were then trimmed off with side cutters.

The other ratlines are tied in the same way. At the top of the shrouds I simplified the clove hitches on the intermediate shrouds firstly to overhand knots and then to simple loops since there was no room to manoeuvre the tweezers. I tied the ratlines on one side in two long sessions and needed the break in between to maintain concentration so that I would not knock any other part of the ship.

Below the bottom ratline there is a wooden stretcher running across the shrouds. Its function is to stop the deadeyes from twisting and to provide some extra rigidity. I made the stretchers from walnut, splitting some 5 x 1 strip down to a 1 x 1mm section which was then rounded with sand paper and cut to a length of 35mm. I tacked the stretchers to the shrouds with cyano acrylate and then tied them on with black sewing thread. The layout of the thread is not stated in my references so I gave it a cross over the visible side of the stretcher since this looks more interesting than up-down threads.



Stretcher on shrouds