
**Corrosion of metals and alloys —
Accelerated corrosion test for
intergranular corrosion susceptibility
of austenitic stainless steels**

*Corrosion des métaux et alliages — Essai de corrosion accéléré pour
la détermination de la sensibilité à la corrosion intergranulaire
des aciers inoxydables austénitiques*



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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.

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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ISO 21610 was prepared by Technical Committee ISO/TC 156, *Corrosion of metals and alloys*.

Corrosion of metals and alloys — Accelerated corrosion test for intergranular corrosion susceptibility of austenitic stainless steels

1 Scope

1.1 This International Standard specifies accelerated methods for the determination of the intergranular corrosion susceptibility of austenitic stainless steels. The methods specified by the standard provide results identical to those obtained when using ISO 3651-1 and ISO 3651-2, but the test period for the accelerated corrosion test is shorter.

1.2 This International Standard is applicable to the testing of various kinds of metal production, including two-layer rolled metal, welded joints, deposited metal and weld seam metal.

1.3 Two test methods are specified:

- method A: corrosion test in a solution of copper sulfate and concentrated sulfuric acid in the presence of metallic copper;
- method B: corrosion test in a solution of copper sulfate, sulfuric acid and copper fluoride in the presence of metallic copper.

2 Normative references

The following referenced documents are indispensable for the application 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 3651 (all parts), *Determination of resistance to intergranular corrosion of stainless steels*

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 8044 apply.

4 Test specimens

4.1 Test specimens may be taken from

- any position within steel plates with a width equal to or less than 10 mm, or from strip or wire,
- the axis zone (in the longitudinal direction) of rolled metal (rolled section metal and shaped rolled metal with a round, square or hexagonal cross-section),