

**KEEVITAJATE KVALIFITSEERIMISE KATSE
SULAKEEVITUS
OSA 1: TERASED**

**Qualification testing of welders
Fusion welding
Part 1: Steels
(ISO 9606-1:2012 including Cor 1:2012 and Cor 2:2013)**

EESTI STANDARDI EESSÕNA**NATIONAL FOREWORD**

See Eesti standard EVS-EN ISO 9606-1:2017 sisaldab Euroopa standardi EN ISO 9606-1:2017 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 9606-1:2017 consists of the English text of the European standard EN ISO 9606-1:2017.
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.
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EUROPEAN STANDARD

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2:2013)

Épreuve de qualification des soudeurs - Soudage par
fusion - Partie 1 : Aciers (ISO 9606-1:2012, y compris
Cor 1:2012 et Cor 2:2013)

Prüfung von Schweißern - Schmelzschweißen - Teil 1:
Stähle (ISO 9606-1:2012, einschließlich Cor 1:2012
und Cor 2:2013)

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European foreword

The text of ISO 9606-1:2012 including Cor 1:2012 and Cor 2:2013 has been prepared by Technical Committee ISO/TC 44 "Welding and allied processes" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 9606-1:2017 by 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of an identical text or by endorsement, at the latest by February 2018, and conflicting national standards shall be withdrawn at the latest by February 2018.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 9606-1:2013.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directives 2014/68/EU and 2014/29/EU.

For relationship with EU Directives, see informative Annex ZA and ZB, which is an integral part of this document.

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Endorsement notice

The text of ISO 9606-1:2012 including Cor.1:2012 and Cor 2:2013 has been approved by CEN as EN ISO 9606-1:2017 without any modification.

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Reference numbers, symbols and abbreviated terms	4
4.1 General	4
4.2 Reference numbers of welding processes	4
4.3 Symbols and abbreviated terms	4
5 Essential variables and range of qualification	6
5.1 General	6
5.2 Welding processes	7
5.3 Product type	8
5.4 Type of weld	9
5.5 Filler material grouping	9
5.6 Filler material type	10
5.7 Dimensions	11
5.8 Welding positions	13
5.9 Weld details	15
6 Examination and testing	15
6.1 Examination	15
6.2 Test pieces	16
6.3 Welding conditions	18
6.4 Test methods	18
6.5 Test piece and test specimen	19
6.6 Test report	23
7 Acceptance requirements for test pieces	23
8 Re-tests	24
9 Period of validity	24
9.1 Initial qualification	24
9.2 Confirmation of the validity	24
9.3 Revalidation of welder qualification	24
9.4 Revocation of qualification	24
10 Welder's qualification test certificate	25
11 Designation	25
Annex A (informative) Welder's qualification test certificate	27
Annex B (informative) Job knowledge	28
Annex C (informative) FW/BW test assembly option	31
Bibliography	32

Introduction

The ability of a welder to follow verbal or written instructions and verification of a person's skills are important factors in ensuring the quality of the welded product.

The testing of a welder's skill in accordance with this International Standard depends on the welding techniques and conditions used, in which uniform rules are complied with and standard test pieces are used.

The principle of this International Standard is that a qualification test qualifies a welder not only for the conditions used in the test, but also for all other conditions which are considered easier to weld in accordance with this International Standard. It is presumed that the welder has received training and/or has industrial practice within the range of qualification.

The qualification test can be used to qualify a welding procedure and a welder provided that all the relevant requirements, e.g. test piece dimensions and testing requirements are satisfied (see ISO 15614-1^[11]).

All new qualifications shall be in accordance with each part of this International Standard from its date of issue.

At the end of its period of validity, existing qualification tests of welders in accordance with the requirement of a national standard may be revalidated according to this International Standard. This is providing that the technical intent of this International Standard is satisfied. It is necessary for the new range of qualification to be interpreted in accordance with the requirements of this International Standard.

Qualification testing of welders — Fusion welding —

Part 1: Steels

1 Scope

This part of ISO 9606 specifies the requirements for qualification testing of welders for fusion welding of steels.

It provides a set of technical rules for a systematic qualification test of the welder, and enables such qualifications to be uniformly accepted independently of the type of product, location and examiner or examining body.

When qualifying welders, the emphasis is placed on the welder's ability manually to manipulate the electrode, welding torch or welding blowpipe, thereby producing a weld of acceptable quality.

The welding processes referred to in this part of ISO 9606 include those fusion-welding processes which are designated as manual or partly mechanized welding. It does not cover fully mechanized and automated welding processes.

NOTE For such processes, see ISO 14732^[10].

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

ISO 3834-2, *Quality requirements for fusion welding of metallic materials — Part 2: Comprehensive quality requirements*

ISO 3834-3, *Quality requirements for fusion welding of metallic materials — Part 3: Standard quality requirements*

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

ISO 5173, *Destructive tests on welds in metallic materials — Bend tests*

ISO 5817, *Welding — Fusion-welded joints in steel, nickel, titanium and their alloys (beam welding excluded) — Quality levels for imperfections*

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

ISO 9017, *Destructive tests on welds in metallic materials — Fracture test*

ISO/TR 15608, *Welding — Guidelines for a metallic material grouping system*

ISO 15609-1, *Specification and qualification of welding procedures for metallic materials — Welding procedure specification — Part 1: Arc welding*

ISO 15609-2, *Specification and qualification of welding procedures for metallic materials — Welding procedure specification — Part 2: Gas welding*

ISO 17636 (all parts), *Non-destructive testing of welds — Radiographic testing*

ISO 17637, *Non-destructive testing of welds — Visual testing of fusion-welded joints*

ISO/TR 25901:2007, *Welding and related processes — Vocabulary*

3 Terms and definitions

For the purposes of this part of ISO 9606, the following terms and definitions apply.

3.1

welder

person who holds and manipulates the electrode holder, welding torch or blowpipe by hand

[ISO/TR 25901:2007, 2.428]

3.2

manufacturer

person or organization responsible for the welding production

[ISO 15607:2003,^[12] 3.23]

3.3

examiner

person appointed to verify compliance with the applicable standard

NOTE In certain cases, an external independent examiner can be required.

[ISO/TR 25901:2007, 2.119]

3.4

examining body

organization appointed to verify compliance with the applicable standard

NOTE In certain cases, an external independent examining body can be required.

[ISO/TR 25901:2007, 2.120]

3.5

material backing

backing using material for the purpose of supporting molten weld metal

3.6

gas backing

backing using gas primarily for the purpose of preventing oxidation

3.7

flux backing

backing using flux primarily for the purpose of preventing oxidation

NOTE In submerged arc welding, flux backing may also reduce the risk of a weld pool collapse.

3.8

consumable insert

filler material that is placed at the root of the joint before welding to be completely fused into the root