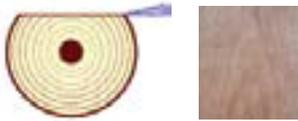


Grain Patterns

The grain structures of different species of wood vary tremendously and as a naturally grown product they vary within their own species from tree to tree. By applying different techniques to the process of slicing the logs into veneers the grain characteristics of the wood can be changed significantly to create differing aesthetic effects.

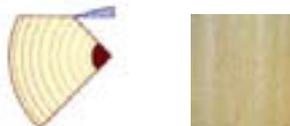
Flat-Cut, Flat-Sliced, Plain-Sliced



This is probably the most common form of veneer slicing performed on decorative hardwoods. As shown in the animation, the slicer passes through the log on a plane tangential to these growth rings. The result is a roughly symmetrical, central grain pattern that is characterised by a 'cathedraling' of the grain and also ellipses and ovals. This form of slicing produces an attractive and regular form termed 'crown' veneer.

As the slicer approaches the centre of the log i.e. its core (shown dark in the illustration), it will start to become defective. At this stage it is usually necessary to trim out this defective centre, leaving straight grain or half-crown veneer, largely free from the cathedrals, ellipses and ovals mentioned earlier. Once through the core normal slicing can resume. It is for this reason that flat-cut logs are often described as having two sides.

Quarter-Cut



Often it is desirable to maximise the yield of straight grained material from a log i.e. that free of cathedrals, ellipses and ovals. This is especially the case when people are trying to achieve continuity throughout a range of veneer products. Some species also do not lend themselves to being flat-cut, either due to their crown wood being unattractive or the texture of the wood making it difficult to produce.

The logs are firstly cut into quarters. The log is then sliced on a plane that is tangential to the growth rings and on the 45% line from the centre of the log. The result is highly regular quarter-cut or straight grained veneer.

Half-Round



This is a variation on the flat-cut method of slicing veneer. It is produced on a face lathe by rotating the log around an off-centre axis in an arc. This method results in almost the whole of the log yielding a crown feature. It also, by increasing the plane of the cut, increases the width of veneer produced, hence making it a useful technique when processing narrow logs. Because of the off-set axis of the log the crown is often not as central as that produced from flat-cut logs. Also the crown effect is much 'wilder' (i.e. cathedraling etc. is not as pronounced) than that produced under the flat-cut method. The greater the circumference of the log then generally the more wilder the grain becomes.

Rotary-Cut

This is when a log is rotated about its central axis and peeled from the outside. The grain pattern that is produced is a large swirly pattern of irregular shapes. This method is rarely used on decorative hardwoods, it is usually employed to maximise yields from cheap woods used to produce veneer for plywood.