

BUREAU OF INDIAN STANDARDS

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भारतीय मानक मसौदा

**स्टील में फ्यूजन वेल्डेड जोड़ और वेल्ड धातु — परीक्षण पद्धति
भाग 3 धात्विक सामग्रियों में वेल्ड पर विनाशी परीक्षण — अनुप्रस्थ तन्यता परीक्षण**

[आई एस 3600 (भाग 3) का पाँचवाँ पुनरीक्षण]

Draft Indian Standard

FUSION WELDED JOINTS AND WELD METAL IN STEEL — METHOD OF TEST

**PART 3 DESTRUCTIVE TESTS ON WELDS IN METALLIC MATERIALS —
TRANSVERSE TENSILE TEST**

[Fifth Revision of IS 3600 (Part 3)]

ICS 25.160.40

Welding General and its Applications
Sectional Committee, MTD 11

Last date of comments
03 December 2024

NATIONAL FOREWORD

This draft standard is identical to ISO 4136 : 2022 'Destructive tests on welds in metallic materials — Transverse tensile test' 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 Welding General and its Applications Sectional Committee and approval of the Metallurgical Engineering Division Council.

This standard was originally published in 1966 and subsequently revised in 1973, 1984, 2009 and 2018. First revision of this standard was undertaken in 1973 to cover various tests on fusion welded joints and weld metals in steel. Second revision of this standard was undertaken in 1984 to bring the test and test requirements in line with the other international standards published so far by revising the standard in 9 Parts. The third revision of this standard was undertaken in 2009 to align it with the ISO 4136 : 2001. Fourth revision was undertaken in 2018 to align it with the latest version of ISO 4136 : 2012. This revision has been undertaken to align it with the latest version of ISO 4136 : 2022 under dual numbering system to harmonize it with the latest developments that have taken place at international level.

The main changes as compared to the previous version are as follows:

- The prescription of the ambient temperature has been updated to conform with ISO 6892-1;
- Table 1 has been updated and figures have been changed accordingly;
- The diameter of pipes has been clarified;

- d) The determination of section S_0 has been clarified; and
- e) A Bibliography has been created.

This Indian Standard is published in various parts. Other parts in this series are:

Part 1	Destructive tests on welds in metallic materials — Tensile test on cruciform and lapped joints
Part 2	Destructive tests on welds in metallic materials — Impact tests — Test specimen location, notch orientation and examination
Part 4	Destructive tests on welds in metallic materials — Longitudinal tensile test on weld metal in fusion welded joints
Part 5	Destructive tests on welds in metallic materials — Bend tests
Part 8	Destructive tests on welds in metallic materials — Fracture test
Part 9	Destructive tests on welds in metallic materials — Macroscopic and microscopic examination of welds

The text of ISO standard has been approved as suitable for publication as an 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'; and
- 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 exist. The corresponding Indian Standards which are to be substituted in their place are given below along with their degree of equivalence for the edition indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
ISO 6892-1 Metallic materials — Tensile testing — Part 1: Method of test at room temperature	IS 1608 (Part 1) : 2022/ISO 6892-1 : 2019 Metallic materials — Tensile testing: Part 1 Method of test at room temperature (<i>fifth revision</i>)	Identical
ISO 6892-2 Metallic materials — Tensile testing — Part 2: Method of test at elevated temperature	IS 1608 (Part 2) : 2020/ISO 6892-2 : 2018 Metallic materials — Tensile testing: Part 2 Method of test at elevated temperature (<i>fourth revision</i>)	Identical

The 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.

<i>International Standard</i>	<i>Title</i>
ISO 4063	Welding, brazing, soldering and cutting — Nomenclature of processes and reference numbers

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 scope of the standard is as follows:

SCOPE

This document specifies the sizes of test specimen and the procedure for carrying out transverse tensile tests in order to determine the tensile strength and the location of fracture of a welded butt joint.

This document applies to metallic materials in all forms of product with joints made by any welded butt joint.

The complete document/text of ISO 4136 : 2022 'Destructive tests on welds in metallic materials — Transverse tensile test' may be made available, on request to:

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