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ABSTRACT:

Quarter Cut and Rift Cut wood produces similar results. However, there are differences and limitations. This article provides information to help distinguish between the 2 and to help select the appropriate cut desired.

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KEYWORDS:

Quarter cut, rift cut, wood veneer, wood paneling, wood doors, woodwork

REFERENCES:

Architectural Woodwork Institute (AWI).
Architectural Woodwork Manufacturers Association of Canada (AWMAC)
Woodwork Institute (formerly Woodwork Institute of California)(WI).

No Matter How You Slice It?

By Randal J. Reifsnider, AIA, CSI, CCS, LEED AP, SCIP

Of Course It Matters!

We were recently asked to specify "straight grained" wood for architectural woodwork surfaces to receive a transparent finish. By "straight grained" we assumed the architect meant they wanted wood with grain lines that were all parallel and tightly spaced rather than the flowing and amorphic grain that is typically seen as the result of specifying Plain Sliced (or Flat Cut) or Rotary Sliced.

So, how do you specify the way the wood should be cut in order to achieve this "straight grained" appearance? There are actually 2 possible cuts, each with 1 possible option. Which you specify depends on the results desired.

The 2 possible cuts are: **Quarter Cut** and **Rift Cut**.

Quarter Cut

This cut commonly produces a "straight grained" look, but not always depending on the wood species. Because of the varying densities of grain from one slice to the next, Quarter Cut can also produce a striping effect. Quarter cut oak includes a random pattern of "flakes*" or "flecks*" in the finish. Neither the striping nor the "flakes" are necessarily aesthetically objectionable. However, they give Quarter Cut wood surfaces a more "natural" look than the Rift Cut. Quarter Cut Option: **Vertical Grain Sliced** is a unique appearance produced by some quarter cut softwoods and has no less than 5 growth rings per inch on average.

Rift Cut

This cut produces a grain pattern that is more uniform and pristine than quarter cut woods. It is made by cutting the wood at about a 15 degree angle off the quartered position. Note that Rift Cut is **ONLY** available for Red Oak and White Oak.

Rift Cut Option: **Comb Grain** produces extremely tight, straight grain lines. This is achieved by using Rift Cut, but then selecting the best cuts of the lot. There is a premium to be paid for this selection process.

The fact that Rift Cut is **ONLY** available for Red Oak and White Oak raises another issue: **NOT ALL SPECIES OF WOOD ARE AVAILABLE IN ALL CUTS**. Be sure to verify that the species of wood desired is available in the cut desired. Refer to AWS for recommendations of commonly available slices by species.

Also when considering type of cut to use, understand that quarter and rift are not conducive to small tree species; and they are the most wasteful cuts - especially for lumber.

Conclusion

On the project where we were asked to specify "straight grained" wood: the species selected was Western Red Cedar. Thus the possible cuts available to produce the desired affect were limited to a Quarter Cut. Western Red Cedar is one of the softwoods which produce a Vertical Grain appearance when Quarter Cut.

Therefore we specified Vertical Grain Western Red Cedar.

Definitions

Note that the terms "cut" and "slice" when used with Quarter, Plain, and Rift refer to wood veneers. The term "sawn" when used with the terms Quarter, Plain, and Rift refer to solid wood lumber products.

*According to the Glossary in the AWI, AWMAC, WI - Architectural Woodwork Standards - 1st Edition, October 1, 2009:

"FLAKE: More properly called "fleck," and sometimes referred to as "silver

grain." Created when the veneer knife of saw passes through the medullary rays, wood rays, or pith rays in such a manner as to reveal the natural wavy, pencil-like stripes in the wood."

"FLECK, RAY: Portion of a ray as it appears on the quartered or rift-cut surface. Fleck is often a dominant appearance feature in oak."

Section 4, Sheet Products, 1.2 BASIC CONSIDERATIONS, 1.2.18 WOOD-VENEER SLICING; © 2009, AWI, AWMAC, WI - Architectural Woodwork Standards - 1st Edition, October 1, 2009, pg 72.

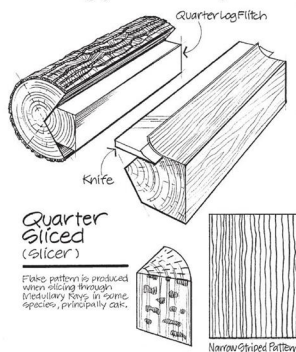
Perk

Note that AWI membership for architects is relatively inexpensive. \$75.00 for the first year (12 months) and only \$25.00 to renew each year after and includes the following valuable resources:

- Architectural Woodwork Standards (AWS)
- Design Solutions
- Quality Certification Program
- Technical Assistance for Architectural Woodwork Questions
- AIA CES Credit
- Discount Pricing on Publications

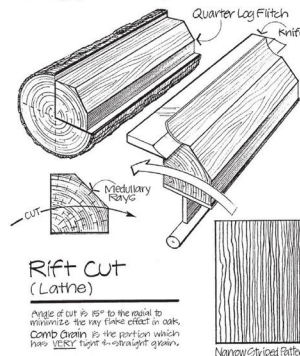
The illustrations are from AWI, AWMAC, WI - Architectural Woodwork Standards - 1st Edition, October 1, 2009 and are used with permission from the Joint Standards Committee. They show the appearance of veneer cut wood. Cut boards will appear slightly different. Consult a local AWI, AWMAC, or WI millwork or lumber company for samples and availability.

Quarter Slicing (or Quarter Cut)

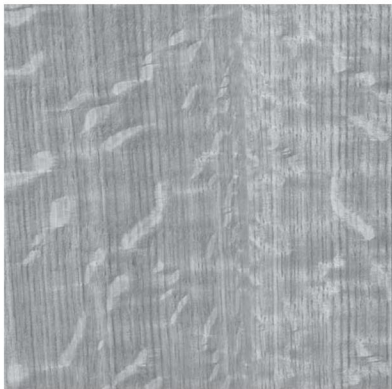


Quarter slicing simulates the quarter sawing process of solid lumber, roughly parallel to a radius line through the log segment. In many species the individual leaves are narrow as a result. A series of stripes is produced, varying in density and thickness from species to species. Flake is a characteristic of this slicing method in Red and White Oak.

Rift Slicing (or Rift Cut)



Rift veneers are produced most often in Red and White Oak, rarely in other species. Note that rift veneers and rift sawn solid lumber are produced so differently that a match between rift veneers and rift sawn solid lumber is highly unlikely. In both cases the cutting is done slightly off the radius lines minimizing the fleck or flake associated with quarter slicing.



QUARTER SLICING (Oak)



RIFT SLICING

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