SLOVENSKI STANDARD
oSIST prEN 510:2018

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Opredelitev zahtev za varovalno obleko, kjer je nevarnost, da se obleka zaplete ob gibajoče dele

Specification for protective clothing for use where there is a risk of entanglement with moving parts

Festlegungen für Schutzkleidungen für Bereiche, in denen ein Risiko des Verfangens in beweglichen Teilen besteht

Spécification pour l'habillement de protection destiné à être utilisé en cas de risque de happement par des pièces de machines en mouvement

Ta slovenski standard je istoveten z: **prEN 510**

ICS:

13.340.10	Varovalna obleka	Protective clothing

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EUROPEAN STANDARD

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English Version

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This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 162.

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.

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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.

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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 510:2018) has been prepared by Technical Committee CEN/TC 162 “Protective clothing including hand and arm protection and lifejackets”, the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 510:1993.

This document has been prepared under a standardization request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Regulation.

For relationship with EU Regulation, see informative Annex ZA, which is an integral part of this document.

The most technical significant changes in this document in comparison to the previous edition are listed in Annex B.

Introduction

This document applies to specific garments to be worn when the risk of entanglement cannot be effectively controlled by physically safeguarding moving parts of machines.

1 Scope

This document specifies design requirements of protective garments that minimize the risk of its entanglement or drawing-in by moving parts when the wearer is working at or near hazardous moving machines or devices, complementary to the general requirements as stated in EN ISO 13688.

This document does not include protective clothing against injuries by special moving machine parts for which specific standards exist, e.g. protective clothing for user of chainsaws (EN ISO 11393).

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 ISO 13688:2013, *Protective clothing - General requirements (ISO 13688:2013)*

3 Terms and definitions

No terms and definitions are listed in this document.

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

4 Requirements

4.1 General

The requirements of EN ISO 13688:2013 regarding innocuousness (4.2), comfort (4.4), ageing (Clause 5) apply.

The design requirements in 4.2 shall be checked by visual inspection.

4.2 Design

4.2.1 Basic design requirements

4.2.1.1 General

The design requirements are complementary to subclause 4.3 of EN ISO 13688:2013.

The design of the garment shall comply with the following principles:

a) a covering of any other garment

b) a close fit

c) a smooth outer surface of the garment.

4.2.1.2 Fastening requirements

The garment shall be fastened by means having no exposed loose ends. The fastening elements shall be concealed. Folds caused by fastening elements shall lie on the inner side of the garment.

After cleaning in accordance to 5.2 of EN ISO 13688:2013, the fastening elements shall be visually inspected to check their effectiveness: when fastened, the garment or pocket opening remain closable.

4.2.1.3 Cuff and trouser lower-hem requirements

Cuffs shall not have turn-ups.

Lower hems of trousers or one-piece suits shall not have turn-ups.

4.2.1.4 Pocket requirements

There shall be no external pockets.

Any inside pocket of the garment above the waist shall not be provided with pocket openings on the outside and shall only be accessible from inside the garment.

Any inside pocket of the garment below the waist with pocket openings on the outside shall be closable.

4.2.2 Additional design requirements in relation to the garment type

4.2.2.1 General

The garment or garment ensemble shall consist of:

a) waist jacket (see 4.2.2.2) with bib and brace overall (see 4.2.2.3) or

b) waist jacket (see 4.2.2.2) with sleeveless coverall (see 4.2.2.4) or

c) coverall with sleeves (see 4.2.2.5).

Examples of possible design are shown in Figure 1.

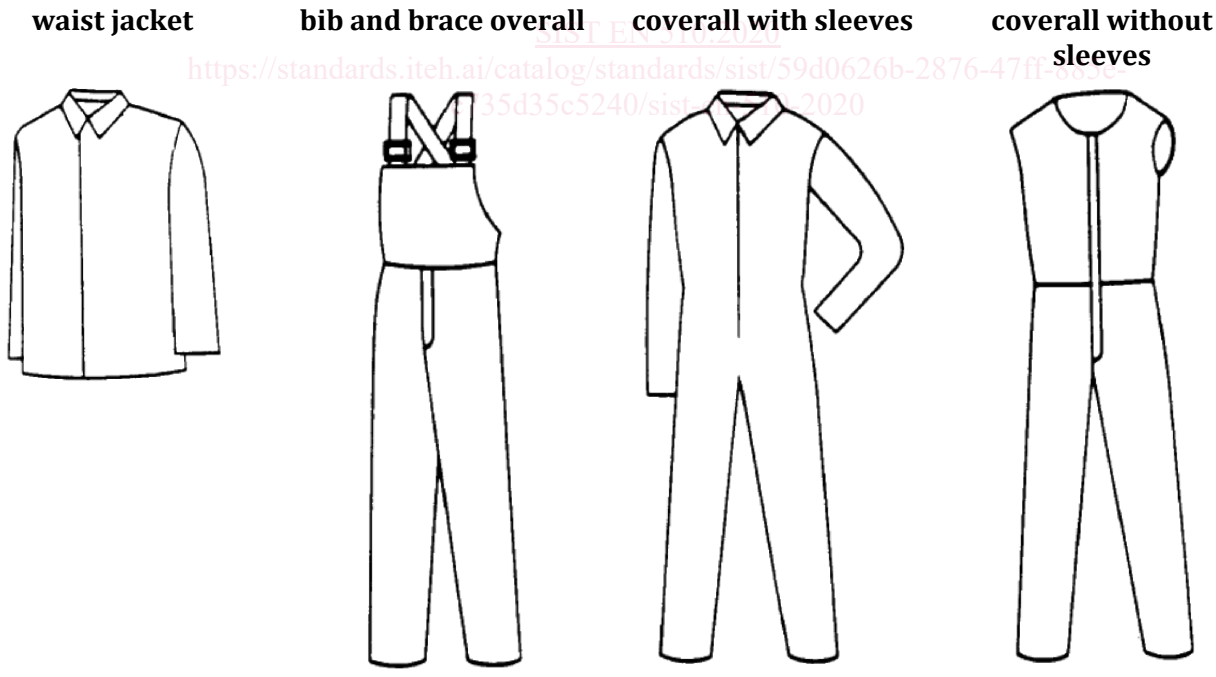

Figure 1 — Examples of possible design

4.2.2.2 Waist jacket

The waist jacket shall either have a stand-up collar or a stitched down laid-on collar or be collarless. The jacket shall be closable up to the collar or neck band.

The back and the front shall have no formed folds. The cuff shall be adjustable to give a close fit.

The bottom of the waist jacket shall be adjustable to achieve close fitting.

4.2.2.3 Bib and brace overall

If a side opening is required it shall be closable along the whole length of the side opening (e.g. touch-and-close fastener).

The brace shall be sewn on the back and the effective length of the brace shall be adjustable. The buckles required for adjustment shall be sewn on the bib; they shall be so designed that the ends of the braces hang on the inner side of the bib. The braces shall be of extensible material.

The trouser bottoms shall be adjustable to give a close fit.

4.2.2.4 Coverall with or without sleeves

The features as specified in 4.2.2.2 and 4.2.2.3 shall equally apply to coveralls. The width of the waist shall be adjustable by internal means. Sleeveless coveralls shall have an extensible back.

5 Dimensional change

The dimensional change due to cleaning shall comply with 5.3 of EN ISO 13688:2013.

6 General size designation

The general size designation shall comply with Clause 6 of EN ISO 13688:2013.

7 Marking

The marking shall comply with Clause 7 of EN ISO 13688:2013.

The marking shall use the pictogram ISO 7000-2411 (Figure 2) intended for protection against moving parts.

Figure 2 — Pictogram ISO 7000-2411

8 Information supplied by the manufacturer

The information supplied by the manufacturer shall comply with Clause 8 of EN ISO 13688:2013.

The information supplied by the manufacturer shall provide following complementary warnings:

— The safety functions are only fulfilled when the garments referred to in this standard are of close fit and properly fastened.

— Both pieces of a two-piece garment shall be worn together. A sleeveless coverall may be worn alone, when all the other garments, worn below, are covered.

Annex A
(informative)

Rationale and specific features

A.1 Rationale

The applied principle in this document is led by minimizing the risk for a garment part to be caught by any moving parts.

To be worn for regular activities especially at work places, garments, intended for being reusable, have mechanical properties and to lower these properties would lead to denature the garments themselves.

Therefore, in order to minimize the risk to be caught, the requirements in this document was focused on inherently safe design (i.e. avoiding loose parts of the garments, smooth surface) rather to state about unsuitable mechanical properties.

A.2 Specific features (optional)

Some garment could be designed with detachable parts (e.g. detachable sleeves or detachable trouser legs).

Some garment could be designed with integrated wearable devices (e.g. sensors) to act on the machine with moving parts by stopping it if the garment wearer is going to close to the moving parts.