Non-destructive testing of steel tubes - Part 3: Automatic eddy current testing of seamless and welded (except submerged arc-welded) steel tubes for the detection of imperfections

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EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 10246-3:2000 sisaldab Euroopa standardi EN 10246-3:1999 ingliskeelset teksti. Käesolev dokument on jõustatud 16.06.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 10246-3:2000 consists of the English text of the European standard EN 10246-3:1999. This document is endorsed on 16.06.2000 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This standard specifies requirements for eddy current testing of seamless and welded tubes for pressure purposes, with the exception of submerged arc-welded (SAW) tubes, for the detection of imperfections, according to two different acceptance levels (see tables 1 and 2).	**Scope:** This standard specifies requirements for eddy current testing of seamless and welded tubes for pressure purposes, with the exception of submerged arc-welded (SAW) tubes, for the detection of imperfections, according to two different acceptance levels (see tables 1 and 2).

ICS 23.040.10, 77.040.20

Võtmesõnad: defects, determination, eddy current tests, electromagn etic tests, metaltubes, non-destructive tests, pipes (tubes), pressure pipes, seamless tubes, steel tubes, tests, welded tubes

Hinnagrupp G

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 10246-3

November 1999

ICS 23.040.10; 77.040.20

English version

Non-destructive testing of steel tubes

Part 3: Automatic eddy current testing of seamless and welded (except submerged arc-welded) steel tubes for the detection of imperfections

Essais non destructifs des tubes en acier – Partie 3: Contrôle automatique par courants de Foucault pour la détection des imperfections des tubes en acier sans soudure et soudés (sauf à l'arc immergé sous flux en poudre)

Zerstörungsfreie Prüfung von Stahlrohren – Teil 3: Automatische Wirbelstromprüfung nahtloser und geschweißter (ausgenommen unterpulvergeschweißter) Stahlrohre zum Nachweis von Fehlern

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

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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.

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CEN

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

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

Ref. No. EN 10246-3 : 1999 E

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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 the requirements for automatic eddy current testing of seamless and welded tubes with the exception of submerged arc-welded (SAW) tubes for the detection of imperfections. The standard specifies acceptance levels, calibration procedures and gives guidance on the limitations of the tests.

This Part of EN 10246 is applicable to the inspection of tubes with an outside diameter equal to or greater than 4 mm.

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 20286-2	ISO system of limits and fits - Part 2: Tables of standard tolerance grades and limit deviations for holes and shafts (ISO 286-2:1988)
ENV 10220	Seamless and welded steel tubes - Dimensions and masses per unit length
ISO 235	Parallel shank jobber and stub series drills and Morse taper shank drills

3 General requirements

3.1 The eddy current 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 by the eddy current test method for the detection of imperfections using one of the following techniques, as appropriate:

a) Concentric coil technique - full peripheral (see figure 1);

b) Rotating tube/pancake coil technique - full peripheral (see figure 2) ;

c) Segment coil technique - weld only (see figure 3).