



SLOVENSKI STANDARD

SIST EN 462-5:1997

01-junij-1997

Neporušitveno preskušanje - Kakovost radiografske slike - 5. del: Indikatorji kakovosti radiografske slike (vrste duplex, žični), določitev neostrine slike

Non-destructive testing - Image quality of radiographs - Part 5: Image quality indicators (duplex wire type), determination of image unsharpness value

Zerstörungsfreie Prüfung - Bildgüte von Durchstrahlungsaufnahmen - Teil 5: Bildgüteprüfkörper (Doppel-Drahtsteg), Ermittlung der Bildunschärfe

Essais non destructifs - Qualité d'image des radiogrammes - Partie 5: Indicateurs de qualité d'image (duplex a fils), détermination de l'indice de flou de l'image

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Ta slovenski standard je istoveten z: **EN 462-5:1996**

ICS:

19.100 Neporušitveno preskušanje Non-destructive testing

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EUROPEAN STANDARD

EN 462-5

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 1996

ICS 19.100

Descriptors: non-destructive tests, industrial radiography, photographic images, quality, image quality indicators, specifications, dimensions, utilization

English version

**Non-destructive testing - Image quality of
radiographs - Part 5 : Image quality indicators
(duplex wire type), determination of image
unsharpness value**

Essais non destructifs - Qualité d'image des
radiogrammes - Partie 5 : Indicateurs de
qualité d'image (duplex à fils), détermination
de l'indice de flou de l'image

Zerstörungsfreie Prüfung - Bildgüte von
Durchstrahlungsaufnahmen - Teil 5 :
Bildgüteprüfkörper
(Doppel-Drahtsteg), Ermittlung der Bildunschärfe

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This European Standard was approved by CEN on 1996-02-23. 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 Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 138 "Non-destructive testing" the secretariat of which is held by AFNOR.

EN 462-5 is a Part of a series of European Standards; the other Parts are the following:

- EN 462-1 Non-destructive testing - Image quality of radiographs - Part 1: Image quality indicators (wire type), determination of image quality value
- EN 462-2 Non-destructive testing - Image quality of radiographs - Part 2: Image quality indicators (step/hole type), determination of image quality value
- EN 462-3 Non-destructive testing - Image quality of radiographs - Part 3: Image quality classes for ferrous metals
- EN 462-4 Non-destructive testing - Image quality of radiographs - Part 4: Experimental evaluation of image quality values and image quality tables

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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 September 1996, and conflicting standards shall be withdrawn at the latest by September 1996.

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According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This standard specifies a method of determining the image unsharpness of radiographs and real-time radioscopic systems.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 444 Non-destructive testing - General principles for the radiographic examination of metallic materials with X-and gamma-rays.

EN 462-1 Non-destructive testing - Image quality of radiographs - Part 1: Image quality indicators (wire type), determination of image quality value

EN 462-2 Non-destructive testing - Image quality of radiographs - Part 2: Image quality indicators (step/hole type), determination of image quality value

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3 Definitions

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For the purposes of this standard, the following definitions apply:

3.1 Duplex wire image quality indicator (duplex wire IQI)

An arrangement of pairs of wires as shown in figure 1.

3.2 Image unsharpness value

The number of the largest discernible element (see clause 5).

The corresponding unsharpnesses are shown in table 1.

4 Specification of duplex wire IQI

4.1 Dimension/Manufacture/Marking

4.1.1 Design/Material

The duplex wire 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 1 D to 3 D are of tungsten, the others of platinum.

The dimensions shall be in accordance with figure 1.

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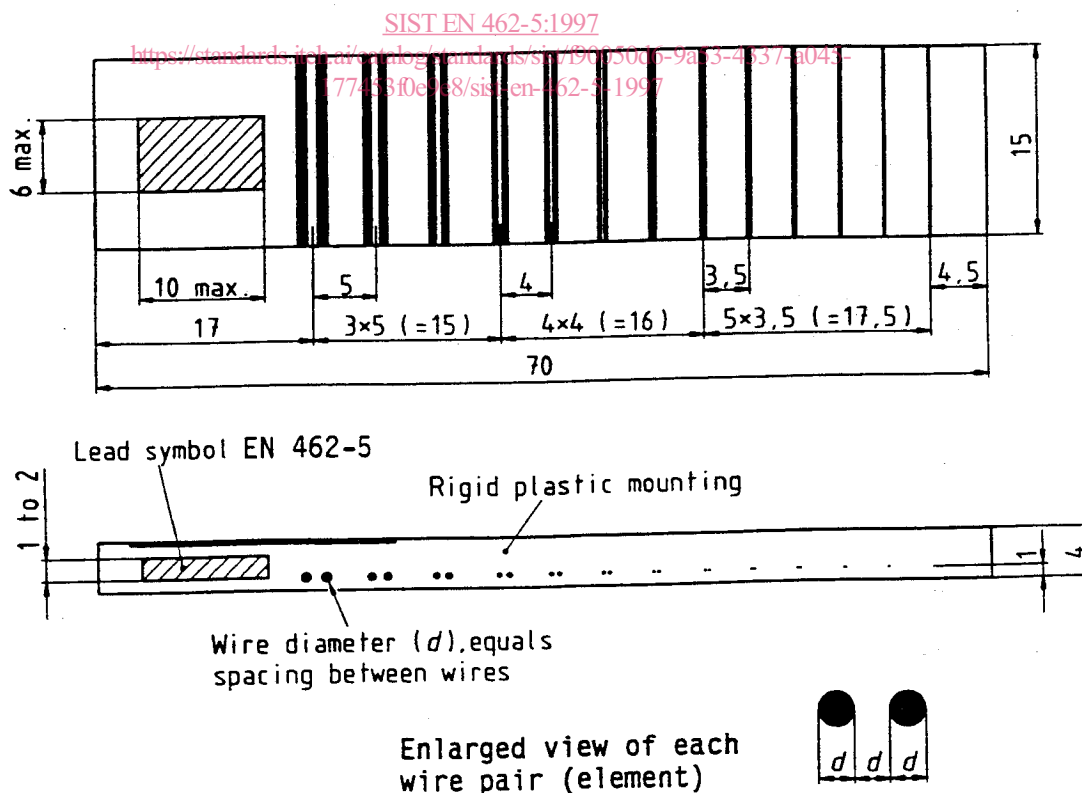


Figure 1: Duplex wire IQI

4.1.2 Manufacture

The wire diameters and spacing of the wires are shown in table 1.

Table 1: Element number, corresponding image unsharpness and wire diameter

dimensions in millimetres

Element no. (D=duplex)	Corresponding unsharpness	Wire diameter and spacing, d	Tolerances of wire diameter and wire spacing
13D	0,10	0,050	± 0,005
12D	0,13	0,063	
11D	0,16	0,080	
10D	0,20	0,100	
9D	0,26	0,130	
8D	0,32	0,160	± 0,01
7D	0,40	0,200	
6D	0,50	0,250	
5D	0,64	0,320	
4D	0,80	0,400	
3D	1,00	0,500	± 0,02
2D	1,26	0,630	
1D	1,60	0,800	

4.1.3 Marking

The marking of the duplex wire IQI (see figure 1) shall give the following information: EN 462-5.

4.2 Declaration of conformity

The manufacturer of this IQI shall provide a certificate of conformity with each duplex wire IQI.

5 Use of duplex wire

The duplex wire IQI should be used in conjunction with a wire or step/hole type IQI. It shall be placed on the source side of the object being examined and be aligned as closely as possible normal to the axis of the radiation beam.