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**Automated ultrasonic examination of
steel pipes and tubes**

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Foreword

This Japanese Industrial Standard has been revised by the Minister of Economy, Trade and Industry based on the provision of Article 14, paragraph (1) of the Industrial Standardization Act applied mutatis mutandis pursuant to the provision of Article 16 of the said Act in response to a proposal for revision of Japanese Industrial Standard with a draft being attached, submitted by The Japan Iron and Steel Federation (JISF), an accredited standards development organization. This edition replaces the previous edition (**JIS G 0582** : 2015), which has been technically revised.

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Automated ultrasonic examination of steel pipes and tubes

Introduction

This Japanese Industrial Standard has been prepared based on **ISO 10893-10** : 2011 (Edition 1) and its Amendment 1 : 2020, **ISO 10893-11** : 2011 (Edition 1) and its Amendment 1 : 2020, and **ISO 10332** : 2010 (Edition 2) with some modifications of the technical contents.

The vertical lines on both sides and dotted underlines indicate changes from the corresponding International Standards. A list of modifications with the explanations is given in Annex JA.

1 Scope

This Standard specifies the automated angle beam ultrasonic examination (including the method using phased array probe) of longitudinal imperfections of seamless steel tubes and longitudinal imperfections of the welds of welded steel tubes (excluding submerged arc-welded tubes). It is normally applicable to steel tubes with an outside diameter equal to or greater than 10 mm.

If so specified by the product standard or agreed between the purchaser and the manufacturer, the method may be applied for inspection of transverse imperfections on seamless steel tubes, and longitudinal imperfections on the parent material of welded steel tubes.

NOTE 1 This Standard is normally applied to steel tubes with a ratio of the wall thickness to the outside diameter equal to or smaller than 20 %.

NOTE 2 **ISO 10332**, **ISO 10893-10** and **ISO 10893-11** permit the use of the Lamb wave technique for inspection of longitudinal imperfections.

NOTE 3 The International Standards corresponding to this Standard and the symbol of degree of correspondence are as follows.

ISO 10332 : 2010 *Non-destructive testing of steel tubes — Automated ultrasonic testing of seamless and welded (except submerged arc-welded) steel tubes for verification of hydraulic leak-tightness*

ISO 10893-10 : 2011 *Non-destructive testing of 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* + Amendment 1 : 2020

ISO 10893-11 : 2011 *Non-destructive testing of steel tubes — Part 11 : Automated ultrasonic testing of the weld seam of welded steel tubes for the detection of longitudinal and/or transverse imperfections* + Amendment 1 : 2020 (Overall evaluation : MOD)

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standards and **JIS** are IDT