

**Non-destructive testing - Image quality of radiographs -
Part 5: Determination of the image unsharpness value
using duplex wire-type image quality indicators**

**Non-destructive testing - Image quality of radiographs -
Part 5: Determination of the image unsharpness value
using duplex wire-type image quality indicators (ISO
19232-5:2013)**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 19232-5:2013 sisaldab Euroopa standardi EN ISO 19232-5:2013 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 19232-5:2013 consists of the English text of the European standard EN ISO 19232-5:2013.
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.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 19.06.2013.	Date of Availability of the European standard is 19.06.2013.
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.

ICS 19.100

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Aru 10, 10317 Tallinn, Eesti; www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:
Aru 10, 10317 Tallinn, Estonia; www.evs.ee; phone 605 5050; e-mail info@evs.ee

English Version

Non-destructive testing - Image quality of radiographs - Part 5:
Determination of the image unsharpness value using duplex
wire-type image quality indicators (ISO 19232-5:2013)

Essais non destructifs - Qualité d'image des radiogrammes
- Partie 5: Détermination de l'indice de flou de l'image à
l'aide d'indicateurs de qualité d'image duplex à fils (ISO
19232-5:2013)

Zerstörungsfreie Prüfung - Bildgüte von
Durchstrahlungsaufnahmen - Teil 5: Bestimmung der
Bildunschärfezahl mit Doppel-Drahtsteg-
Bildgüteprüfkörpern (ISO 19232-5:2013)

This European Standard was approved by CEN on 15 May 2013.

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-CENELEC 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-CENELEC Management Centre has the same status as the official versions.

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



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Foreword

This document (EN ISO 19232-5:2013) has been prepared by Technical Committee ISO/TC 135 "Non-destructive testing" in collaboration with Technical Committee CEN/TC 138 "Non-destructive testing" 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 December 2013, and conflicting national standards shall be withdrawn at the latest by December 2013.

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.

This document supersedes EN 462-5:1996.

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, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 19232-5:2013 has been approved by CEN as EN ISO 19232-5:2013 without any modification.

Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Specification of duplex wire-type IQI	1
4.1 Dimensions, manufacture, and marking.....	1
4.2 Declaration of conformity.....	2
5 Use of duplex wire	3

Non-destructive testing — Image quality of radiographs —

Part 5:

Determination of the image unsharpness value using duplex wire-type image quality indicators

1 Scope

This part of ISO 19232 specifies a method of determining the total image unsharpness of radiographs and real-time radiosopic systems.

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/IEC 17050-1, *Conformity assessment — Supplier's declaration of conformity — Part 1: General requirements*

3 Terms and definitions

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

3.1

duplex wire-type image quality indicator

duplex wire-type IQI

image quality indicator specifically designed to assess the total image unsharpness of a radiograph and composed of a series of pairs of wire elements made of high-density metal

3.2

total image unsharpness value

smallest number of the duplex wire pair, which is not separable

Note 1 to entry: The corresponding unsharpness values are given in [Table 1](#). See also [Clause 4](#).

4 Specification of duplex wire-type IQI

4.1 Dimensions, manufacture, and marking

4.1.1 Dimensions and material

The duplex wire-type IQI shall consist of a series of 13 elements placed in a transparent rigid plastic holder. Each element shall consist of a pair of wires of circular section. The elements D1 to D3 are of tungsten, the others of platinum.

The dimensions shall be in accordance with [Figure 1](#).