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Health and safety in welding and allied processes — Transparent welding curtains, strips and screens for arc welding processes

Hygiène et sécurité en soudage et techniques connexes — Rideaux, lanières et écrans transparents pour les procédés de soudage à l'arc

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 9, *Health and safety*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 121, *Welding and allied processes*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 25980:2014), which has been technically revised.

The main changes are as follows:

— hazard level G has been removed;

— requirements regarding luminous and effective blue-light transmittance have been added.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html. Official interpretations of ISO/TC 44 documents, where they exist, are available from this page: https://committee.iso.org/sites/tc44/home/interpretation.html.

This corrected version of ISO 25980:2023 incorporates the following corrections:

— units for the value of the integrated irradiance, E_s, changed from W·m^2 to W·m^{-2} in Clauses A.3, A.4 and A.5.

Health and safety in welding and allied processes — Transparent welding curtains, strips and screens for arc welding processes

1 Scope

This document specifies safety requirements for transparent welding curtains, strips and screens to be used in workplaces where arc welding is taking place. They are intended to provide protection against harmful levels of optical radiation and spatter for workers who are in the vicinity of arc welding processes but not involved in the welding itself. They are intended to reduce the discomfort glare from the arc but also allow sufficient luminous transmittance to permit a view into the workspace behind.

The transparent welding curtains can also be used in other applications as long as the UV- and blue-light emissions are less than in arc welding and the transmitted infrared irradiance is below applicable exposure limits. They are designed to be used at a distance from the arc of at least 1 m.

Welding curtains, strips and screens specified in this document are not intended to replace welding filters. For intentional viewing of welding arcs, other means of protection are used, see ISO 16321-1 and ISO 16321-2.

This document is not applicable to protection against laser radiation, for which ISO 19818-1 applies.

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.

ISO 4007:2018, *Personal protective equipment — Eye and face protection — Vocabulary*

ISO/CIE 11664-1, *Colorimetry — Part 1: CIE standard colorimetric observers*

ISO/CIE 11664-2, *Colorimetry — Part 2: CIE standard illuminants*

ISO 18526-2:2020, *Eye and face protection — Test methods — Part 2: Physical optical properties*

ISO 18526-3:2020, *Eye and face protection — Test methods — Part 3: Physical and mechanical properties*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4007 and the following apply.

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

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
transparent
characteristic of welding curtains, strips and screens that permit visibility of the working place without implying to be glass clear