

Slicing Thick Cherry Veneer for Bending

Slicing is undertaken twice a year to produce the wood required for oval boxes for the Home Shop customers. The first step is a buying trip to a log dealer who has produced logs from standing timber. The region around southern Michigan is one of the best hardwood growing areas in the world, stretching from Illinois to New England, and from the Great Lakes region of Canada to the Southern Appalachians. To go on a log buying trip is like fishing – always optimistic, but never guaranteed of success.

The logs are delivered to the veneer mill for processing. The return load on delivery day is normally made up of cherry backer boards, the remainder from other slicing at the mill. These perfectly quarter sawn sections are cut and dried at the Home Shop for top and bottom boards.

It will be a week or more before the logs can be prepared for the two day soaking and day of slicing, drying, and crating. With a five-hour drive from the shop to the mill, this makes a long day both on delivery and when slicing. Indiana has historically been the center of the hardwood veneer industry. Over the past thirty years, the Home Shop has dealt with ten different mills, but Amos Hill is one of the best at producing high grade thick cherry veneer.

The photo essay tells the story of what becomes of these cherry logs at a hardwood flitch slicing veneer mill. My thanks to Amos Hill Veneer, Inc., in Edinburgh, Indiana, and to Bill Costoplos, their production manager, for slicing for us, and welcoming Eric and me into the plant to give input concerning our special veneer needs, and for allowing me to record this story.

— by John Wilson



1 Logs for box bands. Not many trees grow straight and knot free like these. Butt logs from such trees command top prices and few uses return a profit as slicing for hardwood face veneers. Hence the label “veneer grade” for such logs.

2 (*inset*) Spread out at the veneer mill, these logs await slicing at Amos Hill Veneer Company in Edinburgh, Indiana. In the far right background is the Home Shop van and trailer.



3 Debarking is the first step on the journey through the mill. This will not only remove unwanted bark, but dirt and grit that dulls saw and knife.



4 Cutting down the center creates two halves called flitches. The alternative method of veneering is to rotary cut in the round. Only by flitch cutting will the grain pattern of sawn lumber be preserved. It also results in the best bending stock.



5 A two-day soaking in hot water will soften wood fiber to produce tight smooth veneer. Each species has its own schedule for optimum results and this cherry will be slowly raised to 175° F and held there 12 hours.



6 The mystery of the slicing floor is captured in this photo of first impressions. The apparent wall in the background is actually the vacuum holding face of the slicer with the 12' flitch just apparent above the triangular knife holding frame.



7 Viewed from the side are parts of the Capital slicing machine, patented in 1905. From right to left: the vacuum and dogging flitch holder which travels up and down; the flitch; the knife and nose bar; the carriage which advances with each slice; the conveyor with veneer slices; and catchers stacking veneer.



8 A new knife is ready for changeover.



9 The knife is being installed. It will take about two hours from this point until all six logs, twelve flitch, are sliced.



10 Correct adjustment is critical for producing quality slicing. At left you see the mill operator wrenching the bolts to adjust the lead and gap that exert the necessary pressure for a smooth, tight veneer. The man in the center holds a gauge while the plant manager looks on.



11 Here come the flitch. Having been fished out of the hot water vat, they are cleaned all over to remove the resulting black layer: sides milled, ends trimmed, and back planed flat which is happening here.



12 Clean as plucked chicken, the flitch await mounting on the mill. The one on the left is being hoisted with chain and hooks.



13 (*right*) The flitch moves onto the mill where it is mounted with a combination of holding dogs and suction. The dogs will retract after the bulk of the flitch is sliced, leaving the remainder held by vacuum alone. The mill can leave as little as $\frac{1}{4}$ " of wood unsliced.



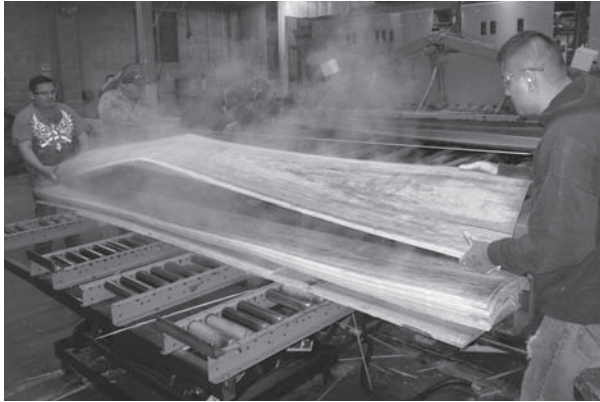
14 Where the knife meets the wood.



15 Everyone is anxious to see the outcome of our slicing as thick bending stock is an unusual order. Most logs are sliced at $\frac{1}{42}$ " for fancy hardwood face veneers. Our requirements are for veneer 4 to 5 times this thick, and both smooth and tight. From left you see the production manager, a catcher, the mill operator, the foreman, and the second catcher all watching the outcome.

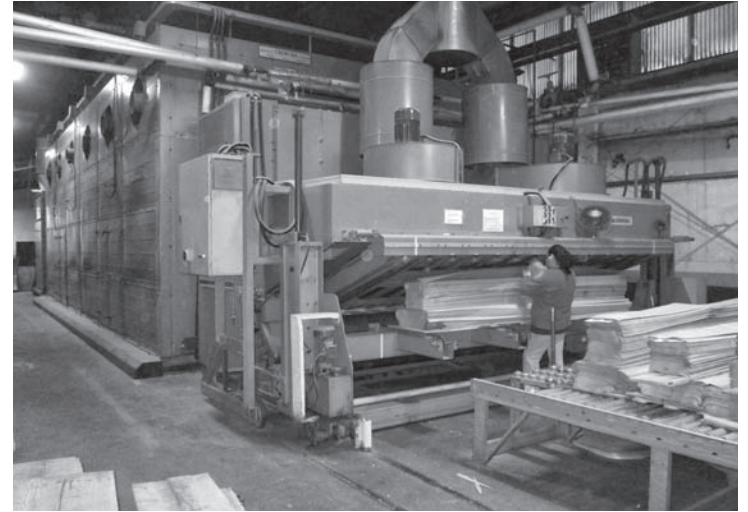
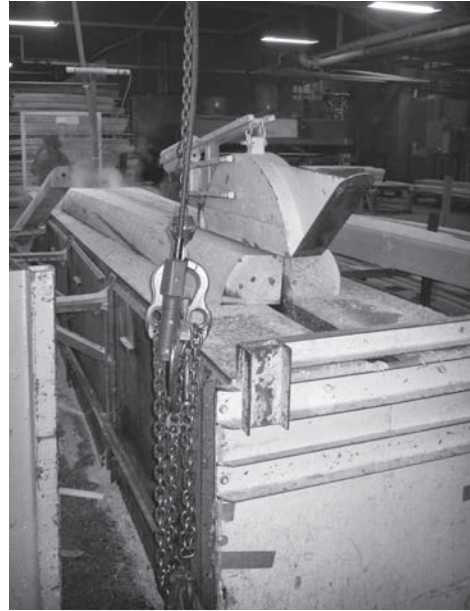


16 "Stop the mill." The final adjustments will happen as thickness and surface are checked.



17 Veneer apparently in flight, the catchers deserve their name. At every step the sequence of the log will be preserved.

18 (*center*) Here we see a half sliced flitch being cut in two. The operation called “busting the heart” is done in some instances to improve the quality of the slicing. Imagine the face of the flitch like a board being hand planed with grain direction affecting the smooth outcome. The rough half will be reversed when remounted.



19 The wet veneer requires drying before it can be crated or mold will result. Like every step of the way, the temperature and the final moisture content affect the outcome.



20 The speed of the conveyor and the temperature of the blown air result in the final moisture in the wood. Bending stock wants to be dry enough not to mold (under 20° MC) and not as dry as standard veneer destined for panel facing (6° MC).



21 Home again and parked in the drive outside the shop. All six cherry logs are now twelve crates of thick bending stock veneer. The two thicknesses of $\frac{1}{10}$ " and $\frac{1}{12}$ " will be graded, cut in stacks of 10 into dimension, and drum sanded where necessary for final band stock.