ACON TIMBER

Acon Timber S.A.U. Sawmill log quality guide

Description of pine quality characteristics and quality standards (Pinus taeda, Pinus elliottii, Pinus elliottii-caribea)

Period 2023/2024

Log quality requirements

1. General

1.1 Species

Acon Timber will only accept pine logs from the following pine species:

1) Pinus taeda,
2) Pinus elliottii,
3) Pinus elliottii - Pinus caribea hondurensis (hybrid).

The different species will be received, processed and paid for in the same way. Quality requirements and price will also be the same.

Taeda pine

Eliotis pine

Hybrid pine

1.2 Conditions of the logs

Only freshly cut logs in good phytosanitary condition and free from external elements (stones, metals, mud, etc.) will be accepted.

The logs shall be delivered to the sawmill within 3 days after harvesting.

The logs are to be delivered with bark. Logs with some missing bark due to mechanical harvesting will be accepted.

The logs must be cylindrical in shape, with minimal taper.
Logs that have forked branches or branches forming acute angles to the trunk, along with a crown of branches, will not be accepted.

Forked branches

Branches with acute angles

1.3 Classification of logs

Logs need to be classified based on their diameters to be accepted. These diameters should fall within the specified range of maximum and minimum values as outlined in the purchase agreement.

The categorization of diameters and the evaluation of the quality of each log will be performed utilizing results obtained from the on-site classification system specifically designed for logs with bark. This system is equipped with a 3D scanner, X-ray capabilities, and a metal detector.

Logs with different diameters will be accepted

1.4 Diameter and length measurements

The measurement of the logs is carried out individually with a scanner. The diameter at the "narrow tip with bark" is taken for classification. Electronic scanning is employed to classify the lengths, achieved as logs pass through the scanner. The excess to the nominal length is also measured. The length tolerance will be detailed in each contract.

In case the cuts are not perpendicular, the length is determined by the minimum length between the cuts. Diameters

and lengths are calculated as established by the ÖNORM L1021 standards.

The supplier or owner will receive a report on the diameter classification, volume and quality of each supplied log. The diameter range required for the narrower end and the specific lengths will be established within the agreements.

2.2 Knots

Sound knots: The knot is well connected all the way round to the rest of the wood and has the same color. It shall be accepted in accordance with the parameters.

Dead knots: The knot is partially or completely unattached to the wood and is dark in color. Accepted according to the parameters.

Rotten knot: Biotic rot following the branch inside the trunk. (Biomass)
Very large knots: Any knot that exceeds the parameters and makes sawing difficult will be considered as extremely large knot and the log will be considered as biomass. (See Annex).

Knots are permitted if they do not affect the quality of the sawing.

Whorls: Logs with this defect will not be accepted and will be considered as biomass.

Logs with many and big knots will not be accepted.
See more pictures in the Annex.

2.3 Debranching

Branches must be cleanly removed flush with the surface of the log.

Note: If this cannot be achieved with a single-pass delimbing motion, the logs must be delimbed using a two-pass procedure (forward and backward), or manually with a chainsaw.

Annexed are the detailed permitted and non-permitted delimbing qualities.

Correct delimbing

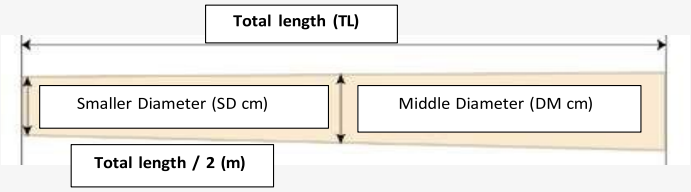
Incorrect delimbing

2.4 Taper

Taper is the decrease in diameter along the length of a log.
The taper is measured electronically and is indicated in linear centimeters. The measurement is made from the middle of the log to the end of the thinner tip.

It will be accepted if standards are met.

Taper= $\frac{DM-DF}{(LT/2)}$



2.5 Maximum allowed measurements.

Maximum girth with bark: 50 cm.
Maximum accepted length: 3.3 m.

2.6 Elephant foot

The area of a tree where the tree roots meet the trunk is called elephant foot.

Elephant foot will not be accepted as it cannot be processed in the log sawmilling.

Root collar

2.7 Curvature

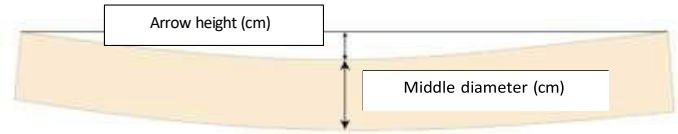
The curvature is the deviation of the longitudinal axis from the straight line of the actual length. The curvature is measured electronically and can be either one-sided or two-sided.

One-sided bend is defined by a single deflection.

Two-sided bending can be observed by two deflections or multiple planes. The larger of these two arrow heights is the relevant one.

The bend is measured as a percentage by the maximum deflection at that point in reference to the imaginary line between the two ends of the log divided by the average diameter (grey line).

$$Bend\ [\%] = \frac{arrow\ height}{middle\ diameter} * 100$$



2.8 Blue stains

Blue stains can be seen at the ends and on the surface of logs. Blue stains occur several days after harvest and will not be accepted.

2.9 Pieces of metal

Logs with pieces of metal inserted in them will not be accepted.

2.10 Insects

Logs with recent and/or old visible damage caused by insects, such as holes, beetle or sirex galleries, etc., will not be accepted.

General parameters and considerations for proper log classification

	DIAMETERS AT THE SMALL END INCLUDING BARK			BIOMASS
	15 to 20 CM	20,1 to 25 CM	25,1 to 30 CM	
Knots in general	Healthy knots up to 8 cm	Healthy knots up to 10 cm	Healthy knots up to 12 cm	Healthy knots larger than specified in each diameter class and all dead knots will be considered biomass.
Limits on the Size and Quantity of Knots	6 healthy knots up to 8 cm/m	6 healthy knots up to 10 cm/m	6 healthy knots up to 12 cm/m	More than 6 healthy and/or dead knots and the specified branch diameters will be considered biomass for each diameter class.
Debranching and crown of branches	We request debranching to be flush, and it can be accepted with a tolerance of 2 cm. Crowns with knots larger than 8 cm will not be accepted.			It will be considered biomass.
Elephant Foot	They will not be accepted as sawable quality			It will be considered biomass.
Minimum Log Diameter	Logs with a small end diameter of 15 to 30 cm including bark will be accepted.			Logs smaller than 15 cm will be considered biomass.
Maximum Log Diameter				Logs larger than 30 cm and up to 33 cm in small end diameter will be considered within the category of 25 to 30 cm
Log Lengths	The required lengths will be 2.55 m and 3.10 m with a tolerance of + -3. Logs will be delivered in each of the specified lengths and/or in both lengths simultaneously (if explicitly stated in the supply offer or via email) to optimize the utilization of the trees.			- Any log shorter than 2.52 m and longer than 3.3 m will be considered biomass. - Any log shorter than 3.07 m will fall into the 2.55 m category. - Lengths within the parameters of 2.52 - 2.58 m and 3.07 - 3.13 m will be paid according to the measurement determined by the scanner. - Lengths longer than 2.58 m and 3.13 m will be paid as 2.55 m and 3.10 m, respectively. - Any difference will be paid as biomass up to 2% of the total income for the billing period; exceeding this difference will not be considered.
Taper	It will be accepted up to 3.4 cm per linear meter.			More than 3.4 cm per linear meter will be considered biomass
Curvature	Maximum allowed 32% in a single curve, and if it is a double curve, up to 18%.			Greater than 32% deviation and less than 18% will be considered biomass.
Blue Stain	Logs with blue stain will not be accepted as sawable quality.			Logs presenting this issue will be considered biomass.
Metals	Logs with the presence of metals will not be accepted.			
Insects	Logs with the presence of insects will not be accepted.			

CLASIFICATION	DESIGANTION	USE
Pruned (not considered now)	**A**	Sawable
Sawable (with excellent characteristics)	**BC**	Sawable
Sawable (with limit parameters)	**CX**	Sawable
Biomass	**IH**	Biomass
Blue Stain	**BL**	Biomass
Large knots (exceeding the allowed limit)	**ND**	Biomass
Not Sawable	**NS**	Biomass
Metals	**MET**	Biomass

Comments:

All logs that do not comply with the "general considerations" for sawlogs will not be considered fit for sawmilling or be classified as biomass. Those classified as biomass will be paid at the price established for this category. The prices shall be specified in each contract.

If at the time of receipt of the cargo more than 10% of the above-mentioned requirements are not met, 100% of the cargo will not be accepted. Freight from the origin to the new destination will be at the supplier's expense.

Photographs will be taken of each of the incoming cargoes and will be available for a period of 2 months for verification by the owner or contractor in the event of any discrepancies.

The following will not be accepted:

- Logs from places where there has been a forest fire.
- Logs from trees whose resin has been extracted; the upper part (after checking at the sawmill) may be accepted.