

**METALSETE MATERJALIDE KEEVISÕMBLUSTE
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MAKROSKOOPILINE JA MIKROSKOOPILINE UURING**

**Destructive tests on welds in metallic materials -
Macroscopic and microscopic examination of welds
(ISO 17639:2003)**

EESTI STANDARDI EESSÕNA**NATIONAL FOREWORD**

See Eesti standard EVS-EN ISO 17639:2013 sisaldab Euroopa standardi EN ISO 17639:2013 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 17639:2013 consists of the English text of the European standard EN ISO 17639:2013.
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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English Version

**Destructive tests on welds in metallic materials - Macroscopic
and microscopic examination of welds (ISO 17639:2003)**

Essais destructifs des soudures sur matériaux métalliques -
Examens macroscopique et microscopique des
assemblages soudés (ISO 17639:2003)

Zerstörende Prüfung von Schweißverbindungen an
metallischen Werkstoffen - Makroskopische und
mikroskopische Untersuchungen von Schweißnähten (ISO
17639:2003)

This European Standard was approved by CEN on 8 August 2013.

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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

The text of ISO 17639:2003 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 17639:2013 by Technical Committee CEN/TC 121 "Welding" 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of an identical text or by endorsement, at the latest by February 2014, and conflicting national standards shall be withdrawn at the latest by February 2014.

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Endorsement notice

The text of ISO 17639:2003 has been approved by CEN as EN ISO 17639:2013 without any modification.

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Destructive tests on welds in metallic materials — Macroscopic and microscopic examination of welds

1 Scope

This International Standard gives recommendations for specimen preparation, test procedures and their main objectives for macroscopic and microscopic examination.

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 6520-1, *Welding and allied processes — Classification of geometric imperfections in metallic materials — Part 1: Fusion welding*

ISO 9956-3, *Specification and approval of welding procedures for metallic materials — Part 3: Welding procedure tests for arc welding of steels*

ISO 9956-4, *Specification and approval of welding procedures for metallic materials — Part 4: Welding procedure tests for the arc welding of aluminium and its alloys*

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

ISO/TR 16060, *Destructive tests on welds in metallic materials — Etchants for macroscopic and microscopic examination*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

macroscopic examination

examination of a test specimen by the naked eye, or under low magnification (generally less than $\times 50$), with or without etching

3.2

microscopic examination

examination of a test specimen by microscope with a magnification of generally $\times 50$ to $\times 500$, with or without etching

3.3

operator

person who performs the macroscopic and/or microscopic examination