

**Metalliske materialer**  
**Rør**  
**Utvidelsesprøving**  
**(ISO 8493:1998)**

Metallic materials  
Tube  
Drift-expanding test  
(ISO 8493:1998)

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**Nasjonalt forord**

Den engelskspråklige versjonen av europeisk standard EN ISO 8493:2004 er fastsatt som Norsk Standard NS-EN ISO 8493:2004.

**National foreword**

The English language version of European Standard EN ISO 8493:2004 has been adopted as Norwegian Standard NS-EN ISO 8493:2004.

English version

## Metallic materials - Tube - Drift-expanding test (ISO 8493:1998)

Matériaux métalliques - Tubes - Essai d'évasement (ISO  
8493:1998)

Metallische Werkstoffe - Rohr - Aufweitversuch (ISO  
8493:1998)

This European Standard was approved by CEN on 1 July 2004.

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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**Management Centre: rue de Stassart, 36 B-1050 Brussels**

## **Foreword**

The text of ISO 8493:1998 has been prepared by Technical Committee ISO/TC 164 "Mechanical testing of metals" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 8493:2004 by Technical Committee EC/ISS/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of an identical text or by endorsement, at the latest by January 2005, and conflicting national standards shall be withdrawn at the latest by January 2005.

This document supersedes EN 10234:1993.

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

## **Endorsement notice**

The text of ISO 8493:1998 has been approved by CEN as EN ISO 8493:2004 without any modifications.

# Metallic materials — Tube — Drift-expanding test

## 1 Scope

This International Standard specifies a method for determining the ability of metallic tubes of circular cross-section to undergo plastic deformation in drift expansion.

This International Standard is intended for tubes having an outside diameter no greater than 150 mm (100 mm for light metals) and a thickness no greater than 10 mm although the range of the outside diameter or the thickness for which this International Standard is applicable may be more exactly specified in the relevant product standard.

## 2 Symbols, designations and units

Symbols, designations and units for the drift-expanding test of tubes are given in table 1 and are shown in figure 1.

Table 1

Symbol	Designation	Unit
$a^a$	Wall thickness of the tube	mm
$D$	Original outside diameter of the tube	mm
$D_u$	Maximum outside diameter after testing	mm
$L$	Length of the test piece before testing	mm
$\beta$	Angle of the conical mandrel	degree

<sup>a</sup> The symbol  $T$  is also used in steel tube standards.

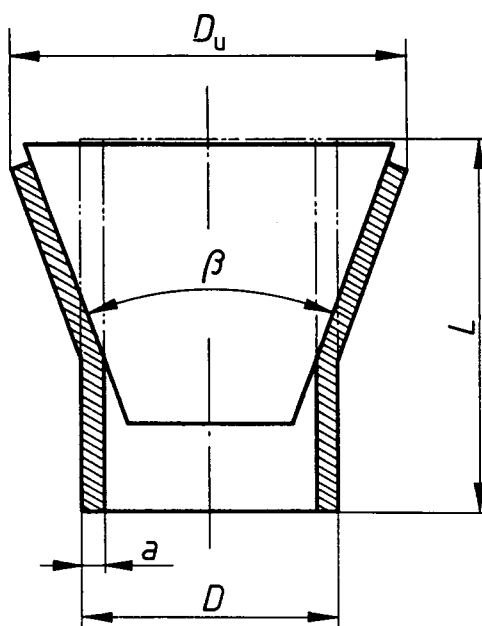


Figure 1