

**Presisjonsstålrør**  
**Tekniske leveringsbetingelser**  
**Del 2: Sveiste kaldtrukne rør**

Steel tubes for precision applications  
Technical delivery conditions  
Part 2: Welded cold drawn tubes

---

**Nasjonalt forord**

Den engelskspråklige versjonen av europeisk standard EN 10305-2:2003 er fastsatt som Norsk Standard NS-EN 10305-2:2003.

**National foreword**

The English language version of European Standard EN 10305-2:2003 has been adopted as Norwegian Standard NS-EN 10305-2:2003.

ICS 77.140.75

English version

## Steel tubes for precision applications - Technical delivery conditions - Part 2: Welded cold drawn tubes

Tubes de précision en acier - Conditions techniques de livraison - Partie 2: Tubes soudés étirés à froid

Präzisionsstahlrohre - Technische Lieferbedingungen - Teil 2: Geschweißte kaltgezogene Rohre

This European Standard was approved by CEN on 2 October 2002.

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 Management Centre 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, 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**

## Contents

Foreword.....	3
1 Scope .....	4
2 Normative references .....	4
3 Terms and definitions.....	5
4 Symbols .....	5
5 Classification and designation .....	5
5.1 Classification.....	5
5.2 Designation.....	5
6 Information to be supplied by the purchaser.....	6
6.1 Mandatory information .....	6
6.2 Options.....	6
6.3 Example of an order .....	7
7 Manufacturing process .....	7
7.1 Steelmaking process .....	7
7.2 Tube manufacture and delivery condition .....	7
8 Requirements .....	8
8.1 General.....	8
8.2 Chemical composition.....	8
8.3 Mechanical properties .....	9
8.4 Appearance and internal soundness .....	10
8.5 Dimensions and tolerances .....	10
9 Inspection .....	14
9.1 Types of inspection .....	14
9.2 Inspection documents.....	15
9.3 Summary of inspection and testing .....	15
10 Sampling.....	16
10.1 Test unit .....	16
10.2 Preparation of samples and test pieces .....	16
11 Test methods.....	17
11.1 Tensile test .....	17
11.2 Flattening test.....	17
11.3 Drift expanding test .....	18
11.4 Dimensional inspection.....	18
11.5 Roughness measurement .....	18
11.6 Visual examination .....	18
11.7 Non-destructive testing.....	18
11.8 Retests, sorting and reprocessing.....	19
12 Marking .....	19
13 Protection and packaging .....	19
Annex A (informative) List of corresponding former symbols for delivery conditions and national steel designations.....	20
Bibliography .....	21

## Foreword

This document EN 10305-2:2002 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 2003, and conflicting national standards shall be withdrawn at the latest by May 2003.

EN 10305 consists of the following Parts under the general title "*Steel tubes for precision applications - Technical delivery conditions*":

- *Part 1: Seamless cold drawn tubes.*
- *Part 2: Welded cold drawn tubes.*
- *Part 3: Welded cold sized tubes.*
- *Part 4: Seamless cold drawn tubes for hydraulic and pneumatic power systems.*
- *Part 5: Welded and cold sized square and rectangular tubes.*
- *Part 6: Welded cold drawn tubes for hydraulic and pneumatic power systems.*

In this European Standard the annex A is informative.

This document includes a Bibliography.

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