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Ģagani les - Razvrġļanje listavcev po videzu - 1. del: Hrast in bukev

Sawn timber - Appearance grading of hardwoods - Part 1: Oak and beech

Schnittholz - Sortierung nach dem Aussehen von Laubholz - Teil 1: Eiche und Buche

Bois sciés - Classement d'aspect des bois feuillus - Partie 1: Chene et hetre

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ICS:

79.040	Les, hlodovina in žagan les	Wood, sawlogs and sawn timber

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EUROPEAN STANDARD

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Sawn timber - Appearance grading of hardwoods - Part 1: Oak and beech

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 975-1:2009) has been prepared by Technical Committee CEN/TC 175 “Round and sawn timber”, the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2009, and conflicting national standards shall be withdrawn at the latest by September 2009.

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1 Scope

This European Standard specifies the rules determining the quality of appearance graded sawn timber. It describes various grades of temperate hardwood rough sawn timber and regularized timber for which it lays down denominations and definitions. It also gives rules for composition and acceptance of batches.

This standard gives minimum requirements for each grade classification. Sawn timber not included within limits given in this standard may be defined, if necessary, by contract specifications established on the basis of this standard.

This standard applies to grading of green and dried timber. Characteristics apply at the time of grading.

This standard does not apply to the strength grading of structural timber or to sawn timber for pallets.

This standard is applicable to the following products:

a) **Oak sawn timber,** in the following categories:

   1) Un-edged boards: individual selected pieces and boules;

   2) Square edged timber and strips (not exceeding 41 mm thickness);

   3) Baulks (sum of thickness + width ≥ 200 mm and thickness ≥ 80 mm).

b) **Beech sawn timber,** in the following categories:

   1) Un-edged boards: individual selected pieces and boules;

   2) Square edged timber and strips;

   3) Prepared timber (dried timber).

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 844-1:1995, *Round and sawn timber – Terminology – Part 1: General terms common to round timber and sawn timber*

EN 844-3:1995, *Round and sawn timber – Terminology – Part 3*: *General terms relating to sawn timber*

EN 844-4:1997, *Round and sawn timber – Terminology – Part* 4: *Terms relating to moisture content*

EN 844-6:1997, *Round and sawn timber – Terminology – Part 6: Terms relating to dimensions of sawn timber*

EN 844-7:1997, *Round and sawn timber – Terminology – Part 7: Terms relating to anatomical structure of timber*

EN 844-9:1997, *Round and sawn timber – Terminology – Part 9: Terms relating to features of sawn timber*

EN 844-10:1998, *Round and sawn timber – Terminology – Part 10: Terms relating to stain and fungal attack*

EN 844-11:1998, *Round and sawn timber – Terminology – Part 11: Terms relating to degrade by insects*

EN 844-12:2000, *Round and sawn timber – Terminology – Part 12: Additional terms and general index*

EN 1310, *Round and sawn timber – Method of measurement of features*

EN 1311, *Round and sawn timber – Method of measurement of biological degrade*

EN 1313-2, *Round and sawn timber – Permitted deviations and preferred sizes – Part 2: Hardwood sawn timber*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 844-1:1995, EN 844-3:1995, EN 844-4:1997, EN 844-6:1997, EN 844-7:1997, EN 844-9:1997, EN 844-10:1998, EN 844-11:1998 and EN 844-12:2000 and the following apply.

3.1
dried timber
timber with a stipulated reduced moisture content

3.2
green timber
timber that has not been dried to or below the fibre saturation point

NOTE Green timber has a moisture content normally above 30 %.

[EN 844-4:1997]

3.3
width or length reduction
notional decrease in the actual dimensions of a board to exclude features that may subsequently be removed

4 Method of determination of sawn timber quality

4.1 Rules for grading

Hardwood (oak and beech) can be put into grades using the principles laid down in 4.2, the criteria defined in 4.3 and the following tables:

— Table 2 gives rules for grading oak un-edged boards;

— Table 3 gives rules for grading oak strips and square edged timber;

— Table 4 gives rules for grading oak baulks;

— Table 5 gives rules for grading beech un-edged boards;

— Table 6 gives rules for grading beech strips and square edged timber;

— Table 7 gives rules for grading beech prepared timber.

4.2 Grading principles

4.2.1 Assessment of the quality

For individual selected boards and boules grading is made on the faces. For other pieces grading is made on faces and edges. The size, position and frequency of features, sawing defects and deteriorations are taken into account. Non-conformity with the conditions applicable to any one of these elements is sufficient to downgrade the piece.

Dimensional variation is not taken into account for quality grading of the pieces. It is already covered by EN 1313-2 or by any specific requirements defined contractually.

Only the following categories can be reduced in width and/or length:

— Individual selected boards,

— boules.

4.2.2 Cases of un-edged boards

4.2.2.1 Individual selected boards

No more than 10% of pieces one grade lower than the lowest one stated for the batch is allowed. For mixed grade batches the minimum proportion of each grade shall be identified.

4.2.2.2 Boules

Recognising the characteristics inherent in a growing tree, a boule may comprise a number of un-edged boards of different grades.

Proportion of grades allowed within a boule is given in Table 1:

Table 1 — Proportion of grades allowed within one boule

≥ 65%	Stated grade
< 25%	One grade lower
< 10%	Two grades lower

Pieces presenting features which are not in conformity with the boule grade shall be graded in accordance with reduced width rules (see 3.2).

4.3 Criteria to be taken into account

4.3.1 General

Quality is determined on the basis of the rules in tables given in this standard and measurement rules according to EN 1310 and EN 1311.

The moisture content of the timber at the time of grading shall be stated.

The following criteria are sufficient for the appearance grading:

4.3.2 Criteria linked to the structure of the timber

— Knots (size, nature, degree of intergrowth, frequency);

— Shakes and checks;

— Slope of grain;

— Bark-pocket;

— Sapwood (for oak); unless specified in the contract, sound sapwood is permitted without limit in all grades;

NOTE Unsound sapwood is considered according to grading criteria given in Tables of Clause 7.

— Included sapwood.

4.3.3 Sawing characteristics

— Boxed heart;

— Exposed pith;

NOTE Presence of pith on un-edged boards is not a qualitative element for downgrading but width reduction may be considered.

— Wane.

4.3.4 Warp

— Bow;

— Spring;

— Cup;

— Twist.

4.3.5 Fungal and insect attacks

4.3.6 Stains

— Red heart (in beech);

— Black streaks;

— Dote;

— Rot;

— Brown oak;

— Other discolorations.

4.3.7 Other characteristics

Characteristics as texture, grain, quarter and plain sawn timber are not taken into account in the grading.

5 Denomination of grades

5.1 General

The denomination includes from three to six characters.

5.1.1 The first character is the species' initial in Latin:

— **Q** for oak;

— **F** for beech.

5.1.2 The next character indicates the type of product:

— **B** for boules;

— **S** for individual selected boards;

— **F** for strips and square edged timber;

— **P** for baulks;

— **D** for prepared timber.

5.1.3 The next character indicated the quality grade.

— **"A"** indicates exceptional quality;

— **1, 2 , etc.** represent the other grades.

In some cases, these are subdivided, denoted by the addition of lower case letters and suffixes (see below).

The grades for oak and beech are specified in 5.2 and 5.3.

5.2 Oak (Q)

— Boules	Q-BA – Q-B1 – Q-B2 – Q-B3 – Q-B4
— Individual selected boards	Q-SA – Q-S1 – Q-S2 – Q-S3 – Q-S4
— Strips and square edged timber	Q-F1a – Q-F1b – Q-F2 – Q-F3 – Q-F4
— Baulks	Q-PA – Q-P1 – Q-P2

For strips and square edged timber, the addition, at the end of class denomination:

— Of the letter X indicates the presence of sapwood on one face of strips or square edged pieces in limit given by Table 3,

— Of letters XX indicates the presence of sapwood on all faces and edges of strips or square edged pieces if it is over the limit given by Table 3.

5.3 Beech (F)

— Boules	F-BA – F-B1 – F-B2 – F-B3
— Individual selected boards	F-SA – F-S1 – F-S2 – F-S3
— Strips and squared edged timber	F-F1 – F-F2 – F-F3
— Prepared timber	F-DA – F-D1 – F-D2

The addition of the letter R at the end indicated the presence of red heart.

6 Acceptance of batches

6.1 Un-edged boards

Unless otherwise specified by the purchase, reception with quality acceptance of individual selected un-edged boards and boules shall take place on the seller's premises to allow width or length reduction to be carried out if necessary (see 4.2.2).

6.2 Square edged timber

Reception can be carried out either on the seller's or the buyer's premises, as mutually agreed, using random sampling method given in CEN/TS 12169.

7 Grading rules

7.1 Grading face

a) For individual selected un-edged boards

Take into account features which are on the "falling" face, which is defined as the face which is visible on the production line, after sawing.

In the case of specific measurement, the quality is determined by the face, the width of which is measured.

b) For boules

Take into account features which are on the upper face in the stacking position to form the boule.

c) For strips and square edged timber

Take into account features which are on the best face.

7.2 Un-edged boards

7.2.1 Grading area

A notional area of 0,2m x 2,0 m containing the maximum number or the largest features on the grading face determines the grade of each board.

Features located less than 10 cm from edges or ends of un-edged boards are not considered, unless the resulting width and length is insufficient to inscribe in an area of 0,20 m x 2 m. This manner of doing is not valid for Q-BA and Q-SA classes; only width reduction can be used and it is limited to 1/3 of the width.

7.2.2 Presence of a solitary feature (only one)

Un-edged boards cannot be downgraded by the presence of only one feature which is not accepted in a grading. Consequently, this feature is accepted with a width or length reduction.

7.3 Strips and square edged timber

7.3.1 Knots

Take into account knots in the most penalized linear metre or the whole piece if the length is < 1 m.

Equivalence concept, except for Q-F1a. This allows any repartition of knots, providing:

— each knot diameter is under maximum allowed diameter;

— the sum of diameters is below the maximum permitted.

Example for QF-2:

— the maximum allowed diameter of knot is 25 mm;

— the maximum number is 3, so the sum is 75 mm (25 mm x 3).

One possible repartition is 4 knots of 10 mm, 1 knot of 15 mm and 1 knot of 20 mm.

7.3.2 Other features

These features are taken into account on the whole piece.

7.4 Baulks

Take into account features on the whole piece, except for dead knots where the maximum number is determined by linear metre.