



FOR SUSTAINABLY MANAGED TROPICAL FORESTS

TECHNICAL GUIDE

FOR THE MARKETING OF TROPICAL VENEERS

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PREFACE

This document sets out as simply as possible the quality and measurement criteria for tropical veneers, wood sheets less than 6 mm thick, obtained by unwinding (total or semi-circular) slicing or sawing. These grading rules have been updated by Patrick MARTIN (ATIBT), Bernard CHEVALDONNET and Sabine BOURY (UIPC) to comply with the latest versions of international and European

standards. This professional document is a reference of the state of the art. Therefore, any additional specifications must be clearly specified in the sales contract. The publication of this document is an integral part of the development of the Fair & Precious collective brand, which aims to promote good practices in forest management.

FAIR & PRECIOUS

«Hyper-consumption» must gradually disappear in favour of more qualitative and participatory ways of thinking. Fair&Precious forest managers want to shape a new way of doing things. With Fair&Precious, they are creating a collective that allows them to promote their values and pool their actions together.

They are therefore developing modes of «positive activism», offering models that are respectful of both the planet and humans*.

* COP 21: signature of the Paris Agreement (12/2015) highlighting the role of forests as a solution to limit climate change (Article 5)

Created at the initiative of ATIBT*, the collective Fair&Precious brand aims to:

- raise awareness among European buyers and consumers of the importance of certified forest management,
- ensure that eco-certified tropical timber is recognised as both a remarkable and a responsible material.

Through this approach, ATIBT and forest managers aim to ensure the economic viability, the social equity and the preservation of forest ecosystems. They stimulate the entire supply chain through the development and promotion of best practices.

**Association Technique Internationale des Bois Tropicaux
International Tropical Timber Technical Association*



ROTARY CUT VENEERS

1.1 - DEFINITION

Rotary cut veneer is obtained by peeling centred on the axe of the log or eccentric to the axe. These veneers are generally destined for the manufacturing of plywood panels, but also for the covering of panel boards, chipboard, solid wood, laminated beams, wooden flooring or directly for packaging.



Veneer spool © E. Groutel, Wale

1.2 - TYPES OF ROTARY CUT VENEER

Veneers for the manufacture of panels

- Face and counterface: veneers intended respectively for the facing and back facing of the panel :
- Inside (crosswire): folds for the inner part of the plywood panel whose wire is perpendicular to the outer plies.
- Soul (long wire): folds for the inner part of the plywood panel whose wire is parallel to the outer plies.

Veneers for the manufacture of Packaging

- Veneer sheet used in its full dimensions for the manufacture of crate or light packing.

1.3 - MANUFACTURING

The greatest care should be taken in the manufacturing of rotary cut veneer. However, a certain number of defects can appear during manufacturing which are either tolerated in certain limits, prohibited or consolidated.

Faces and counterface are preferentially fitted with an edging paper (perpendicular to the grain), glued in such a way so as to prevent the edges splitting, and at a maximum of 1 cm from the edge of the sheet.

1.3.1 - Sheet size

Drying rate

The reference humidity shall be set at $10 \pm 2\%$ for the determination of dimensions and their associated tolerances, unless otherwise specified in the contract.

Usual dimensions (dried veneers):

Each industrialist adapts to the dimensions of his machines, but the dimensions most often encountered are in centimeter (wire direction / cross direction):

257/127 ; 257/158 ; 257/175 ; 317/158 ; 317/188

Tolerances (according to ISO 18775):

Less zero, plus 2 cm over the width

Less zero, plus 3 cm over the length

For Anglophone countries, the dimensions which are in this case indicated in imperial measurements in inches (width x length) must be reversed:

50x101 ; 62x101 ; 39x101 ; 62x125 ; 74x125

Tolerances (according to ISO 18775):

Less zero, more $\frac{3}{4}$ ' over the width

Less zero, plus 1 ' length

Thickness:

The measurement is carried out according to ISO 18775. Unless otherwise agreed, the nominal thickness and tolerances on the thickness relate to a humidity of $(10 \pm 2)\%$.

Tolerances on thickness:

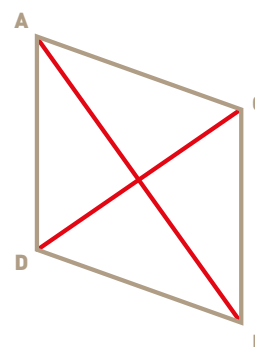
Nominal Thickness	Deviation tolerance on a veneer	Permissible gap between veneers
$\leq 1,5$ mm	$\pm 0,05$ mm	$\pm 0,1$ mm
$> 1,5$ mm	± 4 %	$\pm 8\%$

1.3.2. Manufacturing defects

Out-of-square :

This defect is judged by taking the difference in length between the diagonals of the veneer sheet. As a general rule, the difference between the two diagonal should not exceed 2 cm.

$$(AB) - (CD) \leq 2 \text{ cm}$$



Scratches :

There are grooves appearing on the surface of sheets, caused by one or more nicks from the machines knife. This defect is permitted insofar as a sanding eliminates the scratch while retaining the nominal thickness. This defect is not authorized for grades Prime, I and II, it can however be tolerated for the other inferior grades.

Other manufacturing defects and dirt:

These defects are tolerated to the extent that they are recoverable by sanding or scraping while retaining the nominal thickness.

Raised ply, thickness variation:

These defects are caused by the poor adjustment of the pressure bar. They are not authorized.

Preservation treatment:

It is advisable to treat those veneer species rich in starch against the attack of dry wood insects, most notably those of the Lyctidae and Bostichidae families.

1.4 - QUALITATIVE CLASSIFICATION OF VEENERS

This leaf appearance classification is based on the presence, number and importance of the singularities. It refers to standards ISO 2426-1 and -2 (identical to standards EN 635-1 and -2) relating to the definition of singularities and the appearance classification of plywood panels manufactured from hardwood species.

The details of this classification are given in the synoptic table in appendix N ° 1.



Unrolled veneer sheet © E. Groutel, Wale

1.5 - PACKAGING OF ROTARY CUT VENEERS

It is recommended to pack the veneers in one or more transparent or opaque plastic sheets. They will be linked by 3 straps for the lengths of 2,60 m and by 5 straps or more for the lengths of 3,20m. The veneers must be protected from the strip by the use of angles. The whole will be placed on a pallet, made with boards of 27 mm, allowing the handling by forklift (passage of 8 cm for the blades of the machine for the lower yards and 4 cm for the yards of the top). Depending on the country of export and import (or transit), the

treatment of packaging in accordance with ISPM 15 is mandatory. **For further information, please refer to Annex N°4.**

Whatever the regulatory obligation, it is advisable to treat woods with undifferentiated sapwood used to make pallets against fungal and zoological attacks, as they represent a real risk of contamination of veneers. In the case of packaging of harvested veneers, the latter must not exceed 10 cm of the length of the veneers and 10 cm of the width of the veneers.



Packing on pallet © E. Groutel, Wale

1.6 - MARKING

Each package may be accompanied by an identification system: certification or other information relating to the contract. If necessary, it must bear the legible serial number, in accordance with the specification, with the dimensions.

1.7 - INVOICING UNIT

The billing unit is cubic meter (m³). The measurement shall be given with an accuracy of at least 3 decimal places (to the nearest dm³). For English-speaking countries, the billing unit is cubic foot (cu ft) with an accuracy of at least 2 decimal places.

Attention however, the calculation of the volume to be declared will have to take into account the coefficient of expansion.

Coefficient of expansion: proportion of volume of material relative to the apparent volume, expressed as a percentage.

2.

SLICEDS VENEERS

2.1 - DEFINITION

Veneers obtained by slicing, or using any machine. These veneers are on quarter, on false quarter or on dosse. They are intended for decoration, furniture, parquetry, boating, industrial joinery and industrial or decorative paneling.



Slicing © B. Jobbé Duval, ATIBT

2.2 - TYPES OF SLICED VENEERS

- Decorative and Tinting Veneers
- Balancing Plates
- Thick veneers (10/10th of a millimeter and more) for carpentry, boating, coffins, restoration of furniture, molded parts.

2.3 - MANUFACTURING

The greatest care should be taken in the manufacturing of sliced veneers. However, a certain number of defects can appear during manufacturing which are either tolerated in certain limits, prohibited or consolidated.

2.3.1. Dimensions of sliced veneers

Humidity level

The reference humidity shall be set at $10 \pm 2\%$ for the determination of dimensions and their associated tolerances, unless otherwise specified in the contract.

Lengths:

To be determined in the order form. An over-length of 5 cm is permitted.

Usual lengths are:

2.10 m – 2.45 m

2.55 m – 2.80 m

3.10 m – 3.40 m

Widths:

The width depends on the diameter of the log, and is in general superior to 10cm. Widths are expressed in covered centimetres.

Thickness:

The reference humidity is set at $10 \pm 2\%$ for thickness determination, unless otherwise specified in the contract. The tolerance on the thickness is more or less $5 / 100^{\text{th}}$ of a millimeter.

2.3.2. Manufacturing defect

Stripes:

These are grooves that appear on the surface of the leaves caused by, for example, wood chips slipping between the blade and the wood during sawing or due to a lack of sharpening. This defect is allowed insofar as a sanding eliminates the scratch while retaining the nominal thickness. This defect is authorized according to the specifications, accepted by agreement between the parties and in general according to its disappearance at sanding.

Other manufacturing defects and dirt:

These defects are tolerated to the extent that they are recoverable by sanding or scraping while retaining the nominal thickness.

Metal oxidation:

Except in the case where it disappears when sanding, this defect, like traces of carpet, is not acceptable for decorative purposes (choice E, I and II).

2.4 - QUALITATIVE SORTING OF VENEERS

This leaf appearance classification is based on the presence of defects, their number and their importance. **The details of this classification are given in the synoptic table in appendix N ° 2.**

2.5 - COMPOSITION OF CONSIGMENTS

Any requirement in this regard must be clearly stated in the contract.

2.6 - PACKAGING OF SLICED VENEERS

The veneer sheets are made of bundles of 24, 32 or 40 sheets on a handling pallet. The assembly must be wrapped in an opaque plastic sheet and placed in a container or in a box as for unrolled veneers. In the case of packing of box veneers, the latter must not exceed 10 cm of the length of the veneers and 10 cm of the width of the veneers. Depending on the country of export and import (or transit), the treatment of packaging in accordance with ISPM 15 is likely

to be mandatory. For further information, please refer to Annex 4. Whatever the regulatory obligation, it is advisable to treat woods with undifferentiated sapwood used to make pallets against fungal and zoological attacks, as they represent a real risk of contamination of veneers. In the case of packaging of harvested veneers, the latter must not exceed 10 cm of the length of the veneers and 10 cm of the width of the veneers.

2.7 - INVOICING UNIT

The square meter (m²), obtained by the product of the contractual length expressed in covered 5 cm, by the width expressed in cover cm. In the case where the two edges of the sliced veneer sheet are not parallel, the width is measured at equal distance from

the two extremities. When measurement is carried out with the help of a machine, the machine measures the surface and the length of the veneer and deducts a theoretically mathematical width.

3.

SAWN VENEERS

3.1 - DEFINITION

Sawn veneers are obtained by sawing logs or beams on a machine known as a horizontally alternative saw or by the mechanical pit sawing method. The usual thickness is equal or inferior to 10 mm. They are either plain sawn, quarter sawn or false quarter sawn. It is possible to saw panels between 10-15 mm thickness on these machines. Sawn veneers are destined for decorative purpose for furniture, marquetry tables and for the restoration of antique furniture. They are also used for the manufacturing of diverse objects in solid wood, such as decorative boxes. Sawn veneers are not a homogenous product, indeed, it is their decorative aspect which is paramount to all other considerations. At the present moment an industrial type sawn veneer is being developed which



Sawn veneers © Why Di

can be obtained by the sawing of square edged timber or not, on shifting saw edger's or sorting lines with multi-blades. Therefore, we obtain low thickness sawn timber which is utilized for traditional usage (ice ream sticks etc) and under developed uses such as wooden slats for windows blinds, wooden flooring, joinery etc.

3.2 - TYPES OF SAWN VENEER

These veneers can be considered as square edged lumber, but with a low thickness.

3.3 - MANUFACTURING

Great care must be taken in the manufacture of veneer sheets. However, a certain number of defects may appear during manufacture. They will be tolerated within certain limits and especially if they disappear when sanding. The ends may not be perpendicular to the axis of flow, the edges are parallel or not.

3.3.1. Dimensions of sawn veneer sheets (commercialised in m²)

Drying rate

The reference humidity shall be set at $10 \pm 2\%$ for the determination of dimensions and their associated tolerances, unless otherwise specified in the contract.

Length:

Length is expressed in covered cm for valuable timber species (Rose wood, Ebony, Amourette) and to covered 5cm for other less valuable species. A non invoiced crosscut allowance not exceeding 5 cm can be added in order to cover small and splits.

Width:

Width is measured at equal distance from the two extremities and is expressed in covered centimeter.

Thickness:

Thickness is measured at the least thickest place on the veneer sheet and is expressed in mm without inferior tolerance, in comparison with nominal thickness and a superior tolerance of 5/10th millimeter.

3.3.2. Manufacturing defects**Stripes:**

Grooves that appear on the surface of the leaves caused by, for example, wood chips slipping between the blade and the wood during sawing or due to a lack of sharpening. This defect is allowed insofar as a sanding eliminates the scratch while retaining the nominal thickness.

Other manufacturing defects and dirt:

These defects are tolerated to the extent that they are recoverable by sanding or scraping while retaining the nominal thickness.

3.3.3. Preservation treatment:

It is recommended to treat non-differentiated sapwood veneers against dry wood insects and especially against the lyctus and the bostryche.

3.4. QUALITATIVE CLASSIFICATION OF LEAVES

Wood sawing amount:

The qualitative classification must result from a prior agreement between the parties with regard to the tolerances and requirements of the buyer. In the case where the buyer establishes a specification, it can be based on the following indications:

Choice E : his choice concerns loupes, bushes, brambles and forks. The marketing of these veneers can be conceived only by the principle of contradictory reception.

Choice I, II or III : For these three choices, all singularities are accepted in certain proportions, except for the lignivorous decays of standing or slaughtered wood. All other singularities (including the sapwood) expressly defined as such by parts shall not exceed, on the most decorative face:

- 0% for choice I
- 10% for choice II
- 20% for choice III

The unrestricted net surface area yield will then be:

- 100% for choice I
- 90 to 99% for choice II
- 81 to 89% for choice III

Measurement of the net surface defect output:

The calculation of the unauthorized net surface area consists of:

- Mark the defects in a rectangle or a square
- Measure the surface area
- Add the areas affected by the defects
- Compare this to the total area of the leaf and derive the percentage yield
- Compare this return to the allowed yields for each choice.

Industrial sawing:

The veneers are divided into three choices:

- **Choice I** : Net surface defaults of 90% or more
- **Choice II** : Net surface defect yield of 75% and more
- **Choice III** : net area defaults of 60% or more

The calculation of the net yield of defects is established on the worst face and is done as for the veneers with the rising wood.

3.5. COMPOSITION OF BATCHES AT THE

The composition of the lots must be defined by the order form.

3.6. PACKAGING OF SLICED VENEERS

The veneer sheets will be packed in one or more plastic sheets. They will be linked together and placed in a box if necessary.

Depending on the country of export and import (or transit), the treatment of packaging in accordance with ISPM 15 is likely to be mandatory. For further information, please refer to Annex 4.

Whatever the regulatory obligation, it is advisable to treat woods with undifferentiated

sapwood used to make pallets against fungal and zoological attacks, as they represent a real risk of contamination of veneers. In the case of packaging of harvested veneers, the latter must not exceed 10 cm of the length of the veneers and 10 cm of the width of the veneers. In the case of packing the box veneers, the latter must not exceed 10 cm of the length of the veneers and 10 cm of the width of the veneers.

3.7. INVOICING UNIT

The kilogram (kg) or the square meter (m²). The weight should be given to within 1% and the measurement should be given with an accuracy of at least 2 decimal places (within dm²).

For English-speaking countries, the billing unit is pound (lb) at 1% per square foot (sq ft) with an accuracy of at least 2 decimal places.

ANNEXE 1

QUALITY GRADING OF UNROLLED VENEER SHEETS (To be evaluated according to species)

Grade:	Prime	I	II	III	IV
Defects					
Pin knot ($\emptyset \leq 3$ mm)	No	3 knot/m ²	Admitted	Admitted	Admitted
Sound knots	No	\emptyset of each node ≤ 15 mm \emptyset cumulated ≤ 30 mm / m ² Slots in very light nodes	\emptyset of each node ≤ 35 mm 3 knots / m ² Slots in light knots	$\emptyset \leq$ to 50 mm Limitless	Admitted
Altered (rotten), loose (dead) knots	No	Number of nodes ≤ 2 / m ² , If $\emptyset \leq$ to 6 mm	Number of nodes ≤ 3 / m ² , If $\emptyset \leq$ to 10 mm	$\emptyset \leq 40$ mm 3 knots / m ²	Admitted
Open slits	No	1 / 10th the length of the sheet Of individual width ≤ 3 mm With a number ≤ 3 / m of width of the sheet	1 / 5th of the length of the sheet Of individual width ≤ 5 mm With a number ≤ 3 / m of width of the sheet	1/3 of the length of the sheet Of individual width ≤ 20 mm With unlimited number	Admitted
Close slits	No	Admitted if length $< 1/2$ width			
Anomalies due to insects and tares	No	No	Number of holes ≤ 10 / m ² , If $\emptyset \leq 3$ mm perpendicular to the wire	Number of zones ≤ 3 / m ² , Zones of width ≤ 15 mm And of length \leq to 60 mm	Admitted
Anomalies due to plant parasites	No	No	No	No	Admitted
Between-Bark	No	No	Admitted Width ≤ 5 mm	Admitted Width ≤ 25 mm	Admitted
Spiral grain-tearing	No	No	No	Admitted	Admitted
Irregularities in wood structure	No	Very light	Light	Admitted	Admitted
Abnormal staining	No	No	Admitted	Admitted	Admitted
		Lightweight Contrast	Lightweight Contrast	Admitted	Admitted
Rot	No	No	No	No	No
Other Features	To consider in the closest category				
Sound sapwood *	No	No	Admitted	Admitted	Admitted
Grain of barley	No	Light	Admitted	Admitted	Admitted
Chenillage	No	Light	Admitted	Admitted	Admitted
Thick streak	No	No	Light	Admitted	Admitted
Gale	No	No	No	No	No
Lignicolous Fungi	No	No	No	Admitted	Admitted
Medullary stains	No	Admitted	Admitted	Admitted	Admitted
Mineral stains	No	No	Admitted	Admitted	Admitted
Woollyness	No	No	No	Admitted	Admitted

* This is the sapwood of species with differentiated sapwood. The sapwood is not taken into account for species with undifferentiated sapwood (Antiaris, Ayous, Marupa, Sesendok ...).

Defects such as: Roughness, fermentation (from log or veneer before drying), blade blue, fractures (from logs) are subject to special agreements depending on species and uses.

ANNEXE 2

QUALITY GRADING OF SLICED VENEER SHEETS

Grade :	E (PRIME)	CHOIX I	CHOIX II	FACE - COUNTERFACE
Defects				
Sound sapwood ^{*1}	Veneers destined solely for decorative purposes (Burrs, Burls, Curly grain, diverse). The commercialisation of these veneers should be subject to a contract or negotiated agreement between the parties.	Accepted after reduction		≤ 1/10 of the width
Sound knots		To be negotiated according to the species		Admitted
Altered, loose knots		No	No	No
Pin knot ^{*2}		No	3 small, scattered, clear/ pear sheet	Admitted
Blister grain ^{*2}		No	Light	Admitted
Caterpillar grain ^{*2}		No	Light	Admitted
Bird's eye		No	No	Admitted
Spiral grain		Slope ≤ 3 %	Slope ≤ 3 %	Slope ≤ 3 %
Tearing		No	No	Light
Curly grain ^{*2}		No	No	Admitted
Thick streak		No	No	Admitted
Pinholes		No	To be negotiated	Admitted
Grub hole		No ^{*3}	No ^{*3}	Admitted
Rot		No	No	No
Blue stain		No	No	On 10 % of the sheet
Colour of heartwood		Uniform	Light variations	Variations admitted
Medullary stains		Light	Light	Admitted
Mineral stains		No	No	Admitted









* 1 This is the sapwood of species with differentiated sapwood. In the case of undifferentiated sapwood, sapwood is never considered a defect







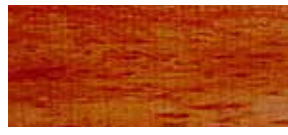



* 2 Except where a decorative effect is sought

* 3 For Wengé, 2 holes of moles are allowed per surface of 0.5 m² for choice I and per surface of 0.25 m² for choices II and III. For Teck I, 2 stitches per surface of 0.5 m² are allowed in front.










ANNEXE 3

GLOSSARY

Admitted defect	Agree without limits as long as the defect does not alter the mechanical strength of the veneer sheet.	
Starch	Organic substance stored by the tree for its alimentation. A wood rich in starch contains in abundance not only in the sapwood but also in the heartwood (wood with non-differentiated sapwood)	
Tearing/Flaking/Scraping	Fibres that are almost perpendicular to the surface of the veneer provoking the tearing of fibres. Can result in mechanical alteration of the veneer sheet	
Sapwood	Part of the wood outside of the heartwood. Sapwood contains living cells and transports the crude sap. Wood is said to contain differentiated sapwood when there is a difference in colour between the sapwood and the heartwood, and non-differentiated sapwood when there is no difference in colour	
Blade stain	Coloured traces left on the veneer by the rubbing of the cutting instruments. May also be caused by an overabundance of tannin.	
Blue stain	Coloured traces left on the veneer by the rubbing of the cutting instruments. May also be caused by an overabundance of tannin.	
Figured wood	Alteration of colour varying from pale blue to black, caused by fungi from the lyctidae family	
Bostryche	Gallery left in the wood by the larva of a dry wood insect of the Bostichidae family. The diameter of the gallery is in the region of 5 mm	
Burl	Protuberance around a group of picots, dormant buds or possibly even branches, giving very decorative veneers.	
Lignivorous fungi	Wood destroying fungi (see rot)	
Lignicolous fungi	Rot which installs itself in the wood, discolouring it (see blues stain) but not destroying its mechanical qualities	
Caterpillar grain	Series of small longitudinal cavities of a lens shaped form, on the bole of the log, disposed in lines of varying lengths giving the veneer a brilliant longitudinal sheen	
Heartwood	Interior zone which in a standing tree no longer contains living cells and where crude sap no longer flows	

Bark pocket	Bark that is partly or wholly embedded in the veneer sheet	
Thickness	Distance between the faces of a veneer sheet at the specified place for measurement. See EN 315	
Fissure/Split	Separation of fibres in the longitudinal sense.	
Fermentation	Stains appearing on the veneer, caused either by the logs being stored for too long in the park, or the veneer sheets being store for too long on top of each other before drying.	
Grain	General direction or disposition of fibres	
Spiral Grain	Grain which follows a spiral direction around the pith	
Shattering	Cracks on the veneer sheets resulting from the presence of felling defaults on the log (felling comb)	
Check	Straight, short and very slightly open surface crack. Generally resulting from check on the log	
Scrapping	See tearing	
Blister grain	Small longitudinal cavity in the form of a grain of barley on the bole of the log, giving the veneer sheet an almond coloured sheen	
Bird's eye	Small white stain in the form of a bird's eye appearing on the veneer sheet. Caused by a preventive bud.	
Log	Trunk of a felled tree	
Splicing	Action of assembling together two or more sheets of veneer	
Width	Distance between the edges of a veneer sheet at the specified place for measurement. Width is measured perpendicularly to the grain	
Light	Signifies that the surface occupied by the singularity must not exceed 10% of the total surface of the sheet (see measuring of the surface of defaults in part 3 of the main text, sawn veneer	
Length	Smallest distance between the extremities of the veneer sheet.	

Burl	Important ligneous outgrowth characterised by the presence of curly grain and giving very decorative veneers.	
Lyctus	Xylophage insect the larva of which attacks dried wood, as long as the wood pores are sufficiently large enough. The diameter of the gallery is around 1mm in size	
Curly grain	Synonym of burr (see burr)	
Grub (worm) hole	Gallery between 5 and 20 mm in diameter left in the wood by the larva of an insect of either the Bostrichidae or the Cerambycidae family	
Pin Knot	Small sound knot the diameter of which does not exceed 3 mm	
Pinhole	Worm hole not generally exceeding 2 mm in diameter	
Inactive pinhole (black)	Hole in which the walls of the gallery are a blackish colour. This defect is uniquely of an aesthetic order.	
Knot	Part of the branch included in the wood. The diameter of a knot is the average of its smallest and largest diameters.	
Unsound (altered) knot	Knot affected by rot	
Sound knot	Knot not showing any sign of rot	
Active pinhole (white)	Hole in which the walls of the gallery are the same colour as its environment. See Lyctus and Bostryche. There is a risk of contamination for the Lyctus	
Dry wood pinhole	Synonym of active pinhole. Caused by insects that are not preoccupied by the state of the woods humidity. Risk of contamination.	
Teck Sting	Section of the gallery dug in the Teak wood by the larva of the insect: Xyleutes ceramic	
Plain sawn	Veneers the face of which are tangential or approximately tangential to the growth rings.	
Full quarter sawn veneer	Veneers the faces of which are at an angle of 80° or more with the growth rings	

Quarter sawn veneer	Veneer the faces of which are approximately or totally perpendicular to the growth rings.	
Tropical veneers	Veneers originating from tree having grown in the regions situated between the tropic of Cancer and the tropic of Capricorn	
Raised ply	When the veneer sheet is on edge folded on itself. This manufacturing defect appears when the sheets are longer on the edges than in the middle	
Resin pocket	Longitudinal cavity in the wood containing or having contained resin.	
Rot	Decomposition of wood under the action of fungi or other micro-organisms creating a softening, a loss of mass and resistance, and often causing a change in texture and colour.	
Curly grain	Grain which follows a route constituted of irregular tangled curves	
Coarseness	Veneers presenting a coarse surface caused by upright standing fibres	
Mechanical pit sawing	Machine replacing manual sawing through mechanising it. Wood is fixed on a frame and placed vertically into a pit or shaft, and is then raised during the action of sawing.	
Singularity	Zone of wood different from that mostly encountered in a wood of good conformation. The «default» can be a commercial synonym of singularity.	
Crosscut allowance	Additional length to that of the nominal length, in order to compensate for the loss of length due to the presence of end splits.	
Medullary stains	Pockets of parenchyma marking the veneer with a brown sheen. This defect is inherent to certain species (iganganga, ozigo and others).	
Mineral stains	Contrasting stains or veins appearing on the veneer the causes of which are diverse (soil, deposits of calcium salts or others).	
Teredo worm	Orifices appearing on the veneer caused by a marine borer attacking the wood in log form as they float in the lagoons or estuaries awaiting to be loaded aboard a vessel.	
Moisture content	The rate or degree of the humidity of wood is the relationship of the mass of water that it contains to the mass of totally dry wood. The rate of humidity is measured with the aid of a humidimeter	
Tolerated	Signifies that the defect is tolerated, but that its limits must be defined by the parties	
Gum mark	Trace resembling a whitish trail left by the knife or blade to the passage of a pocket of gum.	
Sapwood color variation	Modification of the natural coloring of the wood, due to fungal attack, not associated with loss of resistance.	

ANNEXE 4

TREATMENT WITH ISMP 15

The ISPM/NIMP (International Standards for Phytosanitary Measures) standard is established by the IPPC (International Plant Protection Convention), in connection with the FAO (Food and Agriculture Organization of the United Nations). This standard provides measures to limit the risk of the occurrence and spread of harmful organisms in timber packaging. The treatment involves heating the timber at a minimum core temperature of 56°C for at least 30 minutes. These conditions are lethal to insects in all their forms (eggs, larva*, nymphs*, imago*). Drying of the timber using an artificial dryer (KD - kiln

dried) enables such treatment. The standard recognises this process provided that the prescribed target moisture values are met. This is a curative treatment without any guarantees over time (non-preventive). Fumigation is another technique that meets this requirement. Fumigation is a timber treatment that uses toxic gases: methyl bromide, hydrogen cyanide, hydrogen phosphide, ethylene oxide, carbon dioxide, etc. In some European countries, this operation must be carried out by a company that is approved by a competent authority (usually a ministry).

ANNEXE 5

LIST OF REFERENCE STANDARDS

EN 844 – Round and sawn timber. Terminology (1998)

EN 635-1 – Plywood – Classification by surface appearance – General. Part 1 (1995)

EN 635-2 – Plywood – Classification by surface appearance – Hardwood. Part 2 (1995)

EN 313-1 – Plywood – Classification and Terminology – Classification. Part 1 (1996)

EN 313-2 – Plywood – Classification and Terminology – Terminology. Part 2 (2000)

ISO 2426-1 – Plywood – Classification by surface appearance – General. Part 1 (2000)

ISO 2426-2 – Plywood – Classification by surface appearance – Hardwood. Part 2 (2000)

ISO 2429 – Plywood – Veneer plywood with rotary cut veneer for general use – Classification by appearance of panels with outer veneers of broadleaved species of tropical Africa (1974) (standard removed from collection).

Rules ACCPBD (Canada) – Gradin grules for veneers by surface appearance (2000)

Terminology of round and sawn tropical timber– ATIBT (2001).





FOR SUSTAINABLY MANAGED TROPICAL FORESTS

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