

COLOUR and GRAIN consistency in veneers

In this fourth of a series of workshops relating to the modern use of wood veneer, wood industry consultant Michael Buckley explores some of the design and aesthetic issues and application techniques that are often determined by design requirements.

Whichever way you look at the use of veneer, there are often technical (stability), economic (extended use of the raw material) and environmental (efficient conversion) benefits to consider, especially in higher cost or rarer species. But design requirements are a commanding force in the selection of veneer and that usually comes down to species.

At one end of the spectrum is the custom designer who may select a flitch of veneers with which to produce a work of art to satisfy the design brief of a particular client. At the other end may be a mass producer who needs to combine a low cost material with consistency of product for a long term production programme. And then there is every other type of design requirement in between.

German furniture retailers are renowned for demanding defect-free, colour-consistent veneer for furniture catalogues that allow customers to return after long periods to add to their furniture collection. German panel producers often require the same. Architects may want a short but substantial run of consistent colour and grain pattern for an internal joinery project such as banking offices (perhaps not at the moment!) or hotels.

Consistency in veneers

For designers determined to have absolute consistency in colour and grain, the choice is more limited than for those who design in wood accepting its nature variety and characteristics.

There is a whole range of grain-less white tropical species

such as African samba (obeche), idigbo, agba, Asian ramin, jelutong, and many of the white meranti family. Among the temperate white woods there is European sycamore, American aspen and basswood as well some grades of beech and birch from all over the northern hemisphere, and Tasmanian oak – the leading eucalypt from Australia. South American virola species offer mid colour opportunities, which are also offered by American cherry and Western red alder.

But these mainly are bland species and, while consistent in colour, they mainly lack grain character. There are fewer dark woods that are consistent in colour without strong grain and they include nyatoh, dark red meranti from Southeast Asia, as well as some mahogany species.

All such species offer simplicity of layons when it comes



American cherry veneer used effectively in Singapore's Tanglin Club

Photo: Hardwood Plywood and Veneer Association



Book Match – The most common matching type. Alternating leaves of veneer are turned over, so that adjacent leaves are opened like the pages of a book.

- Visual effect: Veneer joints match, creating a symmetrical pattern. Yields maximum continuity of grain. Prominent characteristics will ascend or descend across the face.



Random Match (Mismatch) – Veneer leaves of the same species are selected and assembled without regard to colour or grain, resulting in variations, contrasts, and patterns of color and grain. Pleasing appearance is not required.

- Visual effect: No visual continuity across the face should be expected.



Slip Match – Adjoining veneer leaves are fed out in sequence (without being turned) so that the same side of the veneer leaves is exposed.

- Visual effect: Figure repeats but grain does not match at joints. Enhances colour uniformity because all faces have a similar light reflection. Joints may not be noticeable if grain is straight; vertical slant may occur if grain is not exactly vertical.

to panel production. Finished panels are also easy to match to moulding and edge-trimming where required to match. In these selections, such white grain-less species as European poplar which is too soft for anything other than food boxes, and grain-less dark species such as Asian keruing, merbau and selangan batu or Australian karri which are all too hard for veneer, are ignored.

Variety in veneers

In species with pronounced grain, the design fun begins. The veneer selection is an art, and their lay-up is a production skill that requires dexterity and training of labour and close coordination with production engineers if customers are to be satisfied. But the advantage is that the design possibilities are endless and every hardwood resource in the world represents a palette of colours and grain patterns of which designers never become tired.

It may also be a truth that this is what holds the interest of customers and it is a well known fact that species tastes go in fashion cycles rather like clothes. When modern stain and finish techniques are added as another dimension for the designer, one can have faith that the panel and furniture industry is able to offer change without end.

The two greatest species on earth for furniture, as far as consumption is concerned are both available as sliced veneer and offer significant grain and colour variations.

Oak is number one, coming mainly from the USA in red and

white, whereas European oak is more mid brown. Both depend on the method of slicing to produce different patterns and effects, although provenance of American oak is an important influence on colour and grain..

Teak is rather less dependent on slicing method and even more on provenance and speed of growth which varies greatly between natural forests and plantations, which are increasingly the source.

The list of other grainy tropical and temperate hardwoods, and some softwoods, suitable for furniture and panels, is almost endless. Some are more rare and expensive like American black walnut and wenge among the dark woods. Others are much more plentiful and less costly, such as ash, hard maple and cedar among the lighter species.



Denzer veneer website



Laying up techniques are the final steps in producing the effects demanded by designers and their markets. By random “mis-matching” veneers the grain and colour variations can be emphasised and featured. By “book-matching” or “slip-matching” veneers, the continuous but gradually changing characteristics can be serialised for a degree of natural continuity reflecting the way trees actually grow (See photo – Red Alder

in KLCC) (See diagrams). The use of burrs or burls of species like yew, elm and maple, available from specialist European and American slicers, can be laid up in spectacle and symmetrical designs (See photo – “Harmonic Growth” table).

These are better described on many websites than there is space for here. With modern substrates and techniques even three-D dimension panelling effects are possible (See photo – Tanglin Club).

Veneer selections

Finally, a word about veneer selection.

There are of course proprietary grades of veneer, but for generations, the art of veneer buying has been surrounded by the personal skills and relationships of veneer buyers. Travel has also been a major cost of the process.

Today there are increasingly good websites for initial selection that is changing the process for many. At danzerveneer.com there is a fine selection of veneers well represented online from



Photo: Turnstone Singapore

Red Alder veneered panels showing consistency of grain and colour



Photo: Phil Koomen

Harmonic growth table by Phil Koomen using veneer marquetry

a “virtual veneer warehouse” (see picture). At frischeis.com there is a range of veneer catalogues that may be ordered online and kept as permanent reference. Another site formwood.com in the USA shows impressive examples of what can be achieved with veneer in projects and provides an A-Z of US domestic and exotic veneers. Another typical site is wood-veneers.com. **PFA**