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**SIS - MATERIALNORMCENTRALEN**

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## Oförstörande provning — Industriella betraktningsskärmar för radiogram — Minimifordringar (ISO 5580:1985)

### Orientering

Europastandarden EN 25 580:1992 gäller som svensk standard. EN 25 580 ikraftsätter ISO 5580:1985 som europastandard.

Detta dokument innehåller de officiella svenska och engelska versionerna av EN 25 580:1992.

Vid tryckning har de två versionerna lagts sida mot sida, men nummerats löpande, så att varje uppslag nummerats som en sida.

Standarden ersätter SS 11 41 90.

## Non-destructive testing — Industrial radiographic illuminators — Minimum requirements (ISO 5580:1985)

### Introduction

The European Standard EN 25 580:1992 has the status of a Swedish standard. EN 25 580 endorses ISO 5580:1985 as a European Standard.

This document contains the official Swedish and English versions of EN 25 580:1992.

The two versions are printed with the pages side by side, but are numbered in consecutive order, so that each set of pages has only one page number.

This standard replaces SS 11 41 90.

UDK 620.179.152.05:620.186

Standarder kan beställas hos SIS som även lämnar allmänna upplysningar om svensk och utländsk standard.  
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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

EN 25580

April 1992

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UDC 620.179.152.05 : 620.186

Descriptors: Non-destructive tests, industrial radiography, radiographic illuminators, equipment specifications, screens : Display, luminance, divergence, lighting, optical measurements, marking

English version

## Non-destructive testing — Industrial radiographic illuminators — Minimum requirements

(ISO 5580 : 1985)

Essais non destructifs — Négatoscopes utilisés en radiographie industrielle — Exigences minimales  
(ISO 5580 : 1985)

Zerstörungsfreie Prüfung — Betrachtungsgeräte für die industrielle Radiographie — Minimale Anforderungen  
(ISO 5580 : 1985)

This European Standard was approved by CEN on 1992-03-27. 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.

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 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

EUROPASTANDARD  
 EUROPEAN STANDARD  
 NORME EUROPÉENNE  
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Nyckelord: Oförstörande provning, industriell, radiografi, radiografiska betraktningsskärmar, utrustningsspecifikationer, skärmar: display, luminans, divergens, belysning, optiska mätningar, märkning

Svensk version

**Oförstörande provning — Industriella betraktningsskärmar  
 för radiogram — Minimifordringar  
 (ISO 5580:1985)**

Essais non destructifs —  
 Négatoscopes utilisés en  
 radiographie industrielle —  
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Non-destructive testing — Industrial  
 radiographic illuminators — Minimum  
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Zerstörungsfrei Prüfung —  
 Betrachtungsgeräte für die  
 industrielle radiographie —  
 Minimale Anforderungen  
 (ISO 5580:1985)

Denna standard är den officiella versionen av EN 25 580:1992 på svenska. För översättningen svarar SIS.

Denna europastandard antogs av CEN 1992-03-27.

CEN-medlemmarna är förpliktade att följa fordringarna i CEN/CENELECS interna bestämmelser som anger på vilka villkor denna europastandard i oförändrat skick skall ges status som nationell standard.

Aktuella förteckningar och bibliografiska referenser rörande sådana nationella standarder kan på begäran erhållas från CENs centalsekretariat eller från någon av CENs medlemmar.

Denna europastandard finns i tre officiella versioner (engelsk, fransk, tysk). En version på något annat språk, översatt under ansvar av en CEN-medlem till sitt eget språk och anmäld till CENs centalsekretariat har samma status som de officiella versionerna.

CENs medlemmar är de nationella standardiseringsorganen i Belgien, Danmark, Finland, Frankrike, Grekland, Irland, Island, Italien, Luxemburg, Nederländerna, Norge, Portugal, Schweiz, Spanien, Storbritannien, Sverige, Tyskland och Österrike.

**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**

In 1990, ISO 5580 : 1985 was submitted to the CEN Primary Questionnaire procedure.

Following the positive result of this procedure, the CEN Technical Board, agreed to submit ISO 5580 : 1985, without modifications, to Formal Vote. The result of the Formal Vote was positive.

National standards identical to this European Standard shall be published at the latest by 92-10-31 and conflicting national standards shall be withdrawn at the latest by 92-10-31.

In accordance with the CEN/CENELEC Common Rules, 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 United Kingdom.

**Endorsement notice**

The text of the International Standard ISO 5580:1985 was approved by CEN as a European Standard without any modification.

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EN 25 580:1992

### **Förord**

1990 underkastades ISO 5580:1985 en första omröstning inom CEN.

Som en följd av det positiva resultatet av denna omröstning enades CENs Tekniska Nämnd om att utan ändringar lägga fram ISO 5580:1985 för formell slutomröstning, som gav positivt resultat.

Nationella standarder identiska med denna europastandard skall publiceras senast 92-10-31 och motstridiga nationella standarder skall dras in senast 92-10-31.

Enligt CEN/CENELECs gemensamma regler är följande länder skyldiga att implementera denna europastandard:

Belgien, Danmark, Finland, Frankrike, Grekland,, Irland, Island, Italien, Luxemburg, Nederländerna, Norge, Portugal, Schweiz, Spanien, Storbritannien, Sverige, Tyskland och Österrike.

### **Meddelande om ikraftsättning**

Texten i den internationella standarden ISO 5580:1985 antogs av CEN utan ändring som europastandard.

# Non-destructive testing — Industrial radiographic illuminators — Minimum requirements

## 1 Scope and field of application

This International Standard specifies the minimum requirements for industrial illuminators used for viewing radiographs.

The function of the illuminator is to allow the viewing of radiographs.

The illuminator shall guarantee the same safety of personnel as an electric apparatus with maximum voltage, insulation and earthing which is required by corresponding safety standards of electrotechnics in each country where these are applied.

## 2 Characteristics of radiographic illuminators

### 2.1 Mechanical construction

An illuminator consists of the housing with one of the sides being the viewing screen illuminated from the inside. This screen can itself be the diffusing screen. This housing may also contain a system for thermal protection of the radiographs; this system may or may not be ventilated.

For the viewing of wet radiographs, the illuminator shall be so designed as to prevent penetration of the liquid if the radiograph comes into contact with the screen.

### 2.2 Viewing screen

The screens shall be easy to clean and shall be made of a material which is resistant to scratching during cleaning processes recommended by the manufacturer and during film viewing.

NOTE — The screen may be a combination of elements, all of which should be resistant to heat in terms of deformation and discoloration.

The size of the screens shall allow the viewing of a radiograph without excessive glare reaching the eyes of the operator. Should the illuminator be used for viewing radiographs of different sizes, a system of covering masks shall be provided.

### 2.3 Luminance

The screen luminance required depends on the density of the radiographs. The following luminance levels are recommended for the perception of information at various density levels.

The luminance (or brightness) of the illuminated radiograph shall be not less than :

- 30 cd/m<sup>2</sup> for film densities  $\leq 2,5$
- 10 cd/m<sup>2</sup> for film densities  $> 2,5$

and, wherever possible, approximately 100 cd/m<sup>2</sup> or higher. These minimum values require the following screen luminance :

Film density	Minimum screen luminance cd/m <sup>2</sup>
1	300
1,5	1 000
2	3 000
2,5	10 000
3	10 000
3,5	30 000
4	100 000
4,5	300 000

NOTE — The illuminator may be provided with a device for continuous control of screen luminance.

### 2.4 Colour of light

The colour of the light used to illuminate the radiograph is normally white. However, in the case of a film with an emulsion type yielding a monocoloured image, light with adapted colours may be used if they have been recommended by the film manufacturers.

### 2.5 Diffusion of light

If the illuminator has a diffusing screen, the light shall be sufficiently divergent so that both eyes of the observer receive rays from all parts of the screen. The diffusion factor  $\sigma'$  shall exceed 0,7 (see 3.1).

### 2.6 Uniformity of illumination

The screen shall be uniformly illuminated, the uniformity factor  $g$  being higher than 0,5 (see 3.2).

### 2.7 Disturbing light

The housing, blinds and covering masks shall be constructed in such a manner that no disturbing light hinders the viewing of the radiographs (see clause 3).