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NSAI Standards

Irish Standard
I.S. EN ISO 9692-1:2013

Welding and allied processes - Types of joint preparation - Part 1: Manual metal arc welding, gas-shielded metal arc welding, gas welding, TIG welding and beam welding of steels (ISO 9692-1:2013)

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 9692-1

September 2013

ICS 25.160.40

Supersedes EN ISO 9692-1:2003

English Version

Welding and allied processes - Types of joint preparation - Part 1: Manual metal arc welding, gas-shielded metal arc welding, gas welding, TIG welding and beam welding of steels (ISO 9692-1:2013)

Soudage et techniques connexes - Types de 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 9692-1:2013)

Schweißen und verwandte Prozesse - Empfehlungen zur Schweißnahtvorbereitung - Teil 1: Lichtbogenhandschweißen, Schutzgasschweißen, Gasschweißen, WIG-Schweißen und Strahlschweißen von Stählen (ISO 9692-1:2013)

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Foreword

This document (EN ISO 9692-1:2013) has been prepared by Technical Committee ISO/TC 44 "Welding and allied processes" in collaboration with Technical Committee CEN/TC 121 “Welding and allied processes” the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by March 2014, and conflicting national standards shall be withdrawn at the latest by March 2014.

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.

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I.S. EN ISO 9692-1:2013

INTERNATIONAL STANDARD

ISO 9692-1

Second edition
2013-09-01

Welding and allied processes — Types of joint preparation —

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

Soudage et techniques connexes — Types de 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

Reference number
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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.

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

This second edition of ISO 9692-1 cancels and replaces ISO 9692-1:2003, which has been technically revised.

ISO 9692 consists of the following parts, under the general title *Welding and allied processes — Types of 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*

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Introduction

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

The specifications 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, and quality level. 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.

Requests for official interpretations of any aspect of this part of ISO 9692 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.

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Welding and allied processes — Types of 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 manual metal arc welding, 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 is given to altering the joint preparation details (where appropriate) to facilitate temporary backing, “one-sided welding,” etc.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6947, *Welding and allied processes — Welding positions*

3 Materials

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

4 Welding processes

Joint preparations recommended in this part of ISO 9692 are suitable for welding carried out in accordance with the following processes as specified in Tables 1 to 4 (combinations of different processes are possible):

a) (3) gas welding; oxyfuel gas welding;

b) (111) manual metal arc welding (metal arc welding with covered electrode); shielded metal arc welding;

c) (13) gas-shielded metal arc welding; gas metal arc welding includes:

— (131) MIG welding with solid wire electrode; gas metal arc welding using inert gas and solid wire electrode;

— (132) MIG welding with flux cored electrode; flux cored arc welding;

— (133) MIG welding with metal cored electrode; gas metal arc welding using inert gas and metal cored wire;

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