

Spiling Update

A detailed description of the spiling process can be found in my article “Planking a Carvel-planked Boat.” This update describes some improvements to this process.

I now use $\frac{1}{4}$ ” plywood for spiling stock because it is thick enough to discourage edge set and flexible enough to easily conform to the curvature of the hull. I now believe that the spiling batten should be full length; i.e., equal to the length of the plank. Although long battens are difficult to handle, they make it easier to select appropriate planking stock.

I make the batten in sections of 8’ or less and splice them together on the boat. This is important. The longer the spiling batten, the easier it is for edge set to creep into your setup. So I limit the length of each piece of batten to 8’, clamp the pieces on the boat, and then splice them together with a plywood butt block (fastened with yellow glue). It’s helpful to paint the batten white so that it’s easier to see your spiling marks.



I design the butts so that the butt blocks lie in the middle of a frame bay (on the front side of the batten) and thus don’t interfere with the spiling process. I then record the location of the batten on the boat so if I have to return it to the boat for some reason, I can reproduce its exact position. Note that edge set in a long batten is not much of a problem when lying flat during reverse spiling, only when you’re positioning it on the boat.

The basic shape of the battens (except at the extreme hood ends) is determined by tracing the outline of the old plank onto a sheet of $\frac{1}{4}$ ” plywood. I then cut about $\frac{1}{2}$ ”- $\frac{3}{4}$ ” inside the lines. This produces a batten that fits in the area vacated by the old plank while providing sufficient clearance to do the spiling.

Because the hood ends have substantial detail, I make a plywood template to fit.



An approximate fit is all that is required. I just measure any gaps with feeler gages and write the errors on the template. I can then make the required adjustments when I trace the pattern onto the planking stock. Once I have all the pieces of the batten clamped (or nailed) in place on the boat, I glue the butt blocks and do the spiling. Here we see the template on the boat with the butt block being glued in place.



I then remove the batten and tack it to the planking stock and reverse spile to transfer the shape of the plank onto the stock. The reverse spiling produces a set of points that are then connected with a fairing batten.

The actual spiling is quit simple. Start by recording the frame locations on the batten and include the frame number.



Then at each frame location, record the distance from a point on the batten to the plank edge below. This is done using a pair of dividers set to a convenient opening. Place one point at the intersection of the plank below and the frame. With the other point make a hole in the batten (directly above). Now with the divider point still stuck in the batten, swing the lower end of the dividers up to the batten and make a second hole. The distance between these two holes records the divider opening. Circle the holes with a marker and connect the circles with a line. Finally, draw an arrow downward indicating that this point references the plank below.

When reverse spiling, adjust the dividers so that the points fall into the two holes. Then keeping one point in the hole with the arrow, swing the other point down making a hole in the planking stock. Try to make your measurements approximately at the midpoint of the frame (fore/aft), and any errors will be minor.