



SLOVENSKI STANDARD
SIST EN ISO 11970:2007
01-december-2007

Popis in odobritev varilnih postopkov za proizvodno varjenje jeklenih ulitkov (ISO 11970:2001)

Specification and approval of welding procedures for production welding of steel castings (ISO 11970:2001)

Schweißverfahrensprüfung für das Produktionsschweißen von Stahlguss (ISO 11970:2001)

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Descriptif et qualification d'un mode opératoire de soudage pour le soudage de production sur aciers moulés (ISO 11970:2001)

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Ta slovenski standard je istoveten z: EN ISO 11970:2007

ICS:

25.160.10	Varilni postopki in varjenje	Welding processes
77.140.80	Železni in jekleni ulitki	Iron and steel castings

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en

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ICS 25.160.10; 77.140.80

English Version

Specification and approval of welding procedures for production
welding of steel castings (ISO 11970:2001)

Descriptif et qualification d'un mode opératoire de soudage
pour le soudage de production sur aciers moulés (ISO
11970:2001)

Anforderungen und Anerkennung von Schweißverfahren für
das Produktionsschweißen von Stahlguss (ISO
11970:2001)

This European Standard was approved by CEN on 24 June 2007.

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 CEN 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 CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Foreword

The text of ISO 11970:2001 has been prepared by Technical Committee ISO/TC 17 "Steel" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 11970:2007 by Technical Committee ECISS/TC 31 "Steel castings", the secretariat of which is held by AFNOR.

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 January 2008, and conflicting national standards shall be withdrawn at the latest by January 2008.

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

Endorsement notice

The text of ISO 11970:2001 has been approved by CEN as EN ISO 11970:2007 without any modifications.

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**Specification and approval of welding
procedures for production welding of steel
castings**

*Descriptif et qualification d'un mode opératoire de soudage pour le
soudage de production sur aciers moulés*

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Printed in Switzerland

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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 3.

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 International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 11970 was prepared by Technical Committee ISO/TC 17, *Steel*, Subcommittee SC 11, *Steel castings*.

Annex B forms a normative part of this International Standard. Annex A is for information only.

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Introduction

All welding procedure approvals for production welding of steel castings shall be in accordance with this International Standard from the date of its issue.

Previous procedure approvals that conform to the range of approval of clause 8 are valid under this International Standard.

Where additional tests have to be carried out to complete the approval it is only necessary to perform the additional tests to the requirements of clauses 6 and 7.

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Specification and approval of welding procedures for production welding of steel castings

1 Scope

This International Standard specifies how a welding procedure specification (WPS) for production welding of steel castings is approved,

It defines the conditions for the execution of welding procedure approval tests and the limits of validity of an approved welding procedure for all practical welding operations within the range of essential variables.

Tests shall be carried out in accordance with this International Standard unless additional tests are specified by the purchaser or by agreement between the contracting parties.

This International Standard applies to the arc welding of steel castings. The principles of this International Standard may be applied to other fusion welding processes subject to agreement between the contracting parties.

In the case of specific service, material or manufacturing conditions, more comprehensive tests may be specified by the purchaser, than are specified by this International Standard, in order to gain more information, e.g. longitudinal weld tensile tests, bend tests, chemical analyses, ferrite determination in austenitic stainless steels, elongation, Charpy "V" impact tests, radiography, etc.

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2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 148:1983, *Steel — Charpy impact test (V-notch)*.

ISO 857-1:1998, *Welding and allied processes — Vocabulary — Part 1: Metal welding processes*.

ISO 4969:1980, *Steel — Macroscopic examination by etching with strong mineral acids*.

ISO 4986:1992, *Steel castings — Magnetic particle inspection*.

ISO 4987:1992, *Steel castings — Penetrant inspection*.

ISO 4992:—¹⁾, *Steel castings — Ultrasonic inspection*.

ISO 4993:1987, *Steel castings — Radiographic inspection*.

1) To be published.