SLOVENSKI STANDARD
SIST EN 1310:2001

01-marec-2001

Okrogli in žagani les - Metode merjenja značilnosti

Round and sawn timber - Method of measurement of features

Rund- und Schnittholz - Messung der Merkmale

Bois ronds et bois sciés - Méthode de mesure des singularités

Ta slovenski standard je istoveten z: **EN 1310:1997**

ICS:

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

SIST EN 1310:2001 **en**

EUROPEAN STANDARD **EN 1310**

NORME EUROPÉENNE

EUROPÄISCHE NORM April 1997

ICS 79.040

Descriptors: wood, sawlogs, sawn timber, appearance, defects, measurements

English version

Round and sawn timber - Method of measurement of features

Bois ronds et bois sciés - Méthode de mesure des singularités

Rund- und Schnittholz - Messung der Merkmale

This European Standard was approved by CEN on 1997-03-05. CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart,36 B-1050 Brussels

Content

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 175 "Round and sawn timber", the Secretariat of which is held by AFNOR.

This standard is one of a series, being methods of measurement for round timber and sawn timber.

Other standards in this series are :

EN 1309 –1	:	Round and sawn timber - Method of measurement of dimensions – Part 1: Sawn timber
prEN 1309 –2	:	Round and sawn timber - Method of measurement of dimensions – Part 2: Round timber
EN 1311	:	Round and sawn timber - Method of measurement of biological degrade.

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 October 1997, and conflicting national standards shall be withdrawn at the latest by October 1997.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This standard specifies the methods of measuring features taken into account in the visual grading of sawn, processed and round timber for appearance or to assess its mechanical properties. It does not apply to the strength grading of structural timber (see EN 518 and EN 519).

This standard applies to hardwood and softwood sawn timber, both square edged and unedged, to processed timber and to round timber. This standard does not apply to tropical timber.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 844 – 1	Round and sawn timber – Terminology – Part 1 :General terms common to round timber and sawn timber
EN 844 – 2	Round and sawn timber – Terminology – Part 2: General terms relating to round timber
EN 844 – 3	Round and sawn timber – Terminology – Part 3: General terms relating to sawn timber
EN 844 – 4	Round and sawn timber – Terminology – Part 4: Terms relating to moisture content
EN 844 – 5	Round and sawn timber – Terminology – Part 5: Terms relating to dimensions of round timber
EN 844 – 6	Round and sawn timber – Terminology – Part 6: Terms relating to dimensions of sawn timber
EN 844 – 7	Round and sawn timber – Terminology – Part 7: Terms relating to anatomical structure of timber

EN 844 – 8	Round and sawn timber – Terminology – Part 8: Terms relating to features of round timber
EN 844 – 9	Round and sawn timber – Terminology – Part 9: Terms relating to features of sawn timber
prEN 844 – 10	Round and sawn timber – Terminology – Part 10:Terms relating to stain and fungal attack
prEN 844 – 11	Round and sawn timber – Terminology – Part 11: Terms relating to degrade by insects
EN 518	Structural timber – Grading – Requirements for visual strength grading standards
EN 519	Structural timber – Grading – Requirements for machine strength graded timber and grading machines

3 Definitions

For the purposes of this standard the definitions in the standards listed in clause 2 apply.

4 Sawn and processed timber

4.1 Knots

For the purposes of this standard, knots in sawn timber are classified according to their shape, size and position. Size is derived from the formulae given below and expressed in millimetres or as a percentage of a dimension of the surface where the knot occurs. The following symbols are used in the formulae, with suffixes as required:

d is the size, in millimetres;
a is the width on the minor axis, in millimetres;
b is the width on the major axis, in millimetres.

Two methods for measuring knots are given : "General method" for appearance grading and "alternative method" where the strength of the piece is to be assessed. If strength grading is required, reference shall be made to EN 518 for visual grading and EN 519 for machine grading. When the standard is applied, it shall be stated whether the "general" or the "alternative" method is used.

4.1.1 General method

Consider each knot individually .
Measure knots on a part or all the surface of the face(s) or the edge(s) taken as specified by the grading rule used.
Figures 1 to 6 show the categories of knots that shall be measured. Each figure is accompanied by the corresponding formula that is generally the arithmetic average of the width on the minor (*a*) and major (*b*) axis of the knot ($d = (a+b)/2$). Then measure the width on the minor and the major axis and derive the size from the formula .

NOTE: The maximum size of each kind of knot and the maximum number of these largest knots per piece or per unit length is stated in the grading standards. For knots that are smaller, a larger number may be permitted, but the sum of the sizes of such knots should not exceed the maximum permitted size multiplied by the maximum permitted number of the largest knots. See formula below:

$$d_1 + d_2 + \ldots\ldots + d_n \leq n_{max} x\ d_{max}$$

where:
n_{max} is the maximum permitted number of knots;
d_1 , d_2, $\ldots\ldots d_n$ are the sizes of the individual knots, in millimetres;
d_{max} is the maximum permitted size of a knot, in millimetres.

If a grading standard permits the use of the method given in the above note this shall be stated in the grading standard.

4.1.1.1 Round knot

Formula: $d = \frac{a + b}{2}$

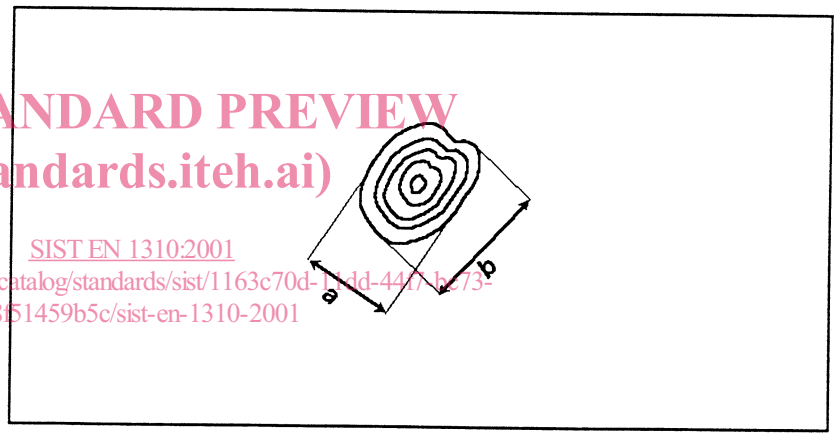
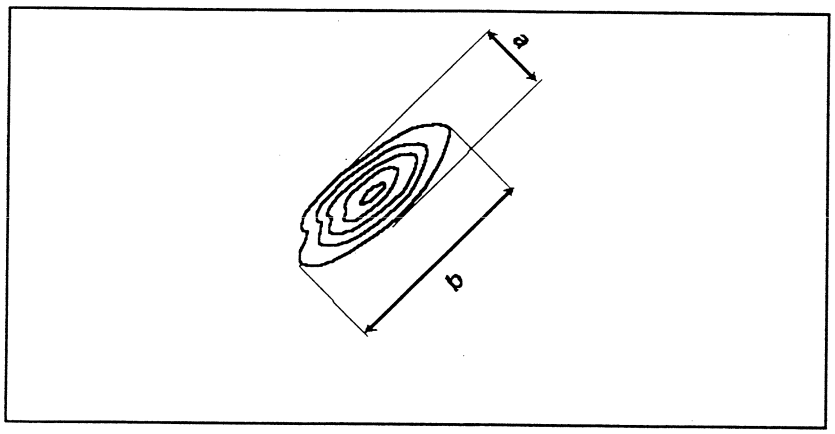


Figure 1 : Round knot

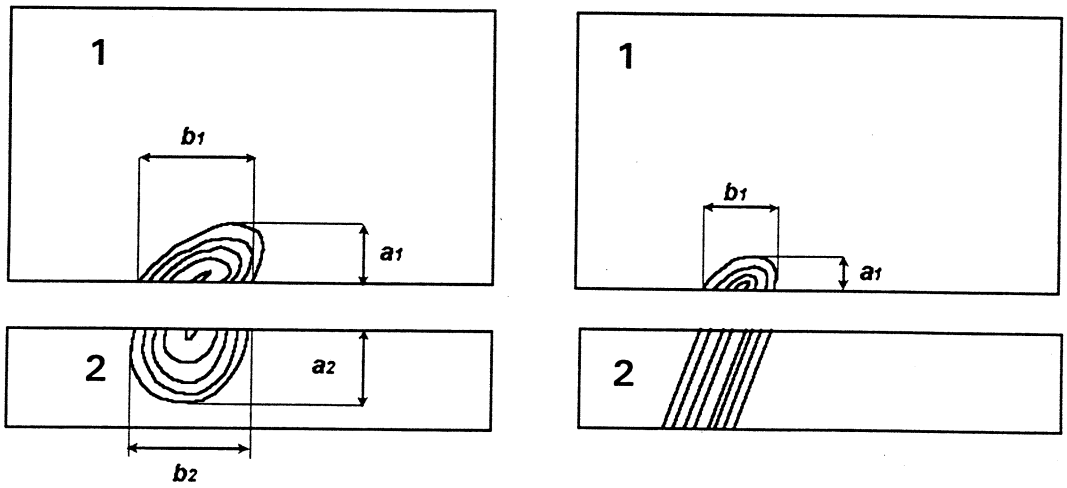
4.1.1.2 Oval knot



Formula: $d = \frac{a + b}{2}$

Figure 2: Oval knot

4.1.1.3 Arris knot



KNOT A **KNOT B**

1– On Faces; 2 – On edges (Knot B: not measured, record its presence)

Figure 3: Arris knot

Formulae:

on face (Knot A and Knot B) : $d = \frac{a_1 + b_1}{2}$

on edge (Knot A) : $d = \frac{a_2 + b_2}{2}$

4.1.1.4 Spike knot

Depending on the grading rule used,

a) use the formula: $d = \frac{a + b}{2}$

or

b) not measured, record its presence.

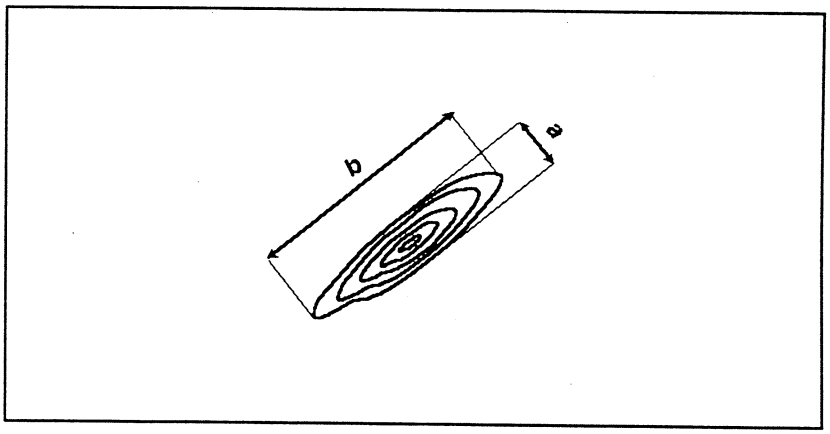


Figure 4: Spike knot

4.1.1.5 Splay knot

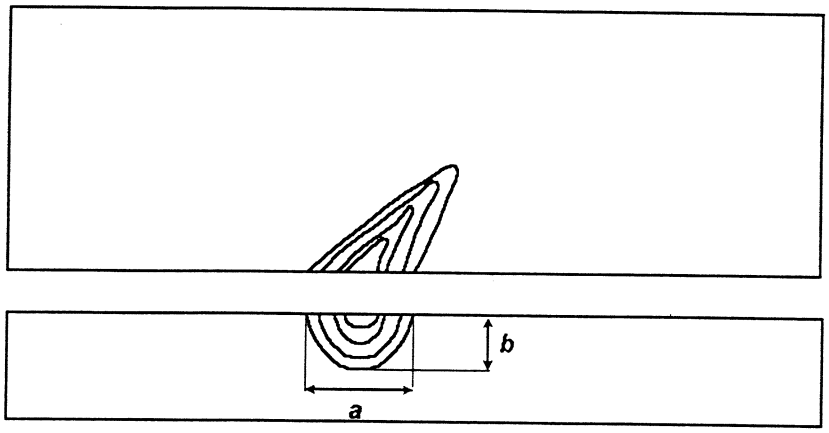


Figure 5: Splay knot

Depending on the grading rule used,

a) measure on the edge only and use the formula: $d = \frac{a + b}{2}$
or
b) not measured, record its presence.

4.1.1.6 Branched knot

Depending on the grading rule used,
a) not measured, record its presence
or
b) record the number of knots in a unit of length.

4.1.1.7 Knot cluster

Measure the individual knots.

4.1.1.8 Cat's paw

Measure the total size of the knot cluster.

Formula: $d = \frac{a + b}{2}$

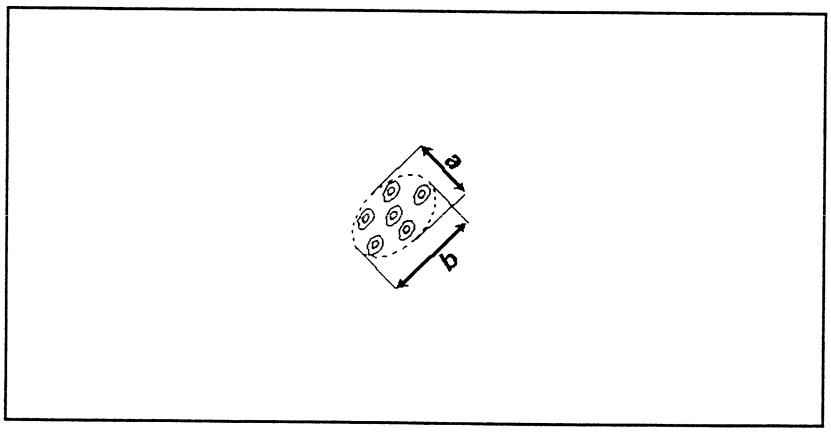


Figure 6: Cats'paw

4.1.2 Alternative method

This method is not used for unedged timber.
Consider knots only on a face and/or an edge where they appear cut transversely or obliquely.

Figures 7 to 12 show the categories of knots that shall be measured. The size shall be the width of the knot or knot cluster, measured at right angles to the longitudinal axis of the piece.

4.1.2.1 Round knot

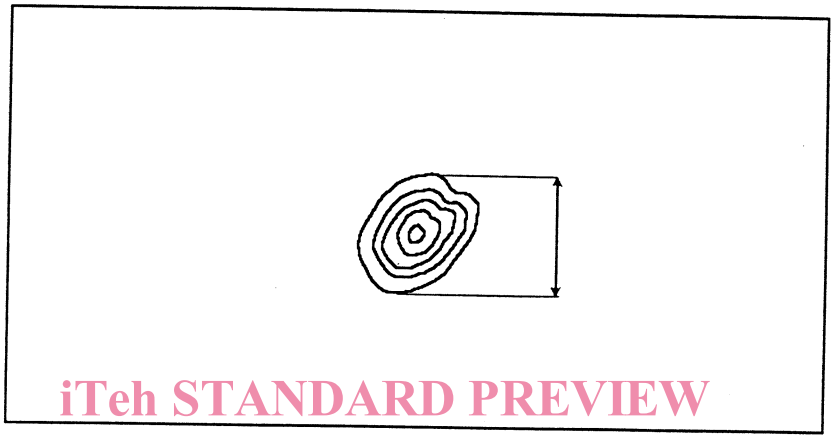
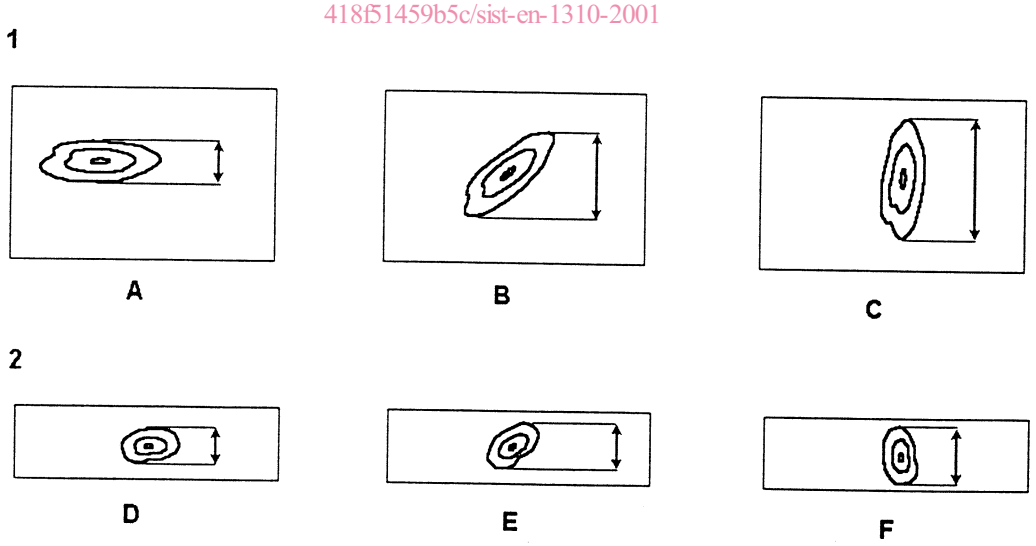


Figure 7: Round knot

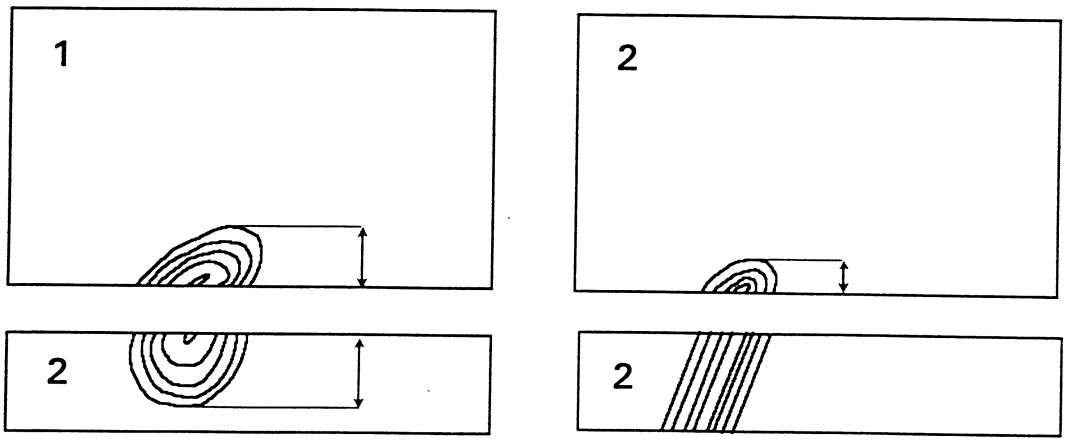
4.1.2.2 Oval knot



1 -On faces ; 2- On edges

Figure 8: Oval knot

4.1.2.3 Arris knot



KNOT A KNOT B

1 – On faces; 2 – On edges (Knot B: not measured, record its presence)

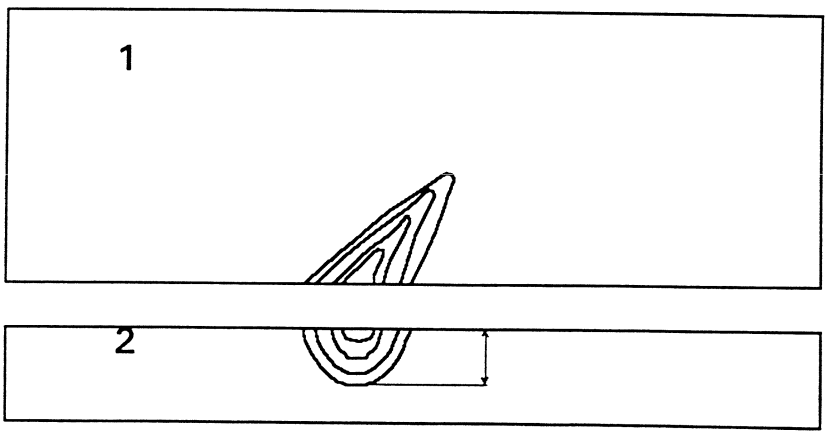
Figure 9: Arris knot

4.1.2.4 Spike knot

Figure 10: Spike Knot

4.1.2.5 Splay knot

Measure on the edge where it has been transversely cut.



1 – On faces; 2 – On edges

Figure 11: Splay knot