

Cutting Kiln Samples from Piled Lumber

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At the Hazel Valley Lumber Company in Placerville, Calif. we had a problem in cutting samples for our kiln charges. We have a single compartment kiln with a capacity of 100 M bd. ft. in which we dry only one species and thickness at a time. Our mill cuts several species and thicknesses, and it takes some time to accumulate a full charge of one item. The stock is built into unit packages at the mill and held on the yard until it can go into the kiln. Thus, partially air dried lumber sometimes goes into the kiln with lumber direct from the mill.

Samples are necessary to control the drying of this stock having wide variation in moisture content. Preparing samples for the unit packages as they were built was unsatisfactory. Various methods of prying out sample boards were tried with limited success.

We then developed a technique of boring through the boards from side to side with a bit of sufficient size to completely sever the piece. This method proved very satisfactory, and I now use it on everything we dry in the kiln.

Here is a picture of the bit we use. It is a Greenlee No. 149 P 2" size. This 2" size is satisfactory for lumber from 5/4 to 7/4, inclusive. One-inch lumber can be drilled with it, although a smaller bit would work much better. The bit has no lead-in screw but instead has a short pyramidal point to help guide it. We use a 5/8" size electric drill because that is what we had; however, I believe a 1/2" size would do as well. After a few attempts, it is easy to guide the drill straight through the piece without running out either side.

Suitable bits are available in several sizes, including some large enough to use on thick pattern stock. Several manufacturers make drills of this general type; there is a large selection of drills to choose from. The length of shank will naturally dictate the width of sample you can cut. Extensions may be purchased or made if the original shank is too short.

When cutting a sample, we make the first hole a foot or more back from the end to eliminate the effect of end drying. Samples can just as easily be cut from the middle section providing the stickers aren't in the way. This leaves two pieces of saleable length. Notice that the short end left in place supports the stickers and boards above the sample.

These drills do not have a spiral behind the cutting head to eject the cuttings. It is necessary to pull the drill out occasionally to clean the bore. This prevents difficulty in removing the bit when the cut is completed.

If the bit does drift out of the center line and fail to cut the board in two, the cut may be completed with a long chisel and hammer.

By making the first cut near the end and the last one toward the main part of the board, the piece being drilled is always held securely by the weight of the courses of lumber above it.

One advantage of this method is that the samples can be cut at any time; when the unit is first built, just before putting it into the kiln, or even while in the kiln before pulling the charge.

Here is a sample cut by this method. Oven samples can be sawn and the calculated O.D. weight determined. We then seal the ends with asphalt mastic and replace the sample in the load. Two short pieces of sticker are placed under it so it will receive the same drying conditions as the remainder of the kiln charge. It can be removed for weighing or checking with a moisture meter and replaced without difficulty.

I have here the bit we use and some samples for you to examine after the meeting.