भारतीय मानक ब्यूरो

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भारतीय मानक मसौदा

Draft Indian Standard

Metallic Materials — Fatigue Testing — Axial-Strain-Controlled Method

(ISO 12106 : 2017, MOD)

ICS 77.040.10

Mechanical Testing of Metals Sectional Committee, MTD 3	Last date of comment: 11/01/2024

NATIONAL FOREWORD

This draft standard is identical ISO 12106 : 2017 'Metallic materials — Fatigue testing — Axial-strain-controlled method' 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 Mechanical Testing of Metals Sectional Committee and approval of the Metallurgical Engineering Division Council.

The committee decided to adopt ISO 12106 : 2017 standard under dual numbering system with minor modification. Y axis of the Fig B.3 has been modified to range from 10^{-3} to 10^{-1} instead of 10^{3} to 10^{1} .

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 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 / 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.	Identical

ISO 9513 : 2012 Metallic materials — Calibration of extensometer systems used in uniaxial testing	12872 : 2021 / ISO 9513 : 2012 Metallic Materials - Calibration of Extensometer Systems Used in Uniaxial Testing (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 23788 : 2012	Metallic materials — Verification of the alignment of fatigue testing machines

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 a method of testing uniaxially deformed specimens under strain control at constant amplitude, uniform temperature and fixed strain ratios including at $R_e = -1$ for the determination of fatigue properties. It can also be used as a guide for testing under other R-ratios, as well as elevated temperatures where creep deformation effects may be active.

The complete document/text of ISO 12106 : 2017 'Metallic materials — Fatigue testing — Axial-strain-controlled method' may be made available, on request to:

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