

**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)**

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 10893-4:2011 sisaldab Euroopa standardi EN ISO 10893-4:2011 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 10893-4:2011 consists of the English text of the European standard EN ISO 10893-4:2011.
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**ICS** 23.040.10, 77.040.20, 77.140.75

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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)

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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 ECSS/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of an identical text or by endorsement, at the latest by October 2011, and conflicting national standards shall be withdrawn at the latest by October 2011.

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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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# Non-destructive testing of steel tubes —

## Part 4: Liquid penetrant inspection of seamless and welded steel tubes for the detection of surface imperfections

### 1 Scope

This part of ISO 10893 specifies requirements applicable to liquid penetrant testing of seamless and welded tubes for the detection of surface imperfections.

It is applicable to all or any part of the tube surface as required by the relevant product standards.

It can also be applicable to the testing of hollow sections.

### 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.

ISO 3059, *Non-destructive testing — Penetrant testing and magnetic particle testing — Viewing conditions*

ISO 3452-1, *Non-destructive testing — Penetrant testing — Part 1: General principles*

ISO 3452-2, *Non-destructive testing — Penetrant testing — Part 2: Testing of penetrant materials*

ISO 9712, *Non destructive testing — Qualification and certification of personnel*

ISO 11484, *Steel products — Employer's qualification system for non-destructive testing (NDT) personnel*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 3452-1 and ISO 11484 and the following apply.

#### 3.1

##### **tube**

hollow long product open at both ends, of any cross-sectional shape

#### 3.2

##### **seamless tube**

tube made by piercing a solid product to obtain a tube hollow, which is further processed, either hot or cold, into its final dimensions