

**Keevitus ja külgnevad protsessid. Soovitused liidete ettevalmistuseks. Osa 1: Teraste käsikaarkeevitus, kaarkeevitus kaitsegaasis, gaaskeevitus, TIG-keevitus ja kiirguskeevitus**

**Welding and allied processes - Recommendations for joint preparation - Part 1: Manual metal-arc welding, gas-shielded metal-arc welding, gas welding, TIG welding and beam welding of steels (ISO 9692-1:2003)**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 9692-1:2004 sisaldab Euroopa standardi EN ISO 9692-1:2003 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 9692-1:2004 consists of the English text of the European standard EN ISO 9692-1:2003.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 15.12.2003.	Date of Availability of the European standard is 15.12.2003.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile [standardiosakond@evs.ee](mailto:standardiosakond@evs.ee).

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Võtmesõnad: specifications, symbols, welding,

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English version

**Welding and allied processes - Recommendations for joint preparation - Part 1: Manual metal-arc welding, gas-shielded metal-arc welding, gas welding, TIG welding and beam welding of steels (ISO 9692-1:2003)**

Soudage et techniques connexes - Recommandations pour la préparation de joints - Partie 1: Soudage manuel à l'arc avec électrode enrobée, soudage à l'arc avec électrode fusible sous protection gazeuse, soudage aux gaz, soudage TIG et soudage par faisceau des aciers (ISO 9692-1:2003)

Schweißen und verwandte Prozesse - Empfehlungen zur Schweißnahtvorbereitung - Teil 1: Lichtbogenhandschweißen, Schutzgasschweißen, Gasschweißen, WIG-Schweißen und Strahlschweißen von Stählen (ISO 9692-1:2003)

This European Standard was approved by CEN on 8 December 2003.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This European Standard exists 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 Management Centre has the same status as the official versions.

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

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## **Foreword**

This document (EN ISO 9692-1:2003) has been prepared by Technical Committee ISO/TC 44 "Welding and allied processes" in collaboration with Technical Committee CEN/TC 121 "Welding", the secretariat of which is held by DS.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2004, and conflicting national standards shall be withdrawn at the latest by June 2004.

This document supersedes EN ISO 29692:1994.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

## **Endorsement notice**

The text of ISO 9692-1:2003 has been approved by CEN as EN ISO 9692-1:2003 without any modifications.

NOTE Normative references to International Standards are listed in annex ZA (normative).

## **Annex ZA**

(normative)

### **Normative references to international publications with their relevant European publications**

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE Where an International Publication has been modified by common modifications, indicated by (mod.), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 2553	1992	Welded, brazed and soldered joints - Symbolic representation on drawings	EN 22553	1994
ISO 6947	1993	Welds - Working positions - Definitions of angles of slope and rotation	EN ISO 6947	1997

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 9692-1 was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 7, *Representation and terms*.

This first edition of ISO 9692-1 cancels and replaces ISO 9692:1992 which has been technically revised.

ISO 9692 consists of the following parts, under the general title *Welding and allied processes — Recommendations for joint preparation*:

- *Part 1: Manual metal-arc welding, gas-shielded metal-arc welding, gas welding, TIG welding and beam welding of steels*
- *Part 2: Submerged arc welding of steels*
- *Part 3: Metal inert gas welding and tungsten inert gas welding of aluminium and its alloys*
- *Part 4: Clad steels*

## Introduction

This part of ISO 9692 defines the parameters characterizing the joint preparation and the collection of frequently recurring values and shapes.

The recommendations given in this part of ISO 9692 have been compiled on the basis of experience and contain dimensions for types of joint preparation that are generally found to lead to suitable welding conditions. However, the extended field of application makes it necessary to give a range of dimensions. The dimension ranges specified represent design limits and are not tolerances for manufacturing purposes. Manufacturing limits depend, for instance, on welding process, parent metal, welding position, quality level, etc. Because of the common character of this part of ISO 9692, the examples given cannot be regarded as the only solution for the selection of a joint type.

Specific fields of application and manufacturing requirements (e.g. pipeline construction) may be covered by selected ranges specified in other standards adapted from this basic part of ISO 9692.

Request for an official interpretation of technical aspects of this part of ISO 9692 should be directed to the relevant secretariat of ISO/TC 44/SC 7 via the user's national standardization body; a listing of these bodies can be found at [www.iso.org](http://www.iso.org).



# **Welding and allied processes — Recommendations for joint preparation —**

## **Part 1: Manual metal-arc welding, gas-shielded metal-arc welding, gas welding, TIG welding and beam welding of steels**

### **1 Scope**

This part of ISO 9692 specifies types of joint preparation for metal-arc welding with covered electrode, gas-shielded metal-arc welding, gas welding, TIG welding and beam welding of steel (see Clauses 3 and 4).

It applies to joint preparation for full penetration butt welds and for fillet welds. For partial penetration butt welds, types of joint preparation and dimensions differing from those specified in this part of ISO 9692 may be stipulated.

The root gaps referred to in this part of ISO 9692 are those gaps presented after tack welding, if used.

Consideration should be given to altering the joint preparation details (where appropriate) to facilitate temporary backing, “one-sided welding”, etc.

### **2 Normative 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.

ISO 2553:1992, *Welded, brazed and soldered joints — Symbolic representation on drawings*

ISO 4063, *Welding and allied processes — Nomenclature of processes and reference numbers*

ISO 6947, *Welds — Working positions — Definitions of angles of slope and rotation*

### **3 Materials**

Joint preparations recommended in this part of ISO 9692 are suitable for all kinds of steel.