
**Railway infrastructure — Rail
fastening systems —**

Part 6:
**Test method for resistance to severe
environmental conditions**

Infrastructure ferroviaire — Systèmes de fixation du rail —

*Partie 6: Méthode d'essai pour la détermination de résistance aux
conditions environnementales sévères*

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 6:

Test method for resistance to severe environmental conditions

1 Scope

This document specifies a laboratory test procedure for finding the effect of exposure to severe environmental conditions on the fastening system.

This test procedure applies to a complete fastening assembly including embedded rail with mechanical fastenings. It is not applicable to embedded rail systems relying on adhesive components to secure the rail.

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 9227, *Corrosion tests in artificial atmospheres — Salt spray tests*

3 Terms and definitions

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

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

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

4 Principle

The complete fastening assembly is exposed to a salt spray and the effect on ease of dismantling, and reassembly, and condition of individual components is recorded.

5 Apparatus

5.1 Salt spray equipment, which shall conform with ISO 9227 for the NSS (neutral salt spray) test.

5.2 Tools, manually operated, normally used for installing and removing the clamping device from the fastening assembly.

6 Test specimens

Each specimen shall consist of a complete fastening assembly with a section of sleeper, bearer or element of ballastless track. This shall include a short length of rail of the section for which the fastening is designed.

7 Procedure

Visually examine and record the condition of each component. Then fit the rail to the section of sleeper or baseplate using the fastening components as they are to be assembled in track.

Subject to the neutral salt spray in accordance with ISO 9227 for 300 h. Remove the clamping device using the tools provided; visually examine all the components and record their condition. Then reassemble the fastening system using the tools provided.

Record any failure to dismantle or reassemble the fastening with the tools provided.

8 Test report

The test report shall include at least the following information:

- a) a reference to this document (i.e. ISO 22074-6:2021);
- b) name and address of laboratory performing the test;
- c) date when the test was performed;
- d) name, designation and description of fastening assembly, including individual components, tested;
- e) origin of test specimens;
- f) support used for assembly;
- g) rail section used in test;
- h) tools provided to assemble and dismantle the assembly;
- i) change in appearance (if any) of each component during test;
- j) any failure to dismantle or reassemble the fastening assembly with the tools provided.