

## **Metallic materials - Tube - Flattening test (ISO 8492:2013)**

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## EESTI STANDARDI EESSÕNA

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English Version

## Metallic materials - Tube - Flattening test (ISO 8492:2013)

Matériaux métalliques - Tubes - Essai d'aplatissement (ISO 8492:2013)

Metallische Werkstoffe - Rohr - Ringfaltversuch (ISO 8492:2013)

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EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

## Foreword

This document (EN ISO 8492:2013) has been prepared by Technical Committee ISO/TC 164 "Mechanical testing of metals" in collaboration with Technical Committee ECISS/TC 110 "Steel tubes, and iron and steel fittings" 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of an identical text or by endorsement, at the latest by May 2014, and conflicting national standards shall be withdrawn at the latest by May 2014.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 8492:2004.

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### Endorsement notice

The text of ISO 8492:2013 has been approved by CEN as EN ISO 8492:2013 without any modification.

<b>Contents</b>		<b>Page</b>
<b>Foreword</b> .....		<b>iv</b>
<b>1</b>	<b>Scope</b> .....	<b>1</b>
<b>2</b>	<b>Symbols, designations and units</b> .....	<b>1</b>
<b>3</b>	<b>Principle</b> .....	<b>1</b>
<b>4</b>	<b>Testing equipment</b> .....	<b>2</b>
<b>5</b>	<b>Test piece</b> .....	<b>2</b>
<b>6</b>	<b>Procedure</b> .....	<b>2</b>
<b>7</b>	<b>Test report</b> .....	<b>2</b>

# Metallic materials — Tube — Flattening test

## 1 Scope

This International Standard specifies a method for determining the ability of metallic tubes of circular cross-section to undergo plastic deformation by flattening. It may also be used to reveal the defects in the tubes.

This International Standard is applicable to tubes having an outside diameter no greater than 600 mm and a thickness no greater than 15 % of the outside diameter. The range of the outside diameter or 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 flattening test are given in [Table 1](#) and are shown in [Figure 1](#).

**Table 1**

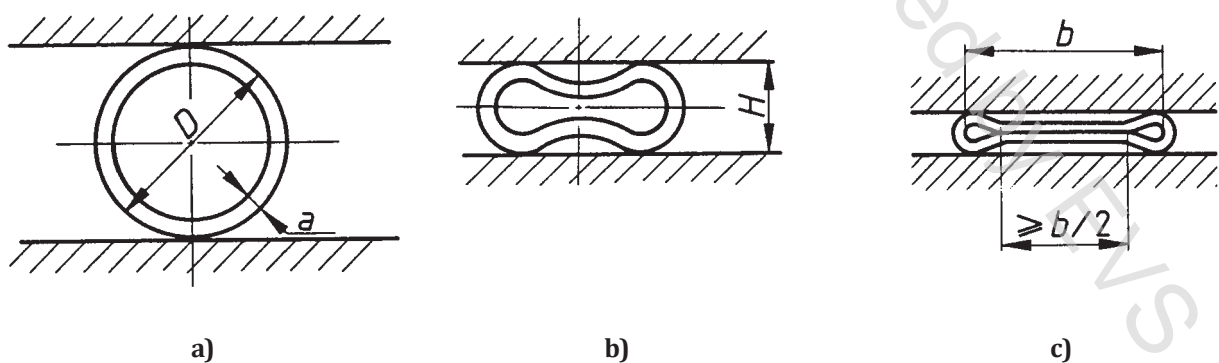
Symbol	Designation	Unit
$a^a$	Wall thickness of the tube	mm
$b$	Inside width of flattened test piece	mm
$D$	Outside diameter of the tube	mm
$H$	Distance between platens measured under load	mm
$L$	Length of the test piece	mm

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

## 3 Principle

Flattening the end of a tube or a test piece of specified length, cut from a tube in a direction perpendicular to the longitudinal axis of the tube, until the distance between platens measured under load in the direction of flattening reaches a value specified in the relevant product standard [see [Figure 1, a](#)) and b)].

In the case of close flattening, the internal surfaces of the test piece shall be in contact over at least half of the internal width  $b$  of the flattened test piece standard [see [Figure 1 c](#))].



**Figure 1**