

Metalliske materialer
Rør
Ringutvidelsesprøving
(ISO 8495:1998)

Metallic materials
Tube
Ring-expanding test
(ISO 8495:1998)

Nasjonalt forord

Den engelskspråklige versjonen av europeisk standard EN ISO 8495:2004 er fastsatt som Norsk Standard NS-EN ISO 8495:2004.

National foreword

The English language version of European Standard EN ISO 8495:2004 has been adopted as Norwegian Standard NS-EN ISO 8495:2004.

English version

Metallic materials - Tube - Ring-expanding test (ISO 8495:1998)

Matériaux métalliques - Tubes - Essai de dilatation
d'anneaux (ISO 8495:1998)

Metallische Werkstoffe - Rohr - Ringaufdornversuch (ISO
8495:1998)

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.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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

Foreword

The text of ISO 8495:1998 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 8495:2004 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of an identical text or by endorsement, at the latest by January 2005, and conflicting national standards shall be withdrawn at the latest by January 2005.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 10236:1993.

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 8495:1998 has been approved by CEN as EN ISO 8495:2004 without any modifications.

Metallic materials — Tube — Ring-expanding test

1 Scope

This International Standard specifies a method for a ring-expanding test on tubes, that is used to reveal defects both on the surfaces and within the tube wall by expanding the test piece using a conical mandrel until fracture occurs. It may be also used to assess the ability of tubes to undergo plastic deformation.

The ring-expanding test is applicable to tubes having an outside diameter from 18 mm up to and including 150 mm and wall thickness from 2 mm up to and including 16 mm.

2 Symbols, designations and units

Symbols, designations and units for the ring-expanding test 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
$D_{m\max.}$	Maximum diameter of the conical mandrel	mm
$D_{m\min.}$	Minimum diameter of the conical mandrel	mm
D_u	Maximum outside diameter of the expanded part of the test piece	mm
k	Length of the taper of the conical mandrel	mm
L	Length of the test piece before the test	mm

^a The symbol T is also used in steel tube standards.

3 Principle

Expanding a ring cut from the end of a tube, over a conical mandrel until fracture, or until the expansion of the test piece reaches a value specified in the relevant product standard (see figure 1).