

### SLOVENSKI STANDARD SIST-TP CEN/TR 15563:2007

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#### Oprema za začasna dela - Priporočila za varovanje zdravja in varnost

Temporary works equipment - Recommendations for achieving health and safety

Temporäre Konstruktionen für Bauwerke - Empfehlungen zur Wahrung von Gesundheit und Sicherheit

Equipements pour travaux temporaires - Recommandations pour assurer la santé et la sécurité (standards.iteh.ai)

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#### **English Version**

### Temporary works equipment - Recommendations for achieving health and safety

Equipements pour travaux temporaires - Recommandations pour assurer la santé et la sécurité

Temporäre Konstruktionen für Bauwerke - Empfehlungen zur Wahrung von Gesundheit und Sicherheit

This Technical Report was approved by CEN on 15 January 2007. It has been drawn up by the Technical Committee CEN/TC 53.

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

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#### **Foreword**

This document (CEN/TR 15563:2007) has been prepared by Technical Committee CEN/TC 53 "Temporary works equipment", the secretariat of which is held by DIN.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This Working Group was given a mandate to write a Technical Report (TR) in Prague in 2001 by CEN/TC 53, the Secretariat of which is held by DIN.

No existing European document is superseded.

A Technical Report is an informative document made available by CEN in at least one of the official languages.

A Technical Report is established and approved by a CEN technical body (CEN Technical Committee, Technical Board or BTTF) by a simple majority vote of CEN national members.

A Technical Report gives information on the technical content of standardization work.

No time limit is specified for the lifetime of Technical Reports, but it is recommended that Technical Reports be regularly reviewed by the responsible technical body to ensure that they remain valid.

Representatives from the relevant safety authorities from Cyprus, Denmark, France, Germany, Italy, Sweden, Switzerland, Norway and the United Kingdom drew up this document. In accordance with the advice of CEN/TC 53, convenors of working groups are asked to take into consideration the recommendations for health and safety contained herein. Therefore, CEN/TC 53 intends that this document should be used as a reference to ensure that, whenever it is practicable to do so, the recommendations for health and safety should be incorporated into the requirements of the European Standards dealing with temporary works equipment.

In drafting this Technical Report, the Technical Group recognised that as the boundaries for the expectations of society and the technical state-of-the-art are continually being advanced, there was a need to remind designers, manufacturers and users of temporary works equipment of this fact. Consequently, the concept of "as far as social and technical developments require" [3.2] has been introduced as an overarching principle in the development of temporary works equipment.

CEN/TC 53 working groups should give careful consideration to the guiding principles set out in this report. However, if not, an explanation should be given along with advice about methods to avoid risk of injury.

#### Introduction

Temporary works equipment makes a vital contribution to the construction of the works in many areas, e.g., on any building or construction project, because it provides:

- means for allowing workers to reach a workplace at height;
- work platform at height;
- temporary support, while the permanent works develops its strength.

Where temporary works equipment is used to support the permanent works in a weakened state, the main consideration is strength. However, when it is also used as the means for providing access to the workplace at height, there are other considerations, which should be taken into account. Temporary works equipment should:

- be strong enough;
- be intrinsically safe;
- provide a comfortable work platform, which allows good ergonomic work positions;
- make erection and dismantling a safe(process,dards.iteh.ai)
- when used and maintained correctly, (in accordance with the) manufacturers instructions), have no adverse effects on their health through working with it; and ist/81b5f13c-f43a-4b9e-b83e-

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 inspire confidence about their safety and health in workers erecting, dismantling and using it so that work can progress expeditiously.

It is important to ensure that convenors of working groups drawing up European Standards for temporary works equipment are aware of these requirements, which could contribute to safety. In the absence of a European Directive for temporary works equipment, relevant safety-related information is spread across several European Directives. Therefore, this Technical Report, which collects together much of this dispersed information, is meant as a reference document for future working group delegates who, while having the necessary technical and manufacturing knowledge, may lack the same in-depth knowledge of factors affecting health and safety.

While this Technical Report asks future working groups to consider a number of questions, it does not demand that a solution be found when it is technically impossible to do so. Consequently, the over-arching principle of this report is that design should take account of "social and technical developments": which is defined in this Technical Report and has two distinct parts, namely:

- i) "Changes in society's expectations, which initiate changes in working practices ..."; which would be articulated in EU Directives [or national laws] and, as such, would be mandatory; and
- ii) "... the advances in technology, which improve the state-of-the-art"; which means when it is technically feasible to do.

#### 1 Scope

This Technical Report sets out recommendations for achieving acceptable levels of health and safety with temporary works equipment intended for use during construction or maintenance of buildings and other permanent structures. Its recommendations should be considered when writing standards for designing and producing temporary works equipment under CEN/TC 53.

#### 2 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.

Council Directive 89/391/EEC, "The Framework Directive"

Council Directive 89/392/EEC, [amended by 91/368], "The Machinery Directive"

Council Directive 89/655/EEC, [Amended by 95/63/EC], "The Work Equipment Directive"

Council Directive 92/57/EEC, "Temporary or Mobile Construction sites Directive"

Council Directive 92/58/EEC, "Safety and/or Health Signs at Work"

Council Directive 01/45 EEC, "Use of Work Equipment by Workers at Work"

Council Directive 86/188/EEC, "Protection of Workers from the risks related to exposure to Noise at Work" https://standards.itch.ai/catalog/standards/sist/81b5f13c-f43a-4b9e-b83e-

Council Directive 90/269/EEC, "Manual Handling of Machinery and Component Parts of Machinery"

Guide to Good Practice for the use of Work Equipment at Heights — European Commission

#### 3 Terms and definitions

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

#### 3.1

#### temporary works equipment (TWE)

equipment, which is provided temporarily as a workplace for people, to enable people to reach a workplace or for temporarily supporting the permanent works

NOTE The equipment is subsequently dismantled.

#### 3.2

#### social and technical developments

changes in society's expectations, which initiate changes in working practices and the advances in technology, which improve the state-of-the-art

#### 3.3

#### hazard

existence of situations likely to cause harm

#### 3.4 risk

probability that a hazard will cause harm

#### 4 General recommendations for achieving acceptable levels of health and safety

#### 4.1 Identifying hazards and limiting the risks

An important first step is to identify and list all the foreseeable hazards [3.3], which could apply to the temporary works equipment.

It should be possible to fit components and use and maintain temporary works equipment with the risks reduced to acceptable levels. Any equipment and accessories necessary to achieve this should be supplied.

Under the intended method of erection and dismantling and reasonably foreseeable conditions of use the risk [3.4] of discomfort, fatigue and psychological stress faced by the worker should be reduced, by design, to levels dictated by social and technical developments [3.2], taking ergonomic principles into account.

It should be supplied with all instructions necessary to limit the risks [3.4] associated with erection, use and dismantling.

#### 4.2 Design

Temporary Works Equipment [TWE] should be designed taking into account:

- a) social and technical developments [3.2] tandards.iteh.ai)
- b) strength and stability;

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- c) risk to workers using the temporary works equipment from objects falling from a height;
- d) risks to others from objects falling from height;
- e) the principles of risk<sup>1)</sup> assessment;
- f) the necessary or foreseeable use of personal protection equipment;
- its function so that it can be erected, used, adjusted, maintained and dismantled safely under the conditions foreseen by the manufacturer or during foreseeable misuse as written in the instruction manual. Manufacturers instructions should draw attention to ways, which compromise safety, in which it should not be used;
- h) provision of sufficient space to enable workers to carry out their work safely;
- i) attachment of the connection devices so that they cannot be removed unintentionally;
- j) the problems associated with storage, transportation and handling;
- k) its performance in fire.

Slipping, tripping and stumbling;

<sup>1)</sup> Some common frequent risks are:

Overloading with bricks, concrete blocks, bagged products, temporary works equipment components, demolition rubble are some of the practices that could cause partial or collapse of temporary works.

#### 4.3 Materials

The materials used in temporary works equipment should not endanger safety or health.

Materials should be durable with respect to the climatic conditions they are required to operate in and robust enough to withstand damage from handling and transportation.

#### 4.4 Information attached to the equipment

If information relevant to the safe use of temporary works equipment is attached to the equipment it should be displayed in a prominent place and should remain legible throughout its service life. This does not preclude renewal of such information.

This information, especially where it is transmitting instructions associated with health and safety, should ensure that such instructions are unambiguous and understood by all users, e.g., by the use of pictograms as a convenient universal language.

#### 4.5 Instruction manuals

The instruction manual should be designed so that it can be clearly understood and should at least contain enough information about erection, use and its limitations, maintenance and dismantling the temporary works equipment safely.

#### 5 Particular recommendations for achieving acceptable levels of health and safety

### 5.1 Safety distances and ergonomics ards.iteh.ai)

Temporary Works Equipment should be designed taking into account data on human body measurements and other data to assist in determining dimensions essential for safety distances and ergonomics.

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NOTE Some relevant data can be found in European Standards e.g., EN 547 and EN 294.

#### 5.2 Handling

#### 5.2.1 Weight, shape and surface

As far as possible the design of components should minimise manual handling. While social and technical developments [3.2] permit the manual handling of temporary works equipment, each component part thereof should be capable of being handled safely. Therefore, components, which have to be handled should:

- a) weigh<sup>2) 3) 4)</sup> as little as social and technical developments require;
- b) be of a shape and dimension(s), which fit comfortably in the hands of the person erecting them;
- c) have their centres of gravity located so that it does not require too great a physical effort to control the movement of the component while handling it; and

<sup>2)</sup> Council Directive 90/269/EEC gives requirements for Manual Handling.

<sup>3)</sup> Directive 90/269/EEC is the basis of guidance in many EU countries. Annex A shows a typical method of interpretation.

<sup>4)</sup> EN 1005-2 should be consulted for advice on manual handling.