

# TRICKS OF THE TRADE: HOT TIPS FOR VERTICAL SOLDERING

by Barry Smith

Anyone who has soldered vertical or steep pitch seams knows how much harder it is than horizontal seams. You need the solder to melt so that it can get drawn into the seam, but the moment it melts, gravity wants it to run down away from your iron. Here is a method that works well on riveted lap joints.

1. Start with an iron with a 3-sided, pointed "knife" shape (as opposed to the classic pointed, 4-sided shape) slightly cooler than you would use on a horizontal joint.

2. Starting at the bottom of the joint, with the tip of the iron pointed down, apply a trail of solder at the edge of the over-lapping metal. Move the iron up the length of the joint fairly quickly and don't try to heat the metal, just leave a narrow, vertical trail of solder. If it doesn't stick to the metal, use more flux until it does.

3. Go back to the bottom, only this time place the sharp edge of the blade across the surface of the joint and again leave a trail of solder. It should be about 1-1 1/2 inches wide, which is determined by the length of the blade of the iron. This should also go fairly quickly and not heat the metal much. Again, use flux if needed. The entire joint should now be covered with a gloppy layer of solder.

4. Repeat the first step of #3, except don't add any more solder, and this time, move up the joint slowly so that the metal heats enough to draw the solder in between the layers, and to seal around the rivets. Only the sharp edge of

the blade should be touching the metal. If done properly, the solder will pool on top of the blade of the iron long enough to be drawn into the joint. Some of the solder will run down the face of the joint, but it should quickly harden again before reaching the bottom. If it all runs straight to the bottom, then the metal is too hot. Repeat this step 3 or 4 times.

5. Once you are confident that the solder has sealed the joint, start at the top and clean off the excess solder with the sharp edge of the blade. Just smooth it off with one quick swipe, leaving a layer of solder behind. There will be a pile of solder below that will have to be cleaned up. If the vertical joint is part of a gutter, then you can use this excess to solder the bottom joint. ☐

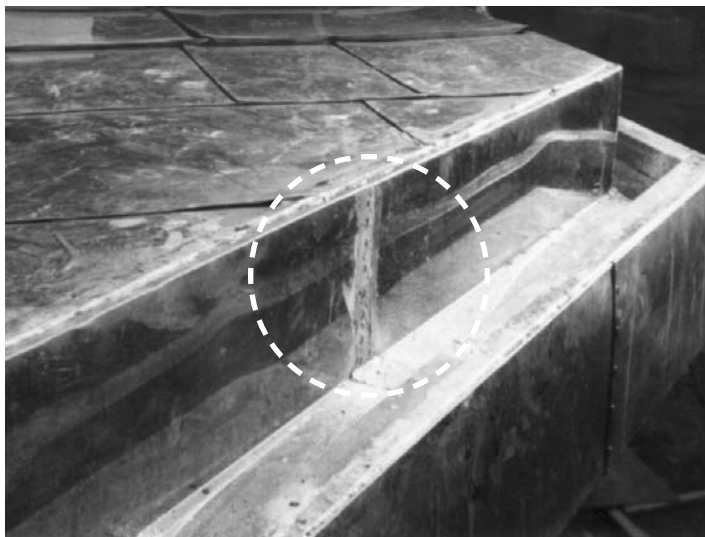


Photo by Barry Smith

A finished vertical seam on a flat-lock copper roof with built-in gutters.

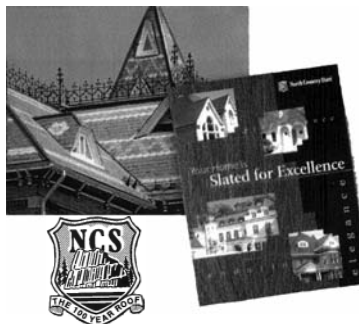
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