



National Standards Authority of Ireland

STANDARD

I.S. EN 10226-1:2004

ICS 21.040.30

**PIPE THREADS WHERE PRESSURE TIGHT  
JOINTS ARE MADE ON THE THREADS - PART  
1: TAPER EXTERNAL THREADS AND  
PARALLEL INTERNAL THREADS -  
DIMENSIONS, TOLERANCES AND  
DESIGNATION**

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*This Irish Standard was  
published under the  
authority of the National  
Standards Authority of  
Ireland  
and comes into effect on:  
August 18, 2004*

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EUROPEAN STANDARD

**EN 10226-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2004

ICS 21.040.30

English version

Pipe threads where pressure tight joints are made on the  
threads - Part 1: Taper external threads and parallel internal  
threads - Dimensions, tolerances and designation

Filetage de tuyauterie pour raccordement avec étanchéité  
par le filetage - Partie 1: Filetages extérieurs coniques et  
filetages intérieurs cylindriques - Dimensions, tolérances et  
désignation

Rohrgewinde für im Gewinde dichtende Verbindungen - Teil  
1: Kegelige Außengewinde und zylindrische Innengewinde -  
Maße, Toleranzen und Bezeichnung

This European Standard was approved by CEN on 2 February 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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## **Foreword**

This document (EN 10226-1:2004) 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 January 2005, and conflicting national standards shall be withdrawn at the latest by January 2005.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

This standard is based, with editorial modifications on ISO 7-1 "Pipe threads where pressure-tight joints are made on the threads - Part 1 : Dimensions, tolerances and designation". Pipe threads to this standard are dimensionally identical to and fully interchangeable with pipe threads to ISO 7-1.

This standard has been prepared in three parts. Parts 1 and 2 reflect the two thread jointing systems in regular use in Europe and Worldwide - Part 1 details taper external and parallel internal pipe threads, and Part 2 details taper external and taper internal pipe threads. Part 3 will provide requirements for the gauging of pipe threads conforming to Parts 1 and 2.

The common requirements for the taper external pipe thread are given in Part 1 and in Part 2, so as to present the complete thread jointing system in each part.

Components having pipe threads produced to the dimensions and tolerances given in this standard can be assembled to give safe and effective pressure tight joints providing proper assembly techniques are used. The techniques used to assemble threaded joints are dependent on a number of factors including the internal thread (parallel or taper), the quality of the mating threads, the materials of the components being connected, the thread sealant or jointing compound used and the assembly torque.

Because of the different assembly techniques used for the taper / parallel and taper / taper systems, it is recommended that mixing of components having parallel internal threads and taper internal threads is avoided in the same piping system.

Relevant EN product or application standards will normally specify whether parallel and /or taper internal threads are permitted for these products or applications. Users should select the internal thread type to suit their product or application requirements.

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.

## EN 10226-1:2004 (E)

### 1 Scope

This part of EN 10226 specifies the requirements for thread form, dimensions, tolerances and designation for jointing pipe threads, sizes 1/16 to 6 inclusive, for joints made pressure-tight by the mating of the threads. These threads are taper external and parallel internal and are intended for use with pipes suitable for threading and for valves, fittings or other pipeline equipment interconnected by threaded joints.

An appropriate thread sealant or jointing compound should be used on the thread to ensure pressure-tight joints.

NOTE 1 Threaded joints using taper external threads and taper internal threads are detailed in prEN 10226-2

NOTE 2 The requirements for taper external threads are identical in EN 10226-1 and prEN 10226-2

NOTE 3 For pipe threads where pressure-tight joints are not made on the threads see EN ISO 228-1

NOTE 4 prEN 10226-3 gives details of recommended gauging systems for the verification of thread dimensions and thread form.

### 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

prEN 10226-3, *Pipe threads where pressure-tight joints are made on the threads - Part 3: Verification by means of limit gauges.*

EN ISO 228-1, *Pipe threads where pressure-tight joints are not made on the threads - Part 1: Dimensions, tolerances and designation (ISO 228-1:2000)*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply (see also Figures 3 and 4)

NOTE For consistency and clarity, common terms and definitions have been adopted for EN 10226-1 and prEN 10226-2, consequently some definitions may include terms which seem inappropriate to this part.

#### 3.1

##### **gauge diameter**

major diameter of the thread, whether external or internal, at the gauge plane.

#### 3.2

##### **major cone**

imaginary cone which just touches the crests of a taper external thread or the roots of a taper internal thread.

#### 3.3

##### **gauge plane**

plane, perpendicular to the axis of the taper thread, at which the major cone has the gauge diameter.

NOTE 1 For external threads the gauge plane is located at a distance equal to the gauge length from the small end of the thread.

NOTE 2 For parallel internal threads, theoretically there is no gauge plane because there is no major cone. However, the concept of a gauge plane is retained to assist with thread inspection and for this purpose the gauge plane is assumed to be located at a distance of half pitch behind the face of the threaded workpiece. This distance has been agreed in order to give consideration to the start of the thread that has been removed by chamfering.

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