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Interested committees:

Title: BS EN 1995-3 Eurocode 5 - Design of timber structures

Part 3: Execution rules

Please notify the secretary if you are aware of any keywords that might assist in classifying or identifying the standard or if the content of this standard

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- iii) requires additional national guidance or information

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

English Version

Eurocode 5 - Design of timber structures - Part 3: Execution

Eurocode 5 - Calcul des structures en bois - Partie 3:
Exécution

Eurocode 5 - Bemessung und Konstruktion von
Holzbauten - Teil 3: Ausführung

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 250.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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 CEN-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document prEN 1995-3:2023 has been prepared by Technical Committee CEN/TC 250 “Structural Eurocodes”, the secretariat of which is held by BSI. CEN/TC 250 is responsible for all Structural Eurocodes and has been assigned responsibility for structural and geotechnical design matters by CEN.

This document is currently submitted to the CEN Enquiry.

The first generation of EN Eurocodes was published between 2002 and 2007. This document forms part of the second generation of the Eurocodes, which have been prepared under Mandate M/515 issued to CEN by the European Commission and the European Free Trade Association.

The Eurocodes have been drafted to be used in conjunction with relevant execution, material, product and test standards, and to identify requirements for execution, materials, products and testing that are relied upon by the Eurocodes.

The Eurocodes recognize the responsibility of each Member State and have safeguarded their right to determine values related to regulatory safety matters at national level through the use of National Annexes.

0 Introduction

0.1 Introduction to the Eurocodes

The Structural Eurocodes comprise the following standards generally consisting of a number of Parts:

- EN 1990, *Eurocode: Basis of structural and geotechnical design*
- EN 1991, *Eurocode 1 — Actions on structures*
- EN 1992, *Eurocode 2 — Design of concrete structures*
- EN 1993, *Eurocode 3 — Design of steel structures*
- EN 1994, *Eurocode 4 — Design of composite steel and concrete structures*
- EN 1995, *Eurocode 5 — Design of timber structures*
- EN 1996, *Eurocode 6 — Design of masonry structures*
- EN 1997, *Eurocode 7 — Geotechnical design*
- EN 1998, *Eurocode 8 — Design of structures for earthquake resistance*
- EN 1999, *Eurocode 9 — Design of aluminium structures*
- New parts are under development, e.g. Eurocode for design of structural glass

The Eurocodes are intended for use by designers, clients, manufacturers, constructors, relevant authorities (in exercising their duties in accordance with national or international regulations), educators, software developers, and committees drafting standards for related product, testing and execution standards.

NOTE Some aspects of design are most appropriately specified by relevant authorities or, where not specified, can be agreed on a project-specific basis between relevant parties such as designers and clients. The Eurocodes identify such aspects making explicit reference to relevant authorities and relevant parties.

0.2 Introduction to EN 1995 (all parts)

EN 1995 (all parts) applies to the design of timber structures and gives specific design rules for buildings and civil engineering timber works.

EN 1995 (all parts) complies with the principles and requirements for the safety and serviceability of structures and the basis of design and verification that are given in EN 1990.

EN 1995 (all parts) addresses only requirements for mechanical resistance, serviceability, durability and fire resistance of timber structures. Other requirements, e.g. concerning thermal or sound insulation, are not considered.

EN 1995 is subdivided in various parts:

EN 1995-1-1, *Eurocode 5 — Design of timber structures — Part 1-1: General rules and rules for buildings*

EN 1995-1-2, *Eurocode 5 — Design of timber structures — Part 1-2: Structural fire design*

EN 1995-2, *Eurocode 5 — Design of timber structures — Part 2: Bridges*

EN 1995-3, *Eurocode 5 — Design of Timber Structures — Part 3: Execution*

CEN/TS 19103, *Design of timber structures — Structural design of timber-concrete composite structures – Common rules and rules for buildings*

0.3 Introduction to EN 1995-3

EN 1995-3 applies to the execution of timber structures to achieve the intended level of safety and serviceability during their design service life, as given by EN 1990 and EN 1995.

This document has the following main functions:

- to transfer the requirements set during design to the constructor i.e. to be a link between design and execution;
- to give advice for supervision and inspection of timber structures.

This document can be used to give a set of standardized technical requirements for the execution when ordering a timber structure.

In order to achieve these functions, a set of documents and drawings giving all information required for the execution of the work shall be available before the start of the execution. This set of documents is referred to as the “execution specification” in this document. This document leaves a number of items open to be decided in the execution specification.

0.4 Verbal forms used in the Eurocodes

The verb “shall” expresses a requirement strictly to be followed and from which no deviation is permitted in order to comply with the Eurocodes.

The verb “should” expresses a highly recommended choice or course of action. Subject to national regulation and/or any relevant contractual provisions, alternative approaches could be used/adopted where technically justified.

The verb “may” expresses a course of action permissible within the limits of the Eurocodes.

The verb “can” expresses possibility and capability; it is used for statements of fact and clarification of concepts.

0.5 National Annex for EN 1995-3

National choice is allowed in this standard where explicitly stated within notes. National choice includes the selection of values for Nationally Determined Parameters (NDPs).

The national standard implementing EN 1995-3 can have a National Annex containing all national choices to be used for the design of buildings and civil engineering works to be constructed in the relevant country.

When no national choice is given, the default choice given in this standard is to be used.

When no national choice is made and no default is given in this standard, the choice can be specified by a relevant authority or, where not specified, agreed for a specific project by appropriate parties.

National choice is allowed in EN 1995-3 through notes to the following clauses:

Table 4.1	Table 6.1	Table 6.2	Table 6.3
Table 6.4	Table 6.5	Table 6.8	Table 6.9
Table 6.10	Table 6.11	6.5.2.1(3), (7) and (8)	6.8.3(8) and (9)
Table B.2	B.4 (1)		

National choice is allowed in EN 1995-3 on the application of the following informative annexes:

Annex A

Annex C

Annex E

Annex F

The National Annex can contain, directly or by reference, non-contradictory complementary information for ease of implementation, provided it does not alter any provisions of the Eurocodes.

1 Scope

1.1 Scope of EN 1995-3

(1) This document gives minimum requirements for execution of timber structures (buildings and bridges) designed in accordance with EN 1995 to ensure that what is built meets the requirements for mechanical resistance, serviceability, durability and fire performance.

(2) This document includes the minimum requirements for moisture control during transport to building site, storage on site, handling on site and execution.

(3) This document gives guidance on workmanship and permitted geometrical deviations during execution.

(4) This document relies on an execution specification which states all the specific requirements relevant for the execution of a particular structure.

(5) For products covered by a European technical product specification, this document only covers those aspects of fabrication such as cutting, machining and drilling after placement of the product on the market.

(6) This document does not cover:

- a) Design and detailing rules;
- b) Secondary members which are not designed according to EN 1995;
- c) Temporary works (such as formwork, scaffolding, propping, shoring, etc.);
- d) Specification, production and conformity of timber members in accordance with European technical product specifications;
- e) Permitted geometrical deviations required for appearance, thermal or sound insulation;
- f) Contractual aspects, responsibilities of the various parties, competency requirements or the degree of independence of the personnel undertaking the inspection;
- g) Health and safety requirements during execution.

1.2 Assumptions

(1) It is recognized in this document that areas such as detailed requirements for competence of personnel, and details related to the Quality Management are within the competence of the CEN Member States.

(2) Before the execution begins on a part of the structure, it is assumed the following are available on site for inspection levels IL2-B and IL3 (Inspection Level according to EN 1990 and Table 4.1 of this document):

- the design of that part, including calculations, drawings, and specification;
- the execution specification.

(3) Before the start of the execution, it is assumed that the execution specification has been checked for completeness.

(4) It is assumed that previous work (such as foundations) has been inspected and any work which needs to be done due to deviations from the execution specification has been carried out.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

NOTE See the Bibliography for a list of other documents cited that are not normative references, including those referenced as recommendations (i.e. in 'should' clauses), permissions ('may' clauses), possibilities ('can' clauses), and in notes.

EN 301, *Adhesives, phenolic and aminoplastic, for load-bearing timber structures — Classification and performance requirements*

EN 1090-2, *Execution of steel structures and aluminium structures — Part 2: Technical requirements for steel structures*

EN 1090-3, *Execution of steel structures and aluminium structures — Part 3: Technical requirements for aluminium structures*

prEN 1995-1-1:2023, *Eurocode 5 — Design of timber structures — Part 1-1: General rules and rules for buildings*

prEN 1995-1-2, *Eurocode 5 — Design of timber structures — Part 1-2: Structural fire design*

prEN 1995-2, *Eurocode 5 — Design of timber structures — Part 2: Bridges*

EN 14545, *Timber structures — Connectors — Requirements*

EN 14592, *Timber structures — Dowel-type fasteners — Requirements*

EN 15425, *Adhesives — One component polyurethane (PUR) for load-bearing timber structures — Classification and performance requirements*

EN 17334, *Glued-in rods in glued structural timber products — Testing, requirements and bond shear strength classification*

EN 17418, *Two-component epoxy and polyurethane adhesives for on-site repair of cracked timber structures — Testing, requirements and repair strength verification*

3 Terms, definitions, symbols and abbreviations

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in prEN 1995-1-1, prEN 1995-1-2 and prEN 1995-2 and the following apply.

3.1.1

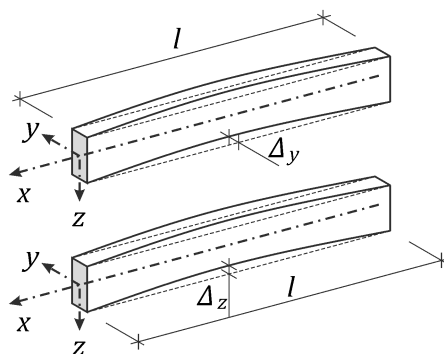
batch

group of similar members or connections

3.1.2

bow

deviation from straightness where the member is curved about either its weak or strong axis

**Key**

l Member length
 Δ_y, Δ_z Bow in the y/z-axis direction

Figure 3.1 — Definitions of Δ_y and Δ_z which denote the bow in directions parallel to the local y- and z-axes respectively

Note 1 to entry: In this document, bow is the deviation from straightness of a member that is assumed to be perfectly straight in the structural model. The term “deviation from the specified curvature” rather than bow is used where a member is curved or cambered in the model.

3.1.3**design documentation**

collection of documents describing the design, usually including drawings and specifications

3.1.4**erection plan**

collection of documents necessary for the erection

Note 1 to entry: An erection plan is usually produced by the party responsible for the construction and can include, for example: the execution specification, storage requirements, weather protection measures, sequence of erection, requirements for temporary works, execution methods, checking procedures, handling and assembly procedures and other requirements necessary for the erection.

3.1.5**execution**

all activities carried out for the physical completion of the work including procurement, the inspection and documentation thereof

Note 1 to entry: The term covers work on site; it can also signify the fabrication of parts off site and their subsequent erection on site.

3.1.6**execution specification**

collection of documents that includes all requirements and information necessary for the *execution* (3.1.5) of a timber structure as provided by the party responsible for the structural design documentation

Note 1 to entry: The party responsible for structural design can be more than one party and can include a manufacturer, if that manufacturer has design responsibility.

3.1.7**inspection**

evaluation of compliance by observation and assessment supported by measurement, testing or interpretation where appropriate

3.1.8**machining**

forming by machine of, for example, slots, recesses, mortices, tenons, or notches

Note 1 to entry: In some countries the term “trimming” is used instead of machining.

3.1.9**moisture control plan**

plan to control the moisture content of timber members and assemblies during execution

3.1.10**permitted geometrical deviation**

permitted difference between a linear or angular dimension and the corresponding target dimension

3.1.11**structural design specification**

project specific document typically used to describe the chosen materials, fasteners and connectors and specific workmanship requirements

3.1.12**surface treatments**

products applied on the surface of members to improve insect resistance or fire performance

3.2 Symbols and abbreviations**3.2.1 Latin lower-case letters**

$a_{i,max}$	max. distance between screws in direction i
a_n	spacing, end or edge distance of a fastener
b	width
b_n	distance outside slots or between slots
b_s	slot width
d	nominal screw diameter
d_{head}	screw head diameter
$f_{c,0,k,sat}$	characteristic compressive strength parallel to the grain in water saturated timber
h	height
h_s	depth of the slotted in steel-plate
h_1	notch dimension
h_1, h_2	mid-height and ridge height of a duo-pitched truss, or heights to eaves and ridge in a portal frame
h_h	diameter of circular hole or height of rectangular hole
h_i	storey height

h_n	locating dimension of a hole
k_{mod}	modification factor accounting for the effect of the duration of load and moisture content
l	relevant length of a member or part of the length of a continuous member for which bow is limited
l_{ef}	effective thread length
l_n	locating dimension of a hole
l_h	length of rectangular hole
l_p	length of the screw point
l_s	length of the slot in a timber member
l_w	anchorage depth in member
l_1	notch dimension
l_1	locating dimension
n	number of fasteners in a row
n	number of storeys
$p_{cal,min}$	calculated minimum pressure
s_n	specified spacing, end or edge distance
t	thickness
t_{head}	thickness of nail head
t_1	thickness of member to be glued 1
t_2	thickness of member to be glued 2
t_s	specified thickness of the steel plate
x	x-axis
y	y-axis
z	z-axis

3.2.2 Latin upper-case letters

A_{nom}	influence area of a screw
BGL	block glued glulam
CC	Consequence class
CLT	cross laminated timber
$E_{mean,i}$	mean modulus of elasticity in the direction i
$F_{ax,t,d}$	design axial resistance
$F_{pull,k}$	characteristic head pull-through resistance
GL	Glued-laminated timber
GLVL	Glued laminated veneer lumber
IL	Inspection level
$I_{i,b=1}$	Second moment of area in the direction i for a width of $b = 1$ mm, in mm ⁴

LR	Laterally restrained node
LVL	Laminated veneer lumber
OSB	Oriented strand board
PMPF	Punched metal plate fasteners
PW	Plywood
SL1-2	Straight line between centres of supports at 1 and 2
SWP	Solid wood panel
SWP-C	Solid wood panel with cross-layer
SWP-P	Solid wood panel without cross-layer
SL	Structural lumber
IL	inspection level

3.2.3 Greek lower-case letters

γ_M	partial factor for material properties
ε	angle of the screw axis to the surface in the parallel to grain direction
μ	mean of the actual spacings or edge distances for n fasteners in a row
ρ_k	characteristic density

3.2.4 Greek upper-case letters

Δ	linear deviation or offset
Δ_y	bow in the local y -axis direction
Δ_z	bow in the local z -axis direction
Δ_n	deviation from the specified spacing, end or edge distance s_n where $n = 1 \dots 4$
$\Delta_{\max}$	maximum permitted deviation
$\Delta_{n,\max}$	maximum permitted deviation from the specified spacing, end or edge distance s_n where $n = 1 \dots 4$
$\Delta_{y,\max}$	maximum permitted bow in the local y -axis direction
$\Delta_{z,\max}$	maximum permitted bow in the local z -axis direction
ϕ	deviation in inclination from vertical
ϕ_i	inclination from vertical of column i
$\phi_{\max}$	maximum permitted deviation in inclination from vertical

NOTE The subscript “ n ” is used, for example, where the deviation on more than one spacing, end or edge distance is shown in one figure, such as in Figure 6.2.

4 Documentation and inspection

4.1 Inspection levels

(1) The inspection level (IL) for a structure or part of the structure should be specified in the execution specification and should be selected based on the consequence class (CC, where relevant), the complexity of the work and the degree of new technology.

(2) The consequence class for a structure or part of the structure should be specified in the execution specification.

(3) A different consequence class may be appropriate for key members or connections within a structure, or for items which will be hidden in the completed structure and cannot be inspected afterwards.

4.2 Execution specification

4.2.1 Content

(1) The execution specification should include design information such as the designer's instructions and drawings.

(2) Depending on the type of structure, the execution specification may include:

- a) The structural design specification;
- b) The consequence class(es);
- c) Inspection levels including any special requirements;
- d) Special requirements for handling including the minimum number and location of lifting points per lift, for storage including support arrangements (upright or laid flat) and for sequence of erection including the need for an erection plan and temporary support for stability as the erection proceeds;
- e) Maximum permitted geometrical deviations (if different from those given in this document) and methods of measuring, including identification of surfaces requiring contact in bearing or identification of members for which the permitted deviations in bow to prevent buckling apply;
- f) Which geometrical deviations should be checked and the checking procedure;

NOTE Annex A gives guidance on how many members of the same or similar type in a structure can be checked.

- g) Expected moisture content in service, permitted moisture content range during execution, any assumptions about protection during execution and whether a moisture control plan is required;
- h) Fire protection and surface treatments for fire and any need for retreatment after post-processing, e.g. after cutting or drilling;

NOTE Fire protection and surface treatments for fire are normally specified in the structural design specification.

- i) Information on treatments to improve durability and any need for a reapplication of treatment where its effectiveness may have been affected by later works such as cutting, drilling and sanding;

NOTE Treatments to improve durability are normally specified in the structural design specification.

- j) Corrosion protection of fasteners and connectors and pre-drilling, where required;

NOTE The corrosion protection of fasteners and connectors is normally specified in the structural design specification.

- k) National regulations with regard to the scope of this document;
- l) Any documentation which is required in the product standards to be forwarded to the building site, for example, the requirements in EN 14250;

(3) The execution specification should define what is to be inspected or checked.

4.2.2 Action in the case of damage or deviations from the execution specification

(1) Where the inspection reveals damage or deviations from the execution specification, appropriate measures shall be taken to ensure that the design has not been compromised.

(2) For IL2-B and IL3 according to Table 4.1, the party responsible for the structural design should be informed without delay and corrective measures shall be agreed before they are carried out.

(3) Corrective measures (if necessary) shall be determined by considering the mechanical resistance, durability, fire design and serviceability.

4.3 Execution quality assurance

(1) In order to provide a structure that corresponds to the requirements and to the assumptions made in the design, an appropriate level of quality management should be in place for IL2-B and IL3.

(2) Quality management measures should comprise:

- A project management in charge of supervision of the works;
- A site management in charge of organization of the works and of enabling the correct use of equipment and machinery, the satisfactory quality of materials, and the execution of a conforming structure;
- Inspection during execution.

NOTE EN ISO 9001 is an example of an acceptable basis for quality management measures.

4.4 Documentation and number of pieces to be assessed

4.4.1 General

(1) The documentation of inspections, measured deviations and the number of pieces to be assessed should depend on the inspection level.

NOTE Table 4.1 (NDP) provides documentation and number of pieces to be assessed for each inspection level unless the National Annex gives different requirements for documentation and number of pieces to be assessed.

Table 4.1 (NDP) — Inspection Level (IL), documentation and number of pieces to be assessed based on consequence class (CC)

Consequence class (CC)	Inspection Level (IL)	Documentation of inspection and of measured deviations	Number of pieces to be assessed as a percentage of the number in Table A.1
CC1	IL1	No	20 %
CC2 (single family houses)	IL2-A	No	20 %
CC2 (except single family houses)	IL2-B	Yes	50 %
CC3	IL3	Yes	100 %
NOTE 1 Table B.2 gives the frequency and number of pieces to be assessed for bond line testing as Table 4.1 does not apply in this case.			
NOTE 2 Table B.3 gives Inspection Levels for bonded-in rods.			
NOTE 3 Single family houses includes semi-detached and terraced houses, as well as individual houses.			

4.4.2 Documentation of the execution

(1) The party responsible for the execution of the work should keep records of inspections and measurements to show that the completed work meets the requirements of the execution specification.

(2) For IL1 and IL2-A documentation may include:

a) Material documentation;

NOTE Material documentation can include, for example, delivery notes, wood species, preservative treatment (where relevant) or Declarations of Performance.

b) The person and/or parties responsible including contact details;

c) The time/date of execution;

d) Records of any bonding operation as listed in Annex B;

e) Records of any extreme weather conditions such as heavy rain, heavy snow or extreme temperatures; also if/how/when the structure was protected and if/how/when cleaning of excess water or snow was undertaken (if relevant);

NOTE It is assumed that the general weather conditions on site during the execution will be available from a local meteorological office, if needed.

f) Records of any damage or departures from the execution specification, and corrective measures taken.

(3) For IL2-B and IL3 documentation should include the points in 4.4.2 (2).

(4) For bridges, documentation shall include the points in 4.4.2 (2). In addition, records for the following shall be kept for IL2-B and IL3:

a) Design service life

b) New technical information on the bridge site conditions which was gained during the execution (i.e. information not known or shown in the structural design specification)

c) Technical information on the completed bridge including the structural report, as-built drawings, photos, including bridge class, loads, etc.)

d) Daily records of temperature and relative humidity at the same time each day.

4.5 Inspection

(1) Inspection shall be undertaken to ensure and show compliance with the execution specification.

(2) If part of the inspection cannot be done after completion it should be undertaken during erection.

(3) The following items should typically be inspected or checked according to the type and size of the building:

a) Strength class or grade, timber species, adhesive type, chemical treatment for fire performance or durability and the associated documentation;

b) Detailed requirements for fire safety according to the design, see prEN 1995-1-2;

- c) The installation of any specified protection layers and detailing required to ensure the durability of structural timber or timber products;

NOTE Such layers and detailing can include, for example, metal flashings, airtight and wind-tight layers in the external envelope of heated and insulated buildings, layers to prevent the intrusion of wood-destroying insects and watertight sealing of surfaces and joints exposed to rainwater and splash water (including in shower and bathrooms).

- d) Structural details, e.g. number and size and type of fasteners, sizes of pre-drilled holes, checking deviations from the specified spacing, edge and end distances are within the maximum permitted deviations;
- e) Detailed requirements for bonding, as listed in Annex B;
- f) Check that deviations from the specified dimensions of members and assemblies, holes and their locations in beams, and slots and their positions in members are within the maximum permitted deviations;
- g) Grade of carbon and stainless steels in fasteners, connectors and connection metalwork and corrosion protection of carbon steels;
- h) Check that deviations from the perfect geometry at the support points in the supporting structure are within the maximum permitted deviations;
- i) Moisture content at delivery, during execution and on completion of the structure;
- j) Methods of handling, storage, protection, assembly and erection;
- k) Any damage including mechanical or moisture damage (such as detrimental swelling, shrinkage, unacceptable fissures or decay) or corrosion of fixings;
- l) Specific checks for seismic areas.

NOTE 1 Annex E lists additional checks required in seismic prone areas.

NOTE 2 It is envisaged that for a single-family house not all of above aspects would be inspected.

5 Workmanship

5.1 General

- (1) The rules given in this section should be followed for the execution of timber members, assemblies and structures.
- (2) The execution specification and the manufacturer's instructions should be complied with.
- (3) Steel and concrete members shall be executed to the relevant European execution standards where available.

5.2 Erection plan

- (1) For inspection levels IL2-B and IL3 (and also for IL1 and IL2-A if required in the execution specification), an erection plan should be prepared to ensure that damage to the structure is avoided during the execution.

NOTE The erection plan includes the sequence of erection of parts of the structure and the need for any temporary bracing.

5.3 Moisture control plan

(1) For inspection levels

- IL2-B and IL3; and
- for IL1 and IL2-A, if required by the execution specification

a moisture control plan should be prepared to ensure that damage to the structure is avoided due to the effects of changing moisture content during execution and on any subsequent drying.

(2) The requirements below are mainly applicable to structures in Service Classes 1 and 2.

(3) Depending on the type of construction and the service class, the moisture control plan should cover:

- a) The target equilibrium moisture content or range during fabrication, storage on site, erection and in service for different wood-based materials and/or for different parts of the structure;

NOTE It is not intended that the moisture content in service is measured. The moisture content in service needs to be understood to ensure the correct conditions during execution.

- b) Measures to protect timber against unsuitable moisture uptake;

NOTE 1 Detrimental effects can be assumed for wood-based panel showing up significant swelling along the edges due to high moisture content.

NOTE 2 For example, measures to avoid moisture transfer from fresh concrete, masonry, or screed e.g. by ventilation and heating.

- c) Measures to ensure that detrimental swelling, shrinkage or decay of the timber members and their connections is avoided;

- d) The storage methods on site;

- e) Any protection needed during transport, storage and erection;

- f) Measures to ensure that, before being used in construction, timber is adjusted as near as practicable to the moisture content appropriate to the equilibrium moisture content that corresponds to the conditions in service;

NOTE At the end of the manufacturing process wood-based panels can have very low moisture contents and might need conditioning to bring moisture contents up to an appropriate level; guidance is given in CEN/TR 12872.

- g) The risk of wetting and water traps during transport, storage and erection;

NOTE Measures to protect timber members during erection against sudden heavy rainfall are relevant especially in the case of large buildings.

- h) How moisture content will be limited;

- i) Measures to control drying after erection;

NOTE Redrying for bridges can generally be ensured by sufficient ventilation.