Non-destructive testing of steel tubes - Part 6: Radiographic testing of the weld seam of welded steel tubes for the detection of imperfections (ISO 10893-6:2019)

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 10893-6:2019 sisaldab Euroopa standardi EN ISO 10893-6:2019 ingliskeelset teksti.	This Estonian standard EVS-EN ISO 10893-6:2019 consists of the English text of the European standard EN ISO 10893-6:2019.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 13.03.2019.	Date of Availability of the European standard is 13.03.2019.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 23.040.10, 77.040.20, 77.140.75

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 10893-6

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Supersedes EN ISO 10893-6:2011

English Version

Non-destructive testing of steel tubes - Part 6: Radiographic testing of the weld seam of welded steel tubes for the detection of imperfections (ISO 10893-6:2019)

Essais non destructifs des tubes en acier - Partie 6: Contrôle radiographique du cordon de soudure des tubes en acier soudés pour la détection des imperfections (ISO 10893-6:2019)

Zerstörungsfreie Prüfung von Stahlrohren - Teil 6: Durchstrahlungsprüfung der Schweißnaht geschweißter Stahlrohre zum Nachweis von Unvollkommenheiten (ISO 10893-6:2019)

This European Standard was approved by CEN on 29 December 2018.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Ref. No. EN ISO 10893-6:2019 E

European foreword

This document (EN ISO 10893-6:2019) has been prepared by Technical Committee ISO/TC 17 "Steel" in collaboration with Technical Committee CEN/TC 459/SC 10 “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 September 2019, and conflicting national standards shall be withdrawn at the latest by September 2019.

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

This document supersedes EN ISO 10893-6:2011.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 10893-6:2019 has been approved by CEN as EN ISO 10893-6:2019 without any modification.

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

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

This second edition cancels and replaces the first edition (ISO 10893-6:2011), which has been technically revised. The main changes compared with the previous edition are as follows:

a) evidences about film overlap have been included in 4.7;

b) a safety warning for X and gamma rays has been added at the end of Clause 4;

c) Figure 2 has been aligned with ISO 17636-1 up to 1 000 kV;

d) film side position and location have been clarified in Clause 6;

e) requirements for film processing have been specified in Clause 7;

f) a reference to ISO 5580 has been added in Clause 8;

g) the figures in Annex A have been revised.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Non-destructive testing of steel tubes —

Part 6: Radiographic testing of the weld seam of welded steel tubes for the detection of imperfections

1 Scope

This document specifies requirements for film-based radiographic X-ray testing of the longitudinal or helical weld seams of automated fusion arc-welded steel tubes for the detection of imperfections.

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

NOTE As an alternative, see ISO 10893-7 for digital radiographic testing.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 5576, *Non-destructive testing — Industrial X-ray and gamma-ray radiology — Vocabulary*

ISO 5579, *Non-destructive testing — Radiographic testing of metallic materials using film and X- or gamma rays — Basic rules*

ISO 5580, *Non-destructive testing — Industrial radiographic illuminators — Minimum requirements*

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

ISO 10893-7, *Non-destructive testing of steel tubes — Part 7: Digital radiographic testing of the weld seam of welded steel tubes for the detection of imperfections*

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

ISO 11699-1, *Non-destructive testing — Industrial radiographic film — Part 1: Classification of film systems for industrial radiography*

ISO 17636-1, *Non-destructive testing of welds — Radiographic testing — Part 1: X- and gamma-ray techniques with film*

ISO 19232-1, *Non-destructive testing — Image quality of radiographs — Part 1: Determination of the image quality value using wire-type image quality indicators*

ISO 19232-2, *Non-destructive testing — Image quality of radiographs — Part 2: Determination of the image quality value using step/hole-type image quality indicators*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 5576, ISO 11484 and the following apply.