

Vervangt NEN-EN 10246-6:1995 Ontw.

Nederlandse norm

# **NEN-EN 10246-6 (en)**

Niet-destructief onderzoek van stalen buizen -  
Deel 6: Geautomatiseerd ultrasoon onderzoek  
over de gehele omtrek van naadloze stalen  
buizen voor het aantonen van  
onvolkomenheden in de omtreksrichting

Non-destructive testing of steel tubes - Part 6: Automatic full  
peripheral ultrasonic testing of seamless steel tubes for the  
detection of transverse imperfections

ICS 23.040.10; 77.040.20  
december 1999



ICS 23.040.10; 77.040.20

English version

**Non-destructive testing of steel tubes - Part 6: Automatic full peripheral ultrasonic testing of seamless steel tubes for the detection of transverse imperfections**

Essais non destructifs des tubes en acier - Partie 6:  
Contrôle automatique par ultrasons sur toute la  
circonférence des tubes pour la détection des imperfections  
transversales des tubes en acier sans soudure

Zerstörungsfreie Prüfung von Stahlrohren - Teil 6:  
Automatische Ultraschallprüfung nahtloser Stahlrohre über  
den gesamten Rohrfumfang zum Nachweis von Querfehlern

This European Standard was approved by CEN on 6 October 1999.

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Preview

## 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of an identical text or by endorsement, at the latest by May 2000, and conflicting national standards shall be withdrawn at the latest by May 2000.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.

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Orb  
Preview

## 1 Scope

This Part of EN 10246 specifies the requirements for automatic ultrasonic shear wave testing of seamless steel tubes for the detection of transverse imperfections. The standard specifies acceptance levels and calibration procedures.

This Part of EN 10246 is applicable to the inspection of tubes with an outside diameter equal to or greater than 10 mm.

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

## 2 General requirements

**2.1** 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.

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

## 3 Method of test

**3.1** The tubes shall be tested using an ultrasonic shear wave technique for the detection of predominantly transverse imperfections.

**3.2** During testing, the tube and the transducer assembly shall be moved relative to each other so that the whole of the tube surface is scanned.

It is recognised that there may be a short length at both tube ends which cannot be tested. Any untested ends shall be dealt with in accordance with the requirements of the appropriate product standards (see also Annex B).

The relative speed during testing shall not vary by more than +10%.

**3.3** During testing, the tubes shall be scanned in two opposite longitudinal directions of beam travel, unless otherwise agreed between purchase and manufacturer.

**3.4** The ultrasonic test frequency applied shall be in the range of 1 MHz to 15 MHz dependant upon the thickness and surface finish of the tubes to be tested.

**3.5** The maximum width of each individual transducer, measured at right angles to the major axis of tube, shall be 25 mm.

**3.6** The equipment shall be capable of classifying tubes as either acceptable or suspect tubes by means of an automatic trigger/alarm level combined with a marking and/or sorting system.

**3.7** Where manual ultrasonic testing of untested tube ends and/or local suspect areas is required, this shall be carried out in accordance with Annex B.

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