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Railway infrastructure — Rail fastening systems —

Part 4: Test methods for resistance to repeated loading

Infrastructure ferroviaire — Systèmes de fixation du rail —

Partie 4: Méthode d'essai pour la détermination de résistance aux charges répétitives

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Foreword

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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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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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 269, *Railway applications*, Subcommittee SC 1, *Infrastructure*.

A list of all parts in the ISO 22074 series can be found on the ISO website.

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.

Railway infrastructure — Rail fastening systems —

Part 4:
Test methods for resistance to repeated loading

1 Scope

This document specifies a laboratory test procedure for applying repeated load cycles which generate displacement cycles representative of the displacements caused by traffic on railway track. It is used for assessing the long-term performance of rail fastening systems.

This document is applicable to surface mounted rail on sleepers, bearers and slab track and embedded rail.

This test procedure applies to a complete fastening assembly.

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 22074-1, *Railway infrastructure — Rail fastening systems — Part 1: Vocabulary*

ISO 22074-2, *Railway infrastructure — Rail fastening systems — Part 2: Test method for longitudinal rail restraint*

ISO 22074-7, *Railway infrastructure — Rail fastening systems — Part 7: Test method for clamping force and uplift stiffness*

ISO 22074-8:2022, *Railway infrastructure — Rail fastening systems — Part 8: Test method for vertical stiffness*

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*

ISO 9513, *Metallic materials — Calibration of extensometer systems used in uniaxial testing*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 22074-1 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
performance requirement
requirement relating to applied loading and pass/fail criteria identified before the test is carried out

Note 1 to entry: These requirements can be set out in a client's technical specification or in standards such as the EN 13481 series or EN 17319.