



**International
Standard**

ISO 17779

**Brazing — Specification and
qualification of brazing procedures
for metallic materials**

*Brasage fort — Descriptif et qualification d'un mode opératoire
de brasage fort pour les matériaux métalliques*

**Second edition
2026-10**

Sample Document

get full document from standards.iteh.ai

Sample Document

get full document from standards.iteh.ai



COPYRIGHT PROTECTED DOCUMENT

© ISO 2026

All rights reserved.

This ISO publication is protected by copyright and is owned by ISO and/or its licensors.

The content of this ISO publication is provided under licence, not sold. Use is subject to the applicable licence terms issued by ISO, an ISO member body, or an authorized third-party distributor.

Except as required for implementation or expressly permitted by a separate licence, no part of this ISO publication may be reproduced, distributed, modified, used, or made available in any form or by any means – electronic or mechanical, including photocopying, scanning, recording, or posting on internal or external digital platforms.

Any use beyond the scope of the granted rights is prohibited and may result in legal action.

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

Published in Switzerland

Contents

Page

Foreword	iv
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Preliminary brazing procedure specification (pBPS)	3
5 Brazing procedure test	3
6 Test piece	3
6.1 General	3
6.2 Shape and dimensions of test pieces	3
6.3 Brazing of test pieces	4
7 Examination and testing	4
7.1 Extent of testing	4
7.2 Test pieces	4
7.3 Non-destructive testing	5
7.4 Destructive testing	5
7.4.1 General	5
7.4.2 Bend testing	5
7.4.3 Peel testing	5
7.4.4 Shear testing	5
7.4.5 Transverse tensile testing	5
7.5 Acceptance levels	6
7.6 Re-testing	6
8 Essential variables and range of qualification	6
8.1 General	6
8.2 Brazing process	6
8.3 Product type	6
8.4 Type of joint	7
8.5 Branch connection	7
8.6 Parent material group(s)	7
8.7 Filler metals, flux and brazing filler application	7
8.8 Dimensions	8
8.9 Filler metal flow direction	8
8.10 Post braze heat treatment	9
8.11 Related to the technical and quality control	9
9 Brazing procedure qualification record (BPQR)	9
10 Brazing procedure specification (BPS)	9
Annex A (informative) Quality requirements for brazing	11
Annex B (informative) Brazing procedure specification (BPS)	12
Annex C (informative) Examples of test pieces	13
Annex D (informative) Brazing procedure qualification record (BPQR)	15
Annex E (normative) Material grouping system	16
Bibliography	18

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).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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 44, *Welding and allied processes*, Subcommittee SC 11, *Qualification requirements for welding and allied processes personnel*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 121, *Welding and allied processes*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 17779:2021), which has been technically revised.

The main changes are as follows:

- in general, all requirements have been clarified by use of suitable revisions;
- introduction has been revised to match text used in ISO/DIS 15614-1;
- reference to [Annex A](#) has been moved from the scope to [7.5](#);
- reference to ISO 857-2 has been deleted from the scope;
- scope revised by removing the statement: “The principles of this document can be applied to other brazing processes and brazing of materials not listed”;
- normative references in [Clause 2](#) have been updated;
- in [7.2](#), [7.3](#), [7.4.2](#), [7.4.3](#), [7.4.4](#) and [7.4.5](#), the use of technically equivalent standards is no longer permitted
- in [Table 4](#), the footnotes have been revised for clarity;
- in [8.7](#), the use of other standards that provide equivalent technical conditions is no longer permitted;
- ISO 11745 has been added to a new bibliography.

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

Sample Document

get full document from standards.iteh.ai

Introduction

The purpose of this document is to provide a general set of rules for brazing procedure qualification independent of product or application.

All new brazing procedure qualification tests are intended to be performed in accordance with this document. Specification and qualification of brazing procedures that were made in accordance with previous editions of this document may be used for any application for which the current edition is specified. In this case, the ranges of qualification of previous editions remain applicable.

Where additional tests need to be carried out to make the qualification technically equivalent, it is only necessary to perform the additional tests on a test piece which should be made in accordance with this document.

Sample Document

get full document from standards.iteh.ai

Brazing — Specification and qualification of brazing procedures for metallic materials

1 Scope

This document specifies requirements for the specification and qualification of brazing procedures for brazing of metallic materials.

This document specifies requirements for brazing of the test piece, testing of the test specimen, essential variables and their range of qualification, acceptance criteria, brazing procedure qualification record (BPQR) and brazing procedure specification (BPS).

This document does not cover testing of residual stresses, corrosion resistance and impact properties.

This document applies to the following brazing processes according to ISO 4063:2023 with local and global heating:

- 911 Infrared brazing;
- 912 Flame brazing, torch brazing;
- 913 Laser beam brazing;
- 914 Electron beam brazing;
- 916 Induction brazing;
- 918 Resistance brazing;
- 919 Diffusion brazing;
- 921 Furnace brazing;
- 922 Vacuum brazing;
- 923 Dip-bath brazing;
- 924 Salt-bath brazing;
- 925 Flux bath brazing;
- 926 Immersion brazing;
- 972 Arc weld brazing.

This document does not apply to brazing for aerospace applications covered by ISO 11745.

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 4063:2023, *Welding, brazing, soldering and cutting — Nomenclature of processes and reference numbers*

ISO 18279:2023, *Brazing — Imperfections in brazed joints*