



BSI Standards Publication

Welding for aerospace applications — Visual inspection of welds

National foreword

This British Standard is the UK implementation of ISO 19828:2025. It supersedes BS ISO 19828:2017, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee WEE/0.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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**Welding for aerospace
applications — Visual inspection
of welds**

*Soudage pour applications aérospatiales — Contrôle visuel des
soudures*

**Second edition
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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 document 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).

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This document was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 14, *Welding and brazing in aerospace*.

This second edition cancels and replaces the first edition (ISO 19828:2017) which has been technically revised.

The main changes are as follows:

- requirements for indirect inspection equipment added in [6.5](#);
- requirement for documenting type of equipment when endoscopes or borescopes are needed for visual inspection added in [6.5](#);
- requirements for welds with limited visual access for inspection added in [6.5](#);
- training and qualification requirements for inspectors using endoscopes or borescopes added in [9](#);
- Minimum contents of inspector certificate modified in [12](#).

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. Official interpretations of TC 44 documents, where they exist, are available from this page: <https://committee.iso.org/sites/tc44/home/interpretation.html>.

Welding for aerospace applications — Visual inspection of welds

1 Scope

This document specifies the requirements for visual inspection of welds in metallic materials and requirements for qualification and certification of personnel for visual weld inspection.

This document is also applicable to the visual inspection of the joint prior to or between welding sequences. In this case, the contents of theoretical and practical training will need to be adapted accordingly.

This document can also be applied for brazed joints.

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 18490, *Non-destructive testing — Evaluation of vision acuity of NDT personnel*

EN 4179¹⁾, *Aerospace series — Qualification and approval of personnel for non-destructive testing*

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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

authorization

written statement by an employer/fabricator that an individual is entitled to perform visual weld inspection within the organization

3.2

examiner/trainer

person who is designated by the *employer/fabricator* (3.3) to certify and recertify visual weld inspectors

Note 1 to entry: The examiner can be at the employer's or an external organization.

3.3

employer/fabricator

organization employing or contracting the services of one or more individuals who perform visual weld inspection, including self-employed individuals

1) Under a Memorandum of Understanding, this is identical to NAS 410^[10].