

DIN 50018



ICS 25.220.99; 77.060

Supersedes
DIN 50018:1997-06

Testing in a saturated atmosphere in the presence of sulfur dioxide, English translation of DIN 50018:2013-05

Prüfung im Kondenswasser-Wechselklima mit schwefeldioxidhaltiger Atmosphäre,
Englische Übersetzung von DIN 50018:2013-05

Essai dans une atmosphère saturée en présence de dioxyde de soufre,
Traduction anglaise de DIN 50018:2013-05

Document comprises 7 pages

Translation by DIN-Sprachendienst.

In case of doubt, the German-language original shall be considered authoritative.



A comma is used as the decimal marker.

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Foreword

This document has been prepared by Working Committee NA 062-01-71 AA *Korrosion und Korrosionsschutz* of the *Normenausschuss Materialprüfung* (NMP) (Materials Testing Standards Committee).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. DIN shall not be held responsible for identifying any or all such patent rights.

Amendments

This standard differs from DIN 50018:1997-06 as follows:

- a) designations of test atmospheres have been revised to comply with DIN EN ISO 6270-2;
- b) procedures of performance checks on the apparatus have been revised to ensure compliance with the requirements on dummy specimens according to DIN EN ISO 6988;
- c) the standard has been editorially revised.

Previous editions

DIN 50018: 1963-12, 1978-05, 1988-06, 1997-06

1 Scope

This standard specifies the general conditions and procedures for the testing of test specimens in condensation atmospheres in the presence of sulfur oxide — and specifically for sulfur dioxide concentrations that are not included in DIN EN ISO 6988:1997-03 — and which are required to be complied with to ensure that the results of tests carried out in different laboratories are reproducible. If a particular concentration has not been specified, testing is to comply with DIN 50018 — AHT 1,0 S. It is advisable to test only same-type anti-corrosion systems at the same time in any one apparatus, as interactions between test specimens of different systems cannot be excluded.

If more than one anti-corrosion system is tested on more than one test material, it needs to be taken into account that the effect of sulfur dioxide on the test specimens might vary.

The shape and preparation of test specimens, the duration of the test and the assessment of the test results are not covered in this standard. For information regarding these, the relevant standards and regulations shall be consulted or shall be agreed on a case-to-case basis. For the purpose of these tests, the specifications of DIN 50905-1 to DIN 50905-3 in particular shall be complied with. Further information is given in the Introduction to DIN EN ISO 6988:1997-03.

The tests described in this standard serve to assess the effectiveness of anti-corrosion systems and to quickly diagnose corrosion defects.

The tests described here are assigned to the category 'accelerated corrosion tests' as in DIN EN ISO 8044.

Unless the anti-corrosion systems applied are similar to one another, it may be difficult to compare their effectiveness under service conditions. This is due to the fact that corrosive test conditions may differ considerably from those occurring in service, thus inducing corrosion to take different routes and to employ different mechanisms.

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.

DIN 50900-2, *Corrosion of metals — Terms — Part 2: Electrochemical terms*

DIN 50905-1, *Corrosion of metals — Corrosion testing — Part 1: General guidance*

DIN 50905-2, *Corrosion of metals — Corrosion testing — Corrosion characteristics under uniform corrosion attack*

DIN 50905-3, *Corrosion of metals — Corrosion testing — Corrosion characteristics under nonuniform and localized corrosion attack without mechanical stress*

DIN EN 10130, *Cold rolled low carbon steel flat products for cold forming — Technical delivery conditions*

DIN EN ISO 6988:1997-03, *Metallic and other non-organic coatings — Sulfur dioxide test with general condensation of moisture (ISO 6988:1985)*

DIN EN ISO 8044, *Corrosion of metals and alloys — Basic terms and definitions*

ISO 8407, *Corrosion of metals and alloys — Removal of corrosion products from corrosion test specimens*