भारतीय मानक

Indian Standard

IS xxxxx : 2024
ISO 11960 : 2020

पेट्रोलियम और प्राकृतिक गैस उद्योग - कुओं के लिए आवरण या ट्यूबिंग के रूप में उपयोग के लिए स्टील पाइप

Petroleum and Natural Gas Industries Steel pipes for use as Casing or Tubing for Wells

ICS 75.180.10, 77.140.75

भारतीय मानक ब्यूरो
BUREAU OF INDIAN STANDARDS
मानक भवन, 9 बहादुर शाह ज़फर मार्ग, नई दिल्ली - 110002
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI - 110002
www.bis.gov.in www.standardsbis.in

November 2024 **Price Group**

Steel Tubes, Pipes and Fittings Sectional Committee, MTD 19

NATIONAL FOREWORD

This draft Indian Standard which is identical with ISO 11960 : 2020 ‘Petroleum and natural gas industries — Steel pipes for use as casing or tubing for wells’ issued by the International Organization for Standardization (ISO), and subject to its finalization, is to be adopted by the Bureau of Indian Standards on the recommendation of the Steel Tubes, Pipes and Fittings Sectional Committee and approval of the Metallurgical Engineering Division Council.

The text of ISO standard has been approved as suitable for publication as in Indian Standard without deviations. Certain terminologies and conventions are, however, not identical with those used in Indian Standard. Attention is especially drawn to the following:

a) Wherever the words `International Standard’ appear referring to this standard, it should be read as `Indian Standard’.

b) Comma (,) has been used as a decimal marker while in Indian Standards the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exists. The corresponding Indian Standards which are to be substituted in their place are listed below along with their degree of equivalence for the edition indicated:

International Standard	*Corresponding Indian Standard*	*Degree of Equivalence*
ISO 80000-1: 2022 Quantities and Units Part 1: General	IS/ISO 80000-1: 2022 Quantities and Units Part 1 General	Identical
ISO 643: 2024 Steels — Micrographic determination of the apparent grain size	IS 4748: 2021 Steel - Micrographic determination of the apparent grain size (Third Revision)	Identical
ISO 6506-1: 2014 Metallic materials - Brinell hardness test: Part 1 test method	IS 1500 (Part 1): 2019 Metallic materials - Brinell hardness test: Part 1 test method (Fifth Revision)	Identical
ISO 6506-2: 2017 Metallic materials -- Brinell hardness test — Part 2: Verification and calibration of testing machines	IS 1500 (Part 2): 2021 Metallic materials — Brinell hardness test — Part 2: Verification and calibration of testing machines	Identical
ISO 6508-1: 2023 Metallic materials — Rockwell hardness test Part 1: Test method	IS 1586 (Part 1): 2018 Metallic materials — Rockwell hardness test: Part 1 test method (Fifth Revision)	Identical

ISO 6508-2: 2023 Metallic materials — Rockwell hardness test Part 2: Verification and calibration of testing machines and indenters	IS 1586 (Part 2): 2018 Metallic materials — Rockwell hardness test: Part 2 verification and calibration of testing machines and indenters (Fifth Revision)	Identical
ISO 6892-1: 2019 Metallic materials — Tensile testing Part 1: Method of test at room temperature	IS 1608 (Part 1): 2022 Metallic materials — Tensile testing — Part 1: Method of test at room temperature	Identical
ISO 7500-1:2018 Metallic materials — Calibration and verification of static uniaxial testing machines Part 1: Tension/compression testing machines — Calibration and verification of the force-measuring system	IS 1828 (Part 1): 2022 Metallic materials — Calibration and verification of static uniaxial testing machines — Part 1: tension/compression testing machines — Calibration and verification of the force-measuring system	Identical
ISO 9513: 2012 Metallic materials — Calibration of extensometer systems used in uniaxial testing	IS 12872: 2021 Metallic Materials — Calibration of Extensometer Systems Used in Uniaxial Testing (Second Revision)	Identical
ISO 10893-2: 2011 Non-destructive testing of steel tubes — Part 2: Automated eddy current testing of seamless and welded (except submerged arc-welded) steel tubes for the detection of imperfections	IS 6398 (Part 2): 2020 Non-destructive testing of steel tubes — Part 2: Automated eddy current testing of seamless and welded (except submerged arc-welded) steel tubes for the detection of imperfections (Second Revision)	Identical

The technical committee responsible for the preparation of this standard has reviewed the provisions of following International Standards referred in these adopted standards and decided their acceptability for use in conjunction with this standard.

International Standard	*Title*
ISO 8501-1: 2007	Preparation of steel substrates before application of paints and related products — Visual assessment of surface cleanliness
ISO 10893-3: 2011	Non-destructive testing of steel tubes — Part 3: Automated full peripheral flux leakage testing of seamless and welded (except submerged arcwelded) ferromagnetic steel tubes for the detection of longitudinal and/or transverse imperfections

ISO 10893-5: 2011	Non-destructive testing of steel tubes — Part 5: Magnetic particle inspection of seamless and welded ferromagnetic steel tubes for the detection of surface imperfections
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
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
ISO 11484: 2019	Steel products — Employer's qualification system for non-destructive testing (NDT) personnel
ISO 13678: 2010	Petroleum and natural gas industries — Evaluation and testing of thread compounds for use with casing, tubing, line pipe and drill stem elements

This standard also makes a reference to the BIS Certification Marking of the product, details of which are given in National Annex A.

In reporting the result of a test or analysis made in accordance with this standard, is to be rounded off, it shall be done in accordance with IS 2: 2022 ‘Rules for rounding off numerical-values (second revision)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

The scope of the standard is as follows:

SCOPE

This document specifies the technical delivery conditions for steel pipes (casing, tubing and pup joints), coupling stock, coupling material and accessory material.

By agreement between the purchaser and manufacturer, this document can also be applied to other plain-end pipe sizes and wall thicknesses.

This document is applicable to the following connections:

— short round thread casing (SC);

— long round thread casing (LC);

— buttress thread casing (BC);

— non-upset tubing (NU);

— external upset tubing (EU);

— integral-joint tubing (IJ).

NOTE 1 For further information, see API Spec 5B.

For such connections, this document specifies the technical delivery conditions for couplings and thread protection.

NOTE 2 Supplementary requirements that can optionally be agreed for enhanced leak resistance connections (LC) are given in A.9 SR22.

This document can also be applied to tubulars with connections not covered by ISO or API standards.

This document is applicable to products including the following grades of pipe: H40, J55, K55, N80, L80, C90, R95, T95, P110, C110 and Q125.

This document is not applicable to threading requirements.

NOTE 3 Dimensional requirements on threads and thread gauges, stipulations on gauging practice, gauge specifications, as well as, instruments and methods for inspection of threads are given in API Spec 5B.

National Annex A

(National Foreword)

A-1 BIS CERTIFICATION MARKING

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act*, 2016 and the Rules and Regulations framed thereunder, and the products may be marked with the standard mark.