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### 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*

ICS: 45.080

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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](http://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](http://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 on 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 the following URL: [www.iso.org/iso/foreword.html](http://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.

# 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, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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: Terms and definitions*

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.

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

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

## 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

This shall conform with ISO 9227 for the NSS (neutral salt spray) test.

### 5.2 Tools

Manually operated tools 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) number, date of issue and title of this document ;
- b) name and address of laboratory performing the test;
- c) date test 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 re-assemble the fastening assembly with the tools provided.