



SLOVENSKI STANDARD
oSIST prEN 17293:2018
01-september-2018

Oprema za začasna dela - Izvedba - Zahteve za izdelavo

Temporary works equipment - Execution - Requirements for manufacturing

Temporäre Konstruktionen für Bauwerke - Ausführung - Anforderungen für die Herstellung

Equipements temporaires de chantiers - Exécution - Exigences pour la fabrication

Ta slovenski standard je istoveten z: prEN 17293

ICS:

91.220

Gradbena oprema

Construction equipment

oSIST prEN 17293:2018

en,fr,de

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 17293

July 2018

ICS 91.220

English Version

Temporary works equipment - Execution - Requirements for manufacturing

Equipements temporaires de chantiers - Exécution -
Exigences pour la fabrication

Temporäre Konstruktionen für Bauwerke - Ausführung
- Anforderungen für die Herstellung

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 53.

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.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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

Contents	Page
European foreword.....	3
Introduction	4
1 Scope.....	5
2 Normative references.....	5
3 Terms and definitions	5
4 General.....	6
5 Manufacturer documentation	6
5.1 Quality documentation	6
5.2 Quality plan	7
5.3 Safety of the erection works.....	7
5.4 Execution documentation	7
5.5 Identification and traceability.....	7
6 Materials.....	7
7 Requirements for welding monitoring class 2	8
8 Steel components	8
8.1 General.....	8
8.2 Special requirements.....	9
8.2.1 Welding.....	9
8.2.2 Mechanical connections.....	11
8.2.3 Galvanized components.....	11
9 Aluminium components	11
9.1 General.....	11
9.2 Special requirements.....	12
9.2.1 Welding.....	12
9.2.2 Mechanical connections.....	13
10 Timber components.....	13
10.1 General.....	13
10.2 Glued joints.....	13
Bibliography.....	14

European foreword

This document (prEN 17293:2018) has been prepared by Technical Committee CEN/TC 53 “Temporary works equipment”, the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 17293:2020

<https://standards.iteh.ai/catalog/standards/sist/8af5aacc-4255-449c-a7ed-a2f5f03aa10b/sist-en-17293-2020>

prEN 17293:2018 (E)**Introduction**

Steel, aluminium and timber components for temporary work equipment are designed according to Eurocodes.

NOTE 1 Temporary works equipment are products covered by CEN/TC53, for example scaffolds, formworks, falseworks.

Because components of temporary works equipment are not intended to be incorporated in a permanent manner in construction works (buildings or civil engineering works) they are not covered by Construction Products Regulation EU 305/2011. Therefore EN 1090-1 is not applicable and components of temporary works equipment must not be marked CE.

EN 1090-2 / EN 1090-3 gives requirements for execution of steel and aluminium components. This European standard gives special requirements for manufacturing components for temporary works equipment in addition or contrary to the requirements of EN 1090-2 / EN 1090-3, to ensure adequate levels of mechanical resistance and stability, serviceability and durability.

EN 1995-1-1 gives requirements for execution of timber components. This European standard gives special requirements for manufacturing glued timber joints in components of temporary works equipment.

NOTE 2 This European standard presupposes that manufacturing is carried out with the necessary skill and adequate equipment and resources to perform that manufacturing in accordance with the requirements of this European standard.

iTeh STANDARD PREVIEW
(standards.itih.ai)

SIST EN 17293:2020

<https://standards.itih.ai/catalog/standards/sist/8af5aaec-4255-449c-a7ed-a2f5f03aa10b/sist-en-17293-2020>

1 Scope

This document specifies requirements for manufacturing components for temporary works equipment:

- a) in a factory or;
- b) on site where manufacturing in a factory is not practicable.

This document specifies requirements for manufacturing components for temporary works equipment in addition or contrary to the requirements of EN 1090-2 / EN 1090-3 and EN 1995-1-1.

Furthermore this document specifies requirements for manufacturing timber components, designed according to Eurocodes, to be used in temporary works equipment.

This document does not specify requirements for erection and transportation of temporary works equipment.

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.

EN 1090-2:2008+A1:2011, *Execution of steel structures and aluminium structures — Part 2: Technical requirements for steel structures*

EN 1993-1-8:2005, *Eurocode 3: Design of steel structures — Part 1-8: Design of joints*

EN ISO 3834-3, *Quality requirements for fusion welding of metallic materials — Part 3: Standard quality requirements (ISO 3834-3)*

EN 10217 (series), *Welded steel tubes for pressure purposes — Technical delivery conditions*

EN 10305 (series), *Steel tubes for precision applications — Technical delivery conditions*

EN 15048-1, *Non-preloaded structural bolting assemblies — Part 1: General requirements*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

welding production batch size

quantity of components which are manufactured using identical welding parameters

3.2

fully mechanised welding

welding in which all main operations (excluding the handling of the work piece) are performed automatically

Note 1 to entry: Manual adjustment of welding variables during welding is possible.

prEN 17293:2018 (E)

[SOURCE: ISO/TR 25901:2007, 2.159]

3.3**automatic welding**

welding in which all operations are performed automatically

Note 1 to entry: Manual adjustment of welding variables during welding is not possible.

[SOURCE: ISO/TR 25901:2007, 2.21]

3.4**manufacturing**

all activities required to produce a component, for example: procurement, preparation and assembly, welding, mechanical fastening, surface treatment, inspection and documentation

3.5**optical check**

continuous automatic inspection for example with a camera

3.6**monitoring**

realtime acquisition and analysis of welding parameters

3.7**welding monitoring classes****3.7.1****welding monitoring class 1**

welding without automatic parameter monitoring

3.7.2**welding monitoring class 2**

fully mechanised welding and automatic welding with automatic parameter monitoring

4 General

Steel, aluminium and timber components for temporary works equipment are designed according to Eurocodes.

Therefore, the standards for execution of steel and aluminium components EN 1090-2 / EN 1090-3 and for execution of timber components EN 1995-1-1 shall be applied, except where the special conditions for manufacturing temporary works equipment demand modifications according to this standard.

Subcontractors shall also fulfil all of the requirements of this standard.

5 Manufacturer documentation**5.1 Quality documentation**

EN 1090-2:2008+A1:2011, 4.2.1, and EN 1090-3:2008, 4.2.1 are replaced by:

The following points shall be documented, and are also applicable for the manufacturing of timber components:

- a) organization chart and managerial staff responsible for each aspect of the manufacturing;
- b) the procedures, methods, work and inspection instructions to be applied;

- c) a procedure for handling changes and modifications;
- d) a procedure for handling of nonconformities, requests for concessions and quality disputes;
- e) the manufacturing drawings;
- f) the specifications of purchased raw materials and components.

5.2 Quality plan

EN 1090-2:2008+A1:2011, 4.2.2 in EN 1090-3:2008 and EN 1995-1-1:2004, EN 1995-1-1:2004/A1:2008, EN 1995-1-1:2004/A2:2014, Clause 10 shall be applied for manufacturing.

5.3 Safety of the erection works

EN 1090-2:2008+A1:2011, 4.2.3 and EN 1090-3:2008, 4.2.3 are not applicable.

5.4 Execution documentation

EN 1090-2:2008+A1:2011, 4.2.4 and EN 1090-3:2008, 4.2.4 are not applicable.

5.5 Identification and traceability

As an alternative to EN 1090-2 and EN 1090-3 identification may be achieved by batching or by the shape and the size of the component or by the use of durable and distinguishing marks applied in a way not producing damage. If the identification by batching is carried out the batches shall be traceable.

6 Materials

Materials shall fulfil the requirements given in European standards where design data is provided. If European standards do not exist, ISO standards may be applied. Additional requirements for some materials are given in EN 12811-2.

When materials are used whose design data is not provided in European or ISO standards, an adequate assessment shall be undertaken.

NOTE National requirements may give information.

For the manufacturing of temporary works equipment materials according to the standards (Tables 2 and 3 in EN 1090-2:2008+A1:2011) or the standards series EN 10217 and EN 10305 for tubes, and EN 10111 for the cold forming process of plates may be used. For steel products, the inspection documents according to EN 10204 shall be as listed in Table 1.

Table 1 — Inspection documents for steel products

Constituent product	Inspection documents
Structural steels (Tables 2 and 3 in EN 1090-2:2008+A1:2011, standards series EN 10217 and EN 10305 for tubes)	
Structural steel grade \leq S275	2.2 a
Structural steel grade $>$ S275	3.1
Structural steels according to EN 10111	3.1
Stainless steels (Table 4 in EN 1090-2:2008+A1:2011)	3.1
Steel and iron castings	3.1

prEN 17293:2018 (E)

Constituent product	Inspection documents
Welding consumables (Table 5 in EN 1090-2:2008+A1:2011)	2.2
Structural bolting assemblies to the EN 14399 series	3.1 b
Structural bolting assemblies to the EN 15048 series	2.1
Bolts ^c , nuts ^c , or washers ^c	2.1
Self-tapping and self-drilling screws and blind rivets	2.1
<p>^a Inspection certificate 3.1 if specified minimum yield strength 275 MPa and specified impact energy tested at a temperature less than 0 °C.</p> <p>^b If bolts of property classes 8.8 and 10.9 are marked with a batch identification mark and the manufacturer can trace the measured characteristic values from the internal (factory) production control records on the basis of this mark, the 3.1 inspection certificate as in EN 10204 may be omitted. For all property classes an inspection document to EN 10204 or a batch identification mark is required.</p> <p>^c Applicable if bolts, nuts or washers are supplied for use in non-preloaded applications and not as a component of a fastener assembly to the EN 14399 series or the EN 15048 series.</p>	

Components of temporary works equipment made of aluminium shall be manufactured according to execution class EXC2 (see 9.1). Therefore inspection certificates 3.1 according to EN 10204 are required. For welding consumables test reports 2.2 are required.

Components of non-loadbearing connections do not require inspection documents.

7 Requirements for welding monitoring class 2

The automatic parameter monitoring shall be verified and comprise of:

a) continuous parameter monitoring of the welding equipment:

- voltage,
- current,
- wire feed rate

and

b) automatic test procedure after welding by an optical check of the weld geometry and position.

8 Steel components

8.1 General

If not specified otherwise in Clause 8 of this standard, the requirements of EN 1090-2 shall be applied for manufacturing.

Components of temporary works equipment shall be rated according to consequence class CC2 and service category SC1 and shall be manufactured according execution class EXC2.

Components according to production category PC1 may be manufactured according EXC1.

NOTE 1 For classification see EN 1090-2:2008+A1:2011, Table B.1 and Table B.2 and EN 1990:2002, EN 1990:2002/A1:2005, EN 1990:2002/A1:2005/AC:2010, Table B.1.