

**Non-destructive testing of steel tubes -  
Part 14: Automatic ultrasonic testing of  
seamless and welded (except  
submerged arc-welded) steel tubes for  
the detection of laminar imperfections**

Non-destructive testing of steel tubes - Part 14:  
Automatic ultrasonic testing of seamless and welded  
(except submerged arc-welded) steel tubes for the  
detection of laminar imperfections

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 10246-14:2000 sisaldab Euroopa standardi EN 10246-14:1999 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 16.06.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 10246-14:2000 consists of the English text of the European standard EN 10246-14:1999.</p> <p>This document is endorsed on 16.06.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b> This part of EN 10246 specifies requirements for automatic ultrasonic testing of seamless and welded (except submerged arc-welded) steel tubes for the detection of laminar imperfections according to four different acceptance levels.</p>	<p><b>Scope:</b> This part of EN 10246 specifies requirements for automatic ultrasonic testing of seamless and welded (except submerged arc-welded) steel tubes for the detection of laminar imperfections according to four different acceptance levels.</p>
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**Võtmesõnad:**

**Hinnagrupp** F

**English version**

**Non-destructive testing of steel tubes**

Part 14: Automatic ultrasonic testing of seamless and welded  
(except submerged arc-welded) steel tubes for the detection  
of laminar imperfections

Essais non destructifs des tubes en  
acier – Partie 14: Contrôle automatique  
par ultrasons des tubes pour la détec-  
tion des dédoubleures des tubes en  
aciers sans soudure et soudés (sauf à  
l'arc immergé sous flux en poudre)

Zerstörungsfreie Prüfung von Stahl-  
rohren – Teil 14: Automatische  
Ultraschallprüfung nahtloser und  
geschweißter (ausgenommen unter-  
pulvergeschweißter) Stahlrohre zum  
Nachweis von Dopplungen

This European Standard was approved by CEN on 1999-10-06.

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, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the 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 ECISS/TC 29 "Steel tubes and fittings for steel tubes", the secretariat of which is held by UNI.

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 May 2000, and conflicting national standards shall be withdrawn at the latest by May 2000.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association. This European Standard is considered to be a supporting standard to those application and product standards which in themselves support an essential safety requirement of a New Approach Directive and which make reference to this European Standard.

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

## 1 Scope

This Part of EN 10246 specifies requirements for automatic ultrasonic testing of seamless and welded steel tubes, with the exception of submerged arc welded (SAW) tubes, for the detection of laminar imperfections. The standard specifies acceptance levels and calibration procedures.

NOTE : An alternative test method for the detection of laminar imperfections in steel strip/plate prior to tube forming of welded tubes, is given in EN 10246-15.

This Part of EN 10246 is applicable to the inspection of tubes with an outside diameter greater than 30 mm. No lower limit of wall thickness is specified but see note in 4.1.

European Standard EN 10246 "Non-destructive testing of steel tubes" comprises the parts shown in Annex A.

## 2 Normative references

This Part of EN 10246 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 those publications apply to this Part of EN 10246 only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 10246-15      Non-destructive testing of steel tubes - Part 15: Automatic ultrasonic testing of strip/plate used in the manufacture of welded steel tubes for the detection of laminar imperfections.

## 3 General requirements

**3.1** The ultrasonic inspection covered by this Part of EN 10246 is usually carried out on tubes after completion of all the primary production process operations.

**3.2** The tubes to be tested shall be sufficiently straight and free from foreign matter as to ensure the validity of the test.

## 4 Method of test

**4.1** The tubes shall be tested using an ultrasonic pulse echo technique for the detection of laminar imperfections. The ultrasound shall be transmitted in the direction normal to the tube surface.

NOTE: For wall thicknesses less than 5 mm, where difficulties may occur in detecting and sizing laminar imperfections using this method of test, an alternative method of test may be agreed between manufacturer and purchaser