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Irish Standard  
I.S. EN ISO 10893-4:2011

# Non-destructive testing of steel tubes - Part 4: Liquid penetrant inspection of seamless and welded steel tubes for the detection of surface imperfections (ISO 10893-4:2011)

## I.S. EN ISO 10893-4:2011

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English Version

**Non-destructive testing of steel tubes - Part 4: Liquid penetrant inspection of seamless and welded steel tubes for the detection of surface imperfections (ISO 10893-4:2011)**

Essais non destructifs des tubes en acier - Partie 4:  
Contrôle par ressuage des tubes en acier sans soudure ou  
soudés pour la détection des imperfections de surface (ISO  
10893-4:2011)

Zerstörungsfreie Prüfung von Stahlrohren - Teil 4:  
Eindringprüfung nahtloser und geschweißter Stahlrohre  
zum Nachweis von Oberflächenunvollkommenheiten (ISO  
10893-4:2011)

This European Standard was approved by CEN on 10 December 2010.

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## **Foreword**

This document (EN ISO 10893-4:2011) has been prepared by Technical Committee ISO/TC 17 "Steel" 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of an identical text or by endorsement, at the latest by October 2011, and conflicting national standards shall be withdrawn at the latest by October 2011.

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 10246-11:2000.

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### **Endorsement notice**

The text of ISO 10893-4:2011 has been approved by CEN as a EN ISO 10893-4:2011 without any modification.

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I.S. EN ISO 10893-4:2011

# INTERNATIONAL STANDARD

**ISO**  
**10893-4**

First edition  
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## **Non-destructive testing of steel tubes —**

**Part 4:**

### **Liquid penetrant inspection of seamless and welded steel tubes for the detection of surface imperfections**

*Essais non destructifs des tubes en acier —*

*Partie 4: Contrôle par ressuage des tubes en acier sans soudure et  
soudés pour la détection des imperfections de surface*



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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 10893-4 was prepared by Technical Committee ISO/TC 17, *Steel*, Subcommittee SC 19, *Technical delivery conditions for steel tubes for pressure purposes*.

This first edition cancels and replaces ISO 12095:1994, which has been technically revised.

ISO 10893 consists of the following parts, under the general title *Non-destructive testing of steel tubes*:

- *Part 1: Automated electromagnetic testing of seamless and welded (except submerged arc-welded) steel tubes for the verification of hydraulic leaktightness*
- *Part 2: Automated eddy current testing of seamless and welded (except submerged arc-welded) steel tubes for the detection of imperfections*
- *Part 3: Automated full peripheral flux leakage testing of seamless and welded (except submerged arc-welded) ferromagnetic steel tubes for the detection of longitudinal and/or transverse imperfections*
- *Part 4: Liquid penetrant inspection of seamless and welded steel tubes for the detection of surface imperfections*
- *Part 5: Magnetic particle inspection of seamless and welded ferromagnetic steel tubes for the detection of surface imperfections*
- *Part 6: Radiographic testing of the weld seam of welded steel tubes for the detection of imperfections*
- *Part 7: Digital radiographic testing of the weld seam of welded steel tubes for the detection of imperfections*
- *Part 8: Automated ultrasonic testing of seamless and welded steel tubes for the detection of laminar imperfections*
- *Part 9: Automated ultrasonic testing for the detection of laminar imperfections in strip/plate used for the manufacture of welded steel tubes*
- *Part 10: Automated full peripheral ultrasonic testing of seamless and welded (except submerged arc-welded) steel tubes for the detection of longitudinal and/or transverse imperfections*

- *Part 11: Automated ultrasonic testing of the weld seam of welded steel tubes for the detection of longitudinal and/or transverse imperfections*
- *Part 12: Automated full peripheral ultrasonic thickness testing of seamless and welded (except submerged arc-welded) steel tubes*

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