

VENEER PRODUCT **INFORMATION MANUAL**



NATURAL
natural



UNIQUE
unique



SUSTAINABLE
sustainable

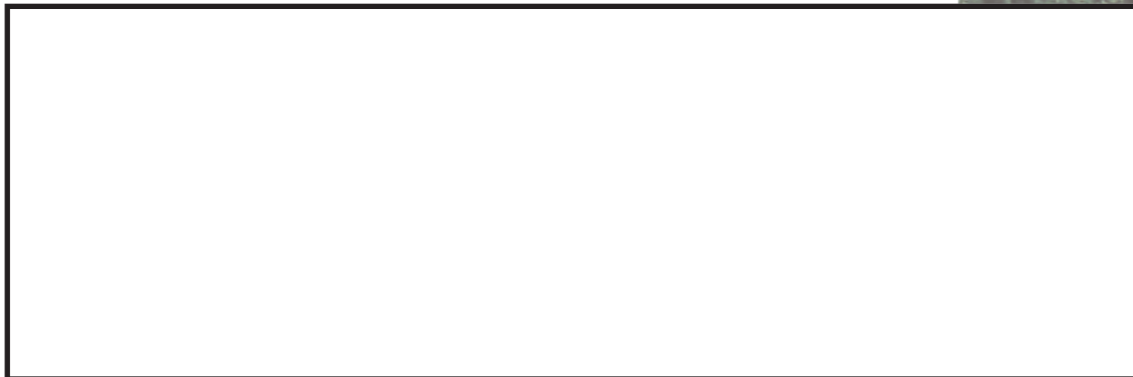


BEAUTIFUL



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FOR MORE INFORMATION REGARDING THESE PRODUCTS PLEASE
CONTACT YOUR NEAREST SUPPLIER:



Veneer is Natural

Wood veneers offer the warmth, beauty and individuality of natural timbers, and are the premium decorative finish for quality furniture and joinery applications. The genuine texture, intricate grain and rich colouring can not be matched by synthetic imitations, yet wood veneered products remain competitively priced.

The use of timber in veneer form allows us to enjoy and appreciate a wide range of decorative timbers which exist in the world, while at the same time, extending the resource to the utmost.

The versatility of wood veneered products provides manufacturers with a wide range of design options. Veneered furniture can be produced that is virtually identical in appearance to solid timber.

In certain items, such as board room tables, veneers and solids can be mixed and matched, for instance the top may be veneered while the edges and legs are solid. Kitchens are another example in which solid timber and wood veneer can be combined to great effect.

Movement and cracking of wood veneered products is minimised, due to the stability of the substrate. The use of wood veneers helps maximise the use of rare and valuable timbers.



Photo's courtesy of Howard Cook

What is Veneer?

Timber veneer is from a natural and renewable resource competing with non-renewable commodities like steel, aluminium and plastics. Its surface coverage is approximately forty times more than 25mm timber and consequently is the most economical way of utilising precious wood.

Veneer is:

- Produced by slicing or peeling selected logs.
- Sliced at approximately 0.6mm (this is normal thickness for the Australian market) or peeled at various thicknesses.
- Several methods are used to create various grain patterns. The most commonly produced patterns are:
 - Crown
 - Quarter
 - Rotary
- However, other categories exist to highlight specific features such as:
 - Birdseye
 - Quilt
 - Pommele
 - Burl/Burr



Photo courtesy of Realwood Veneers.



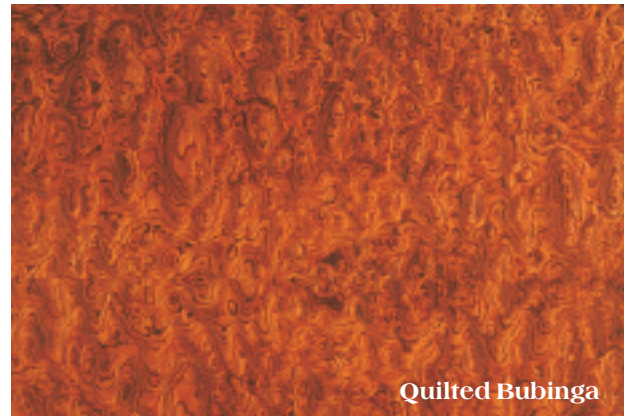
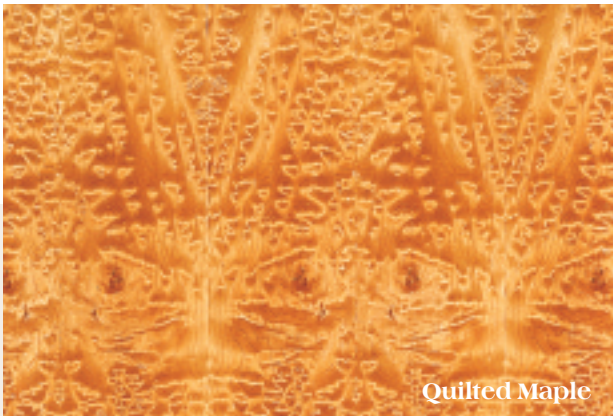
Veneer supplied by Gunns Veneers.



Veneer supplied by George Fethers & Co.

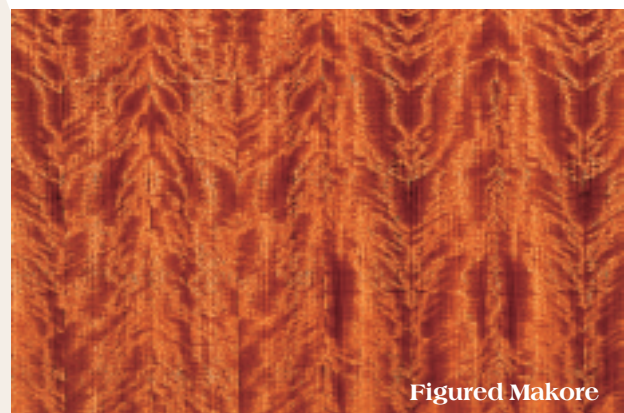
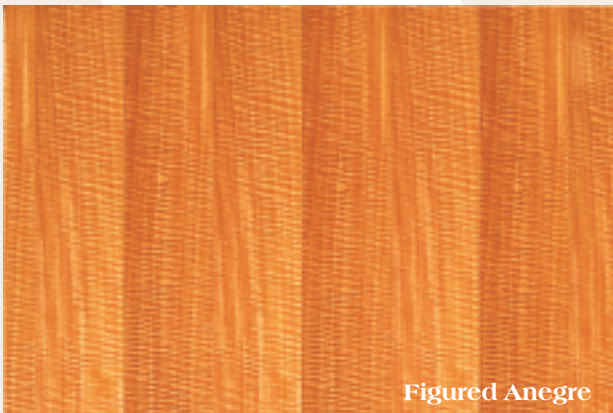
Quilted

Blistered appearance shimmering scalloped pattern.



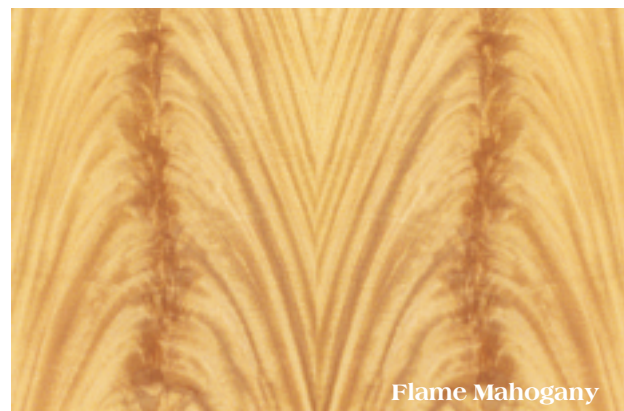
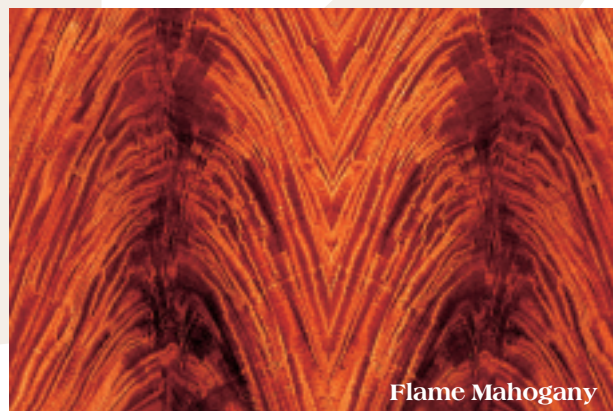
Figured

The markings, often forming wavy shimmering patterns, these may be regular or irregular ranging from fiddleback to block figure.



Flame

Otherwise known as curl or crotches. This veneer is from the fork in a tree and the pattern resembles a flame.



Unique Appearance Characteristics

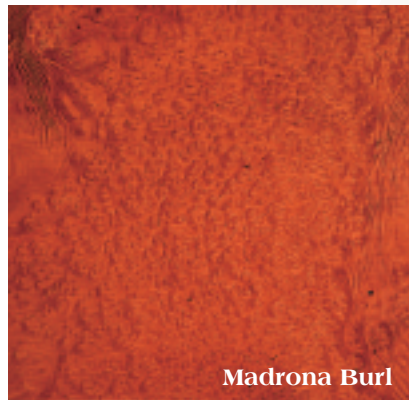
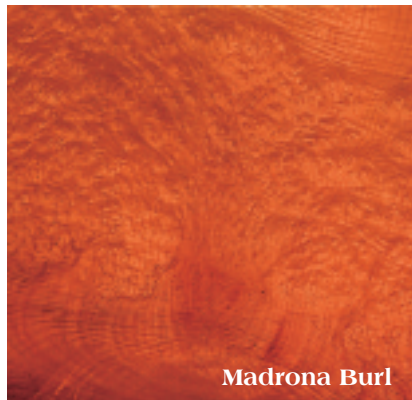
Birdseye

Figure in veneer exhibiting numerous rounded areas resembling small eyes.



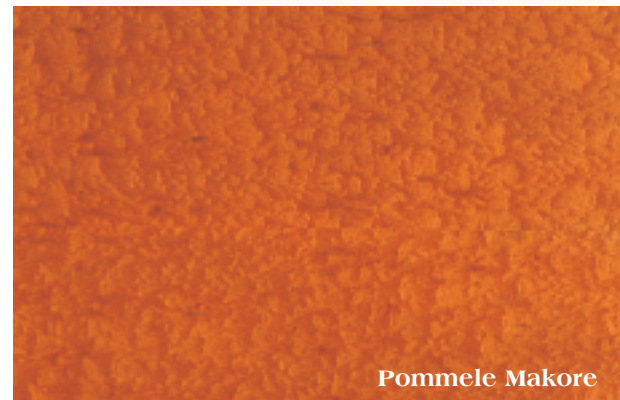
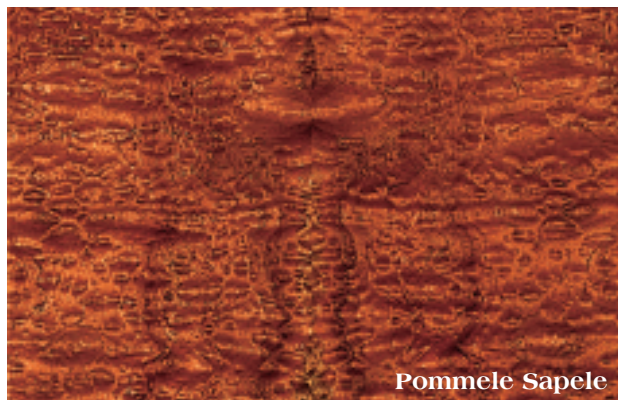
Burls/Burr

Abnormal growth producing tightly packed buds and knots producing highly decorative veneer that mostly appear as rings and dots.



Pommele

A scalloped figure, most usually found in mahogany.





Example of sequence matched panelling and doors (Quilted Maple)

Custom manufacture of veneer panel products is very important when the doors in a specific area should match paneling adjacent to them. This requires the selection of veneer from a single source and the pressing of the door faces and the panel products by a single manufacturer. This differs from utilising doors manufactured by a separate door manufacturer. In some case this may not matter, for instance where the panels and doors are to be stained a very dark colour and grain may take on less importance. In highly figured or distinctively figured woods or woods where the natural colour is shown, however, matching the grain, texture and colour is very important. Certain woods may be very intolerant of selecting from stock panels in that they are inherently varied in appearance. For instance Quarter Cut Tas Oak or Tas Ash has straight grain and fairly constant colour, which makes stock sequenced matched and numbered panels relatively easy to match. However, utilising woods such as Figured Tas Oak or Quilted Bubinga requires absolute matching since these woods have a strong character. In all cases consideration should also be given to specifying that the quality of finishing from suppliers is consistent for both doors and panels.



Veneer supplied by Gunns Veneer.



Macquarrie Apartments, Interior Designed by HPA Mirvac, Veneers supplied by Briggs Veneer.

It is suggested that early in your project you work with veneer suppliers and panel layers, advising them of your design intent, budget, grain and colour requirements, including the panel sizes and total project size. By using their resources, it will help to enhance your knowledge and help your client.

As for all creative works, specifying veneer and veneered panel products for use, is a challenge. It requires the design professional to become knowledgeable about species of wood veneers, their availability, and how to use those veneers correctly. The design professional must then be able to communicate their ideas correctly, so as to end up with the original intention.

Subjective issues such as colour, grain, character and scale are most important. Objective issues of cost, availability and durability can be judged quantitatively. For instance, when permitted by the specifications, some small or medium-sized architectural woodwork projects may be fabricated from premanufactured sets of panels and not custom manufactured panels, because of cost and scheduling factors. Premanufactured or stock panels use varied sequences of veneers, creating panels of varied leaf widths and match and are stocked by a panel layer or distributor. On the other hand, when a design professional requires that the veneer be selected specifically for a project and specifies and draws how those veneers are to be joined and where they are to be used, the cost and schedule will increase - but so will the control of the final product.

With certain areas of a project aesthetic demands may be more important than cost, and these areas should have custom laid up panels. For other areas of the project stock sequenced matched and numbered panels may be a viable way of saving money and speeding delivery. By defining clearly those physical areas of the project where the design elements are most important and focussing on them for the custom manufactured panel products, and then defining other areas where stock panels may be used, time and money may be saved.



Veneer supplied by Gunns Veneers.



Example of matching wall panelling and furniture.



Veneer supplied by Gunns Veneer.



Veneer supplied by George Fethers & Co.

Making Veneer Decisions

Wood Veneer selection can be made on a vast range of functional and design ideas. As a natural material and renewable resource wood veneer's beauty comes from nature, enhanced by man's creativity.

In specifying wood veneer, design considerations need to be taken into account. It is important to consider aesthetics, costs, hardness, stability and moisture resistance. Whilst each species has unique characteristics, the way in which the wood is sliced, will produce very different grain characteristics.



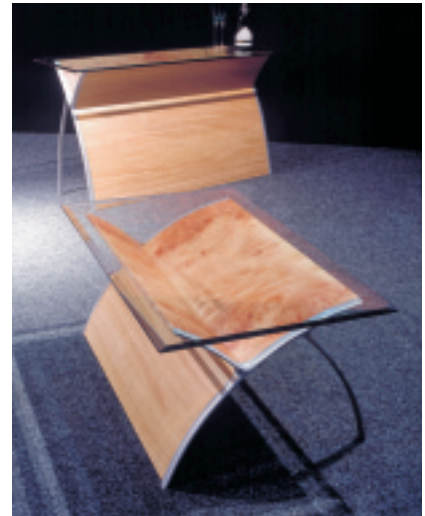
Quarter-cut

Veneer supplied by George Fethers & Co.

As you will see in this publication, there are a variety of ways the wood veneer leaves are laid together and matched. Then there is how the panels are to be stained or dyed and ultimately finished. All these variations allow a myriad of design possibilities.

This picture shows the cross-section of a log. If the heart is removed the material produced will be of a quarter appearance.

Photo supplied by Gunns Veneers.



Burls such as these are usually rotary cut. This example is Tasmanian Myrtle Burl

Veneer supplied by Gunns Veneers.



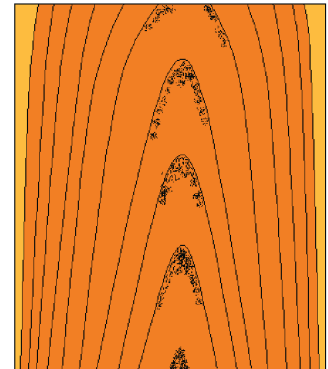
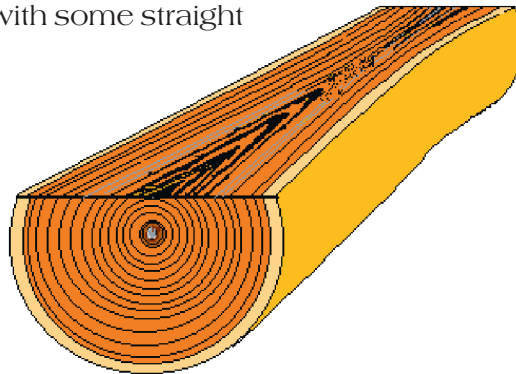
Crown cut eucalypt.

Veneer supplied by Gunns Veneers.

Crown

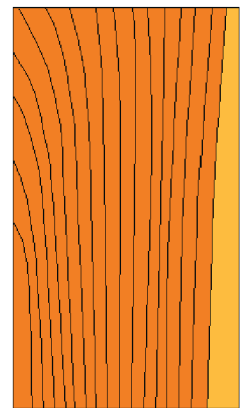
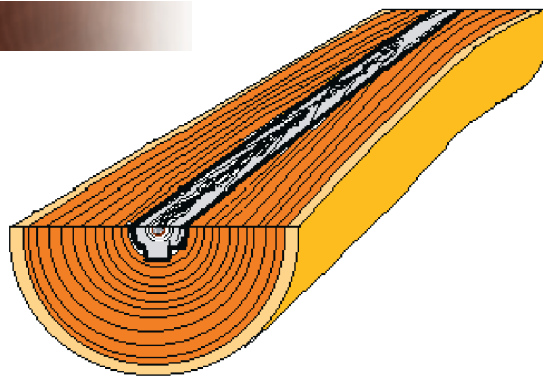
Veneer cut from this part of the log produce leaves with crown pattern with some straight grain either side.

As the crown cut moves through the log towards the centre, the leaves become wider with the crown being narrower and more well defined, with wider straight grain sections on either side.



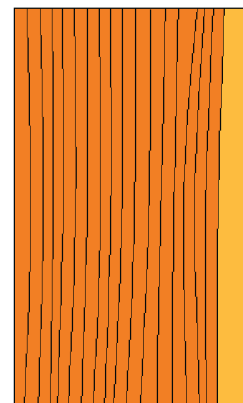
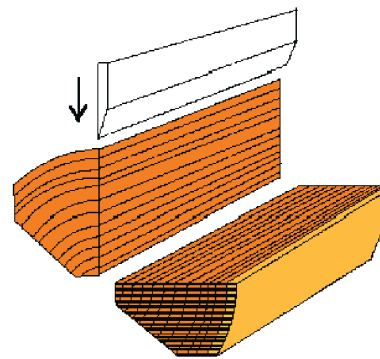
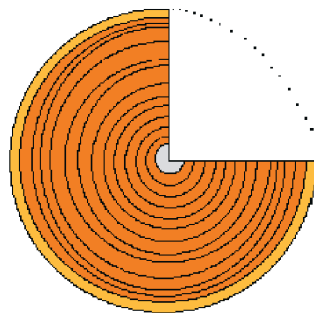
Quarter (false)

The veneer produced is generally straight grain material, often with a slight swing where the faulty part of the heart of the log has been removed.



Quarter (true)

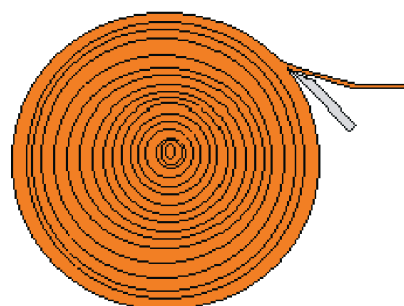
Leaves cut in this method produce fairly straight (parallel growth rings) grain patterns.



Rotary Veneer

Veneer produced by this method has a non-descript swirl pattern.

This type of veneer is produced by peeling a log which has been centred on a lathe.



Artwork supplied by Peter Minett.

Reconstructed Veneers

Also available, are man made patterns – created by artificially reconstituting and dyeing natural timbers. Two examples are shown below



Veneer supplied by New Age Veneers.



Crown Cut Pattern



Birdseye Pattern

Veneer Jointing

After veneers are produced, they are parallel clipped to size, using specialised guillotines and then jointed to create a useable size sheet known as a LAYON.

Veneer layons are made up to order, specified "length by width". The first nominated dimension specifies which direction the grain runs; e.g. 2400mm x 1200mm – the veneer length is 2400mm long and can be referred to as long band.

Nominating 1200mm x 2400mm indicates that the length of the veneer is 1200mm – this is called cross band.

Methods of joining are:

Stitching

Veneer leaves are pulled together and held in place by fibreglass glue thread applied in a zig zag pattern to the underside of the veneer.

Splicing

Veneer leaves are edge glued together. Both of these methods are commonly used in veneered panel production.

Paper Tape

Veneer leaves are held together with sticky backed paper tape. This time consuming process is predominantly used for intricate pattern work.



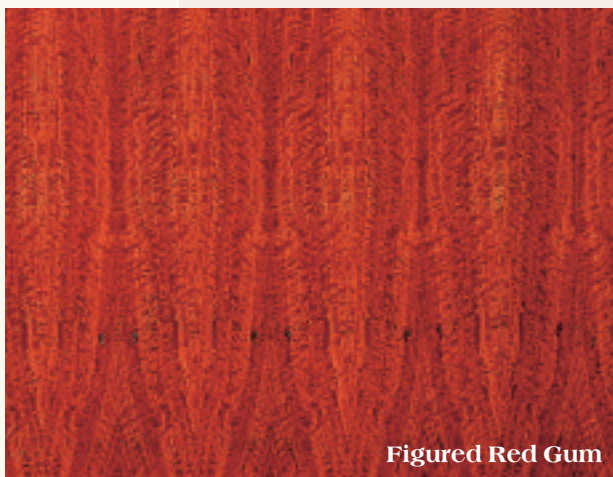
Methods of Assembling Veneer Leaves

Various visual effects can be achieved by different methods of joining. The most commonly used are the following:

The jointing methods shown on this page usually are produced using cost effective, labour efficient, high volume automated production equipment.

Book Matching

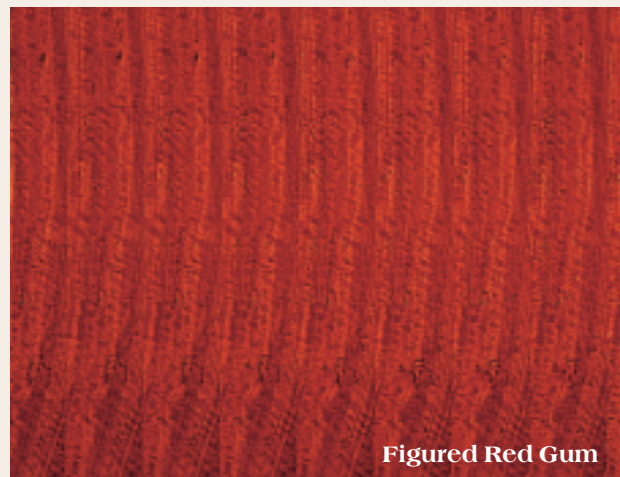
The most widely used method. The veneer leaves are alternatively folded out as if opening the centre spread of a book, so that one veneer leaf is a mirror image of the next.



Figured Red Gum

Slip Matching

The veneer leaves are kept face up and laid side by side. This style results in the same grain pattern being repeated at the width of each leaf across the layon.



Figured Red Gum

Mismatched or Random Matched

Individual leaves are random matched for effect. Knotty Radiata Pine is often laid this way. This is done to disperse characteristics such as clusters of knots more evenly across the sheet.



Knotty Radiata Pine

Reverse Slip Matching

Veneer leaves are slip matched, then every second leaf is turned end for end. The method is used to “balance” crowns in the leaves so that all the crowns do not appear at one end.



American White Oak

Glossary of Terms

back: the category of cheaper veneers that are glued to the back of a panel in order to balance better-quality veneers glued to the front face

balance construction: a balancing back of equal or similar density to face veneer to prevent warpage by moisture and/or pulling

bleed through: glue or components of glue that have seeped or penetrated through the veneer sheet and that show as a blemish or discoloration on the surface

blue stain: 1. Occurs where there is contact of green timber with iron. 2. affects of fungal attack

blockboard: composite board consisting of a core made up of narrow timber strips edge glued to form a slab (corestock) which is then veneered

birdseye: figure in veneer exhibiting numerous rounded areas resembling small eyes

book-matched: veneer leaves are alternately folded out as if opening the centre spread of a book, so that one veneer is a mirror image of the next (the most widely used method)

box match: see page 12 for picture

bundle: comprises consecutive leaves of veneer, usually bound in groups of 24 or 32 leaves

burls/burr: abnormal growth producing tightly packed buds and knots producing highly decorative veneer that mostly appears as rings and dots

crazing: fine cracks which occur on or under the surface of a lacquer coating

cross-band: where the grain direction runs along the width of the panel. Standard practice is for veneers to be laid with the grain direction along the length of the panel (long band)

crotch: see Flame.

crown (cut): the appearance produced generally by the flat cut method (refer diagram under Appearances of Veneer)

curl: see Flame

curved plywood: is layers of veneer bonded together and moulded by pressure into a variety of shapes

cure: the irreversible process of changing the physical properties of an adhesive by chemical reaction to attain bond

curly: is a strong irregular figure found in North American Maple and Birch

delamination: separation of veneers from substrate through failure of the bond

diamond matched: see page 12 for picture

edge strip: a protective strip of solid wood or laminated veneer edging applied to the edge of a panel

end match: see page 13 for picture

face: a term used to describe better quality veneers that are used to cover the visible surfaces of a panel.

figured: the markings, often forming wavy shimmering patterns, these may be regular or irregular ranging from fiddleback to block figure.

flame: otherwise known as curl or crotches. This veneer is from the fork in a tree and the pattern resembles a flame.

flat cut: generally produces veneer with crown cut appearance

flitch: pieces of wood sawn from a log for slicing into veneers OR the bundle of sliced veneers

four way match: see quarter matched

glassworm: straight diagonal tracks of distorted grain which usually intersect

grain: the direction and arrangement of the fibres in timber and veneer

gum vein: a ribbon of resin between growth rings, common in Eucalypts

herringbone match: see page 12 for picture

hob-nail: series of brown spots caused by infestation

inlays: pieces of veneer or other material which are inserted into the face of veneered board to produce borders or other special patterns

knot: a portion of a branch which is enclosed by the natural growth of the tree (refer picture under mismatched/random matched)

layon: veneers joined to create a usable size sheet

long band: where grain direction runs along the length of the panel. Refer "Specifying Your Veneered Board" page 14

LVE (Laminated Veneer Edging): is produced by laminating veneer together, and is used as a substitute for solid timber

marquetry: the process of laying relatively small pieces of veneer to make decorative pictures or patterns



Veneer supplied by Gunns Veneers.

The above represents a great example of matching veneers with solids. The desktop and base are veneered board, with solid edges applied. By using veneers instead of solids only, we achieve the highest utilisation of our natural resources. This makes veneering an environmentally friendly option that produces very aesthetically pleasing furniture and panelling.



Veneer supplied by Gunns Veneers.



Door designed by Hughes Bruce Australia. Veneer supplied by Briggs Veneer.

Veneering allows the designer to use their imagination to create a myriad of different effects and designs. The desk, pictured above, shows the clever combination of inlays and a variety of matching techniques. The modesty panel uses a reverse diamond lay, with the top using a box match lay (see page 12). The inlays in contrasting veneers also add to the effect.

The Zebrano door (pictured left) shows a clever use of the natural swing of the veneer, by making it a feature of the door. There is also end matching applied towards the top of the door that enables the height in addition to the veneer length to be achieved.

Technical Notes for Finishing

The need for finishing

Veneers like most timbers used in furniture, joinery and fit-out require a protective coating or lacquer to protect them from the rigours of day to day usage. It is important that the selection of finish is suitable for the end use application of the finished piece of furniture, etc. For example; a highly decorative jewellery box doesn't need the same durable coating as a kitchen cabinet, or even a laboratory fitment does.

Selection of Veneer and Substrate

Veneer selection is essentially a design issue. There are finishes available for every veneer and timber although some need more careful treatment than others.

Substrate selection is also fairly open although it is highly recommended that moisture resistant boards be used in high humidity areas or areas subjected to occasional wetting, eg. Bars, kitchens, etc.

Inspection and Preparation

The most critical aspect of preparation is the control of moisture content of veneered boards. High moisture content is difficult to detect visually (unless it has progressed to "puffiness") so prevention is the key. Do not leave boards exposed to wet or humid conditions. Particleboard and MDF both pick up moisture from the air so store in a cool dry place.

Veneered Boards should be sanded smooth. Care should be taken to round sharp edges since finishes (especially viscous liquids) tend to draw away from sharp edges and minimise the seal. A well lit workplace is essential to ensure that the piece to be finished is free from marks, indentations, etc., that will detract from its appearance.

After sanding ensure that the board is clean. Dust and grit will adversely affect finish and care should be taken to remove loose particles before installation.

Oil, wax and other contaminants also need to be removed before a lacquer is applied. If necessary use a grease remover.

An appropriate face mask should be used when spray-painting to prevent solids i.e. spray mist from entering the lungs.

Coating Methods

Treatments vary markedly with desired finishes and products and it is important to follow the manufacturer's instructions carefully. Short cuts can cause problems which can take weeks or months to show up. It is recommended that products and methods used be recorded for each job which will provide useful information on the cause of problems should they arise.

The other issue is the environment – temperature and humidity can affect the finish. Finishes should be applied

in controlled environmental conditions, out of draughts, away from dust, moisture and other contaminants.

The back or reverse side of all panels should be sealed to slow and equalise the ingress of moisture. Panels not sealed in this manner may bow or cup.

Selection of Coating

The following table provides some guidelines for coating selection. Remember a high quality lacquer will help achieve a high quality result. Cheaper finishes usually have lower solids contents and take more coats to achieve the same finish. You also need to consider the grain of the veneer – open grained veneers may require filling (especially if a gloss finish is desired) or a more flexible lacquer. The use of 'thin wet' coats and the addition of solvent can be helpful.

Some species of timbers (and veneers) have phenols, tannins and other chemicals present in their cell structure, these species are best sealed with a specially formulated 'isolator' coating that provides a barrier to stop the chemicals in the wood reacting with the chemicals in the top-coat. Lacquer manufacturers can provide advice as to the most suitable coating system for particular species.

It may be necessary or possible to use two or more coating systems on a piece of furniture. For example, a dresser or sideboard needs a very durable serving surface, whilst the vertical surfaces can have a less durable, but just as attractive coating. Oil type finishes, generally known as 'Scandinavian Oils' should be applied over a quality sealer or lacquer. Application of oil type finishes to veneered surfaces may adversely affect the bond of the veneer to the substrate and / or the surface appearance.

Note: Under no circumstances should two pack products be put over single pack coatings.

Where an acid catalysed sealer is unavailable a polyurethane sealer is recommended.

Care labelling

Manufacturers of furniture, joinery and fit-out should provide instructions as to the ongoing, in service, care of the finished article. As these instructions now largely apply to the treatment and protection of the surface finish, they should be formulated in conjunction with the lacquer supplier.

On-going Research

If problems are encountered with finishes applied to veneer, a questionnaire is available from AFRDI/Furntech (03 6326 6155) which will help develop our understanding of the causes and assist with educating the industry. Any information collected will be treated in confidence.

Provided by AFRDI/Furntech (the Australasian Furnishing Research & Development Institute) with assistance from CSIRO and Mirotone and edited by Grahame Waterson.

Every attempt has been made to ensure the accuracy of the information contained in the Veneer Product Information Manual, the Decorative Wood Veneers Association does not accept responsibility for any loss or damage which may be sustained by a party from reliance on the information contained herein.

Coating Systems Selection Guide

Timber and Composites

Generic Type	Properties	Typical Application Area
NITROCELLULOSE	<ul style="list-style-type: none"> • Simple, easy to use • Fast, drying • Economical 	<ul style="list-style-type: none"> • General lounge and bedroom furniture • Furniture restoration • Wall panelling • Casket manufacture
PRE CATALYSED	<ul style="list-style-type: none"> • Improved mar and scuff resistance • Fast drying • Medium water and solvent resistance 	<ul style="list-style-type: none"> • Dining room tables • Wall panelling • Office furniture
ACID CATALYSED	<ul style="list-style-type: none"> • High build • Superior mar and scuff resistance 	<ul style="list-style-type: none"> • Dining and office furniture • Utility furniture • High use areas
POLYURETHANE	<ul style="list-style-type: none"> • Excellent chemical solvent and water resistance • High build • Excellent mar and scuff resistance 	<ul style="list-style-type: none"> • Vanity units • Kitchen cupboards and doors • Kitchen units • Laboratory hotel and office fittings and furniture • Bars and restaurants

Grading

In line with AS/NZS 1859:Reconstituted Wood-based Panels Part 3: Decorative Overlaid Wood Panels, the industry has adopted the following broad common terminology.

F2S – Face Two Sides

Where both sides of the panel are highly visible and face quality of the same veneer is required on both sides.

Terms also widely accepted: G2S (Good Two Sides)

SSB – Same Species Back

Where both sides of the panel are visible and the same species is required on both sides of the panel, but the quality of the back does not need to be as high as on the face.

Terms also widely accepted: DGB (Down Grade Back)

CNB – Customer Nominated Back

Where the veneer species and quality of the back are nominated by the customer.

MOB – Manufacturer's Option Back

Where the veneer species and quality of the back are nominated by the manufacturer, primarily to ensure a balanced panel.

Terms also widely accepted: G1S (Good One Side / Balance Back) or BAMO (Back at Manufacturer's Option)

Veneers for special applications such as partitioning and desk tops are generally higher than standard panel grades. These need to be clarified between veneer supplier and customer and are generally charged at a premium.

Not all face grade applications require the same quality of veneer as veneers are selected by consultation between supplier and customer.

While each panel producer may currently use different terms, or combinations thereof, each producer will recognise any of the above terms so that you can specify veneered board with confidence.

Quality Assurance

To assist in ensuring that the manufacture of wood veneered products in Australia is of the highest possible standard, the Decorative Wood Veneers Association has developed a Quality Assurance Recommendation Program which has been adopted by its members.

Veneered board is to be manufactured in accordance with the following standards:

Substrate:

- AS2270: Plywood & Blockboard for interior use and AS2271: Plywood & Blockboard for exterior use.
- AS/NZS 1859: Reconstituted Wood Based Panels is made up of a series of standards that have reference – Part 1 deals with Particleboard; and Part 2 with Medium Density Fibreboard.

Veneer Bond:

- AS/NZS 1859.03 provides performance requirements and specifications in the manufacture and application of decorative overlaid wood panels.
- Procedures have been developed for measuring the strength of the bond between the wood veneer and the substrate, and minimum standards set which should be met by wood veneered panels. These are covered by the standard AS/NZS 1859.3 and AS/NZS 4266.32 (Veneer Bond Strength and AS/NZS 4266.33 (Veneer Bond Durability).

The Association has a Quality Assurance Recommendation Program which regularly checks the compliance with the glue bond standards. The testing regime was developed and is monitored by the Australasian Furnishing Research and Development Institute (Furtech). Participating DWVA members are registered suppliers under the Furnishing Industry Association's Furnishing Quality Program and are authorised to use the Furnishing Quality Program logo. Look for this mark to identify members of the DWVA.

Panel Manufacture

Specifying Your Veneered Board

Apart from specifying the species, substrate and grade, the dimensions of the veneered board should be ordered “length by width by thickness”. The first nominated dimension specifies in which direction the veneer grain runs, e.g. 2400 x 1200 – the veneer length is 2400mm long and can be referred to as long band. Nominating 1200 x 2400 indicates that the length of the veneer is 1200mm – this is referred to as cross band where the length of the panel in the grain direction is less than the width of the panel. The above represents the practice in Australia – some countries do specify differently, so it is always recommended that where doubt may exist, the grain direction should be clarified before ordering.

Substrates

Particleboard, being strong, stable and inexpensive, is an excellent substrate for veneered products.

Medium Density Fibreboard (MDF) is used as a substrate for wood veneers, particularly for applications where it is desirable for the edges to be moulded and exposed.

Plywood is constructed from three or more layers of veneer bonded together and is used as a substrate for veneer for special applications.

Blockboard is a composite panel comprising a core of wood strips bonded together as a slab faced on each side with two layers of wood veneer. Blockboard is mainly used in the manufacture of solid core doors.

Pressing

Pressing is the process of bonding veneer layons to substrate using specialised pressing equipment which generally applies heat and pressure. Most products are supplied, trimmed and sanded, however this is optional.

Other Veneered Products

Laminated Veneer Edging (L.V.E.) is produced by laminating veneer together, and is used as a substitute for solid timber.

Curved Plywood is layers of veneer bonded together and moulded by pressure into a variety of shapes.

Profile Wrapping: A range of wood veneered profiles can be produced through the profile wrapping process enabling manufacturers to complement their products with matching veneer wrapped profiles.

Veneer edging is available in strips or continuous rolls to apply to the edges to match the veneered product.

Inlays: Plain or patterns

Marquetry: Detailed pictures or patterns created using small pieces of different veneers as illustrated at right.



Marquetry by Michael D Ritter OAM, Sydney Veneer supplied by Briggs Veneers.

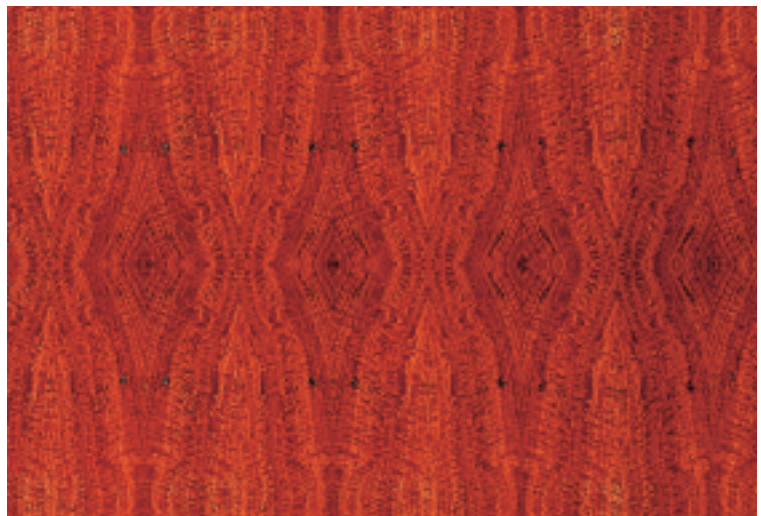
Quarter Matching/ Four Way Matching

This is the most common method of joining burls. The pattern can be continued in all directions until the required panel size is obtained. These panels can be continued in a sequence matched manner.



End Matching/Butt Joining

Where the length of the veneer does not permit its fabrication into the desired height of panel, it may be matched with vertical butts, as well as with horizontal book match joints.



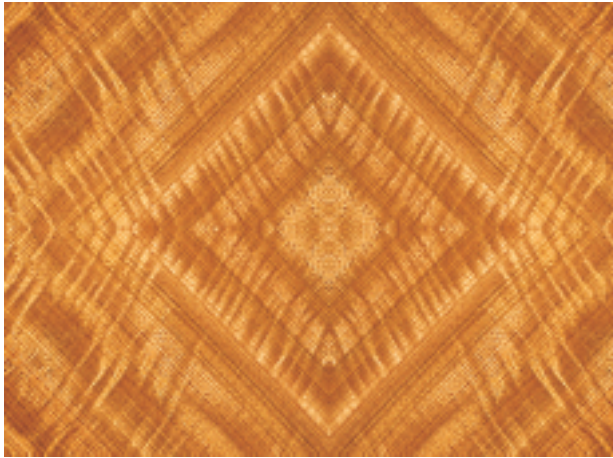
Sunburst



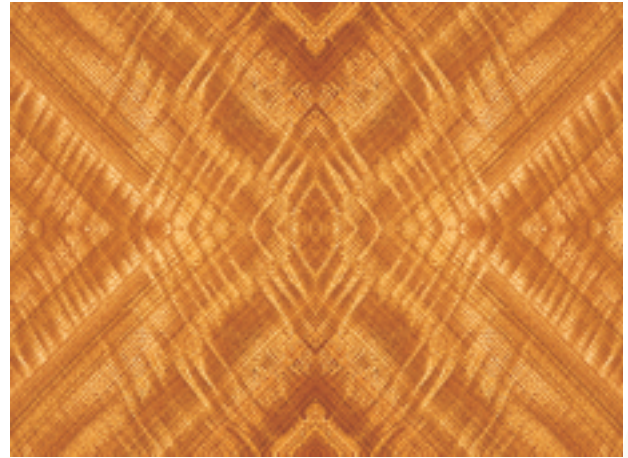
All the special matching techniques are very labour intensive, often hand made, usually with veneer wastage significantly higher than normal matching/joining techniques, and are priced accordingly.

Special Matching Techniques

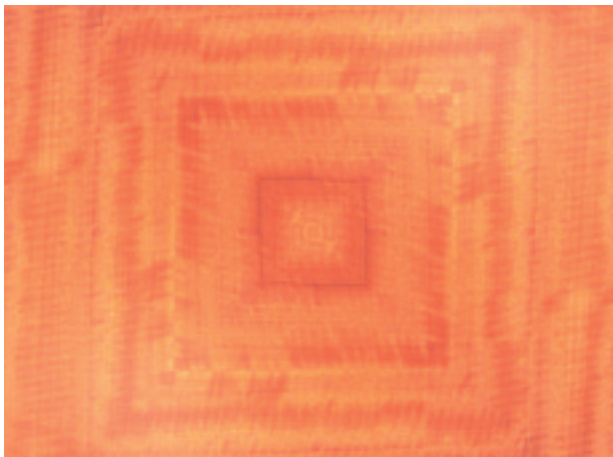
Diamond



Reverse Diamond



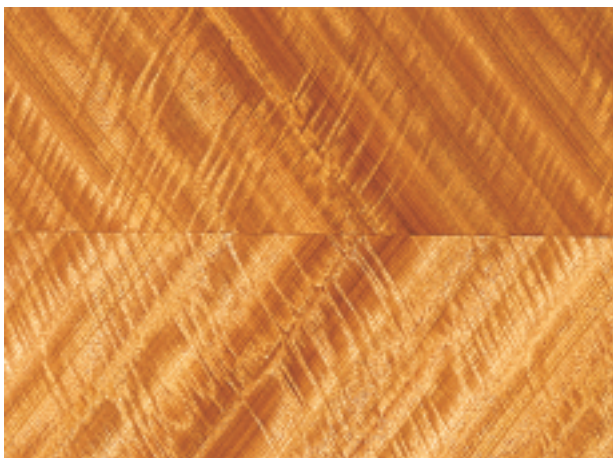
Box Match



Reverse Box Match



"V" Match



Herringbone



MDF: Medium Density Fibreboard (also Customwood, Craftwood) building boards made from fibres of wood bonded together with resin under pressure

mill run: veneer delivered from the production line unsorted and without grading. Usually has a combination of backing and face grade material in varying percentages

mineral stain: naturally occurring discoloration of the wood caused by elements in the soil

mismatched: see random matched

particleboard: (chipboard) building boards made from small chips of wood bonded together with glue under pressure

picket fence: book matching veneer strips appearing alternately light and dark

pips: small circular distortions in the grain

plywood: an assembled product made up of 3 or more plies bonded together with the direction of the grain in alternate plies usually at right angles

pommele: a scalloped figure, most usually found in mahogany

profile wrapping: a range of wood veneered profiles can be produced through the profile wrapping process enabling manufacturers to complement their products with matching veneer wrapped profiles

quarter (cut): the appearance produced generally by the quarter cut method but also includes false quarter that is produced by the flat cut method (refer diagram under Appearances of Veneer)

quarter matched: this is the most common method of joining burls. The pattern can be continued in all directions until the required panel size is obtained. These panels can be continued in a sequence-matched manner

quilted: blistered appearance shimmering scalloped pattern

random matched: individual leaves are random matched for effect. Knotty radiata pine is often laid this way. This is done to disperse characteristics such as clusters of knots evenly across the sheet.

reverse box match: see page 12 for picture

reverse diamond match: see page 12 for picture

reverse slip matched: veneer leaves are slip matched, and then every second leaf is turned end for end. The method is used to “balance” crowns in the leaves so that all the crowns do not appear at one end.

rift cut: a variation on the quarter cut appearance specifically used to eliminate medullary ray in white oak, which results in a broader stripe

rotary cut: veneer is peeled (as opposed to sliced) from a log by turning it against a stationary knife

sapwood: the outer wood of the tree immediately under the bark. Generally it is lighter in colour than the heartwood which is the part of the tree that is used for veneer.

sheet length: dimension in the direction of the grain of the face of the sheet

sheet width: dimension perpendicular to the direction of the grain of the face

slip-matched: veneer leaves are kept face up and laid side by side. This style results in the same grain pattern being repeated at the width of each layon across the layon.

soft forming: laminating veneer on to bullnosed edges

stitched: veneer leaves are pulled together and held in place by fibreglass glue thread applied in a zig-zag pattern to the underside of the veneer.

sunburst: see page 13 for picture

substrate: base panel on to which veneer layons are applied

sugar: darker markings which resemble clusters of sugar crystals

trimming: process of squaring and sizing panels to final face dimensions

veneer:

- **rotary cut:** is a continuous ribbon peeled from a rotating log when a knife is advanced into it, and subsequently clipped to required width
- **semi rotary cut:** veneer produced when log or flitch is clamped off centre in the lathe, and advancing knife peels individual sheets/leaves
- **sliced:** a knife stroked across a flitch repeatedly in a flat plane, produces individual leaves
- **spliced:** a veneer sheet made by edge gluing together jointed veneers
- **stitching:** an alternative method (to splicing) used to produce a veneer sheet by gluing together (with a thread of glue) flitch veneer.

V match: see page 12 for picture.