SLOVENSKI STANDARD
oSIST prEN ISO 6947:2018

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Varjenje in sorodni postopki - Položaji pri varjenju (ISO/DIS 6947:2018)

Welding and allied processes - Welding positions (ISO/DIS 6947:2018)

Schweißen und verwandte Prozesse - Schweißpositionen (ISO/DIS 6947:2018)

Soudage et techniques connexes - Positions de soudage (ISO/DIS 6947:2018)

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Welding and allied processes — Welding positions

Soudage et techniques connexes — Positions de soudage

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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 on 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 the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is Technical Committee ISO/TC 44, *Welding and allied processes,* Subcommittee SC 7, *Representation and terms.*

This fourth edition cancels and replaces the third edition (ISO 6947:2011), which has been technically revised.

The main changes compared to the previous edition are as follows:

— Figure 1 has been revised

— Introduction of the concept of a special test position which is not covered by those defined

— Editorial corrections/improvements

Requests for official interpretations of any aspect of this document should be directed to the Secretariat of ISO/TC 44/SC 7 via your national standards body. A complete listing of these bodies can be found at www.iso.org.

Introduction

This document specifies positions for standard discrete test piece orientation PA, PB, H-L045, etc. that have been included in this document since the third edition (ISO 6947:2011).

Since the third edition was published, positions for production welding are also defined. These positions are flat, horizontal, vertical, and overhead. Unlike discrete testing positions, these positions are contiguous.

Welding position is not dependent on the geometrical arrangement of the joint, e.g. butt or fillet joint, or that of the semi-finished product. Welds of all types and in all directions are covered.

The direction of welding (i.e., upwards or downwards) may also contribute to defining welding positions.

The main positions have been given symbols which can easily be used for designation purposes; these symbols were chosen independently of possible meaningful abbreviations, i.e. they are not derived from any particular language.

The concept of a special test position, not covered by the existing and well defined positions, has been included so that testing can be carried out in positions that don't meet the standard requirements.

The relationship between testing positions and production welding positions is specified elsewhere, e.g. in ISO 9606 or ISO 15614.

Welding and allied processes — Welding positions

1 Scope

This document defines welding positions for testing and production, for butt and fillet welds, in all product forms.

Annex A gives examples of the limits of the slope of a weld axis and the rotation of the weld face about the weld axis for welding positions in production welds.

Annex B gives a comparison of International, European and US designations for welding positions.

2 Normative references

There are no normative references in this document.

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 position
position of a weld defined relative to the slope of the axis and rotation of the face of the weld relative to the horizontal plane

3.2
main welding position
welding position, designated PA, PB, PC, PD, PE, PF, PG and PH, PJ or PK for welding pipe (see Figures 1 and 2)

3.3
special test position
SP
any welding position that is not covered by one of the main welding positions (see 4.3)

3.4
slope
S
angle of the axis of the weld relative to the main welding position

3.5
rotation
R
angle of the face of the weld relative to the main welding position

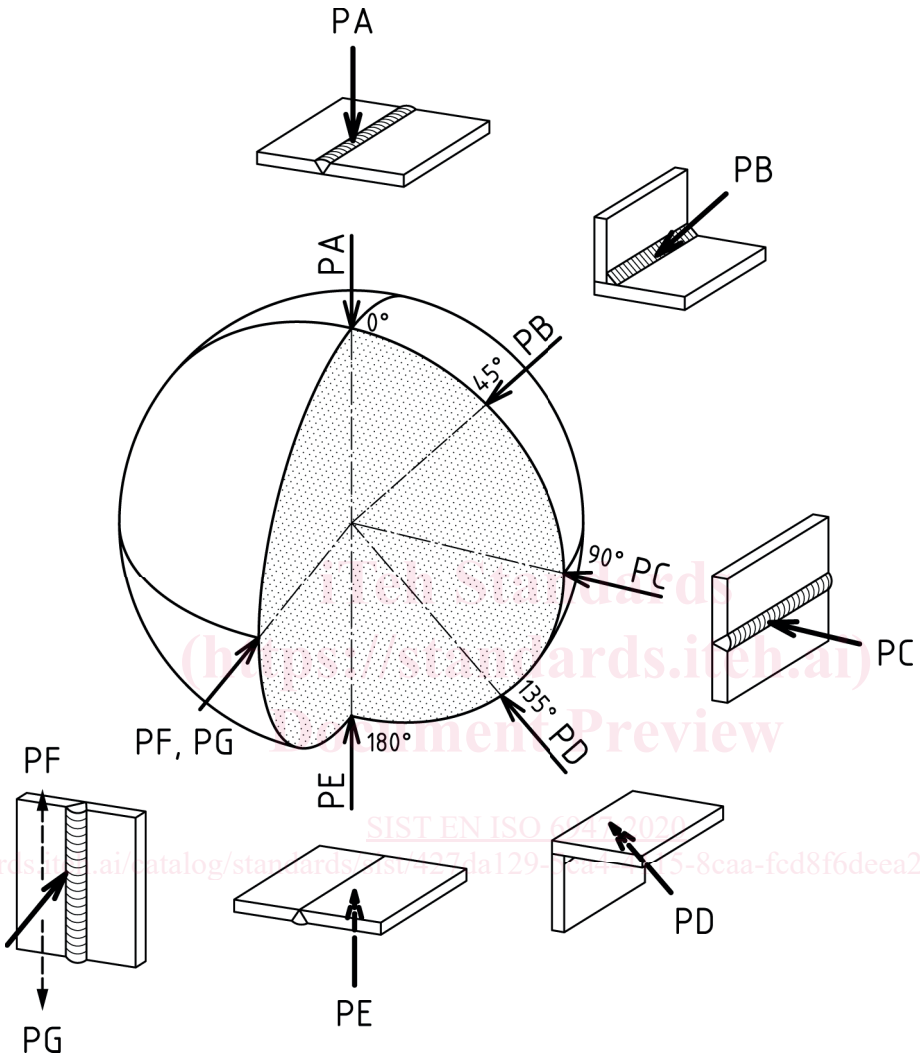
3.6
inclined angle
L
angle of the axis of the pipe

4 Welding positions

4.1 Main welding positions

The main welding positions PA to PG are illustrated in Figure 1. Examples of the main welding positions PA to PK and their application for butt and fillet welds are illustrated in Figure 2.

Figure 3 gives an example of the welding position for a rotating pipe in a positioner.



Key

PA flat position
PB horizontal/vertical position
PC horizontal position
PD horizontal/overhead position
PE overhead position
PF vertical position (welding upwards)
PG vertical position (welding downwards)

Figure 1 — Main welding positions – PA to PG

Examples of main welding positions for butt and fillet welds are illustrated in Figure 2.