

This is a preview of "ISO 11745:2022". Click here to purchase the full version from the ANSI store.

Second edition 2022-11

# Brazing for aerospace applications — Qualification test for brazers and brazing operators — Brazing of metallic components

Brasage fort pour applications aérospatiales — Épreuve de qualification des braseurs et des opérateurs braseurs — Brasage fort des composants métalliques



Reference number ISO 11745:2022(E)

### ISO 11745:2022(E)

This is a preview of "ISO 11745:2022". Click here to purchase the full version from the ANSI store.



## **COPYRIGHT PROTECTED DOCUMENT**

© ISO 2022

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office CP 401 • Ch. de Blandonnet 8 CH-1214 Vernier, Geneva Phone: +41 22 749 01 11 Email: copyright@iso.org Website: www.iso.org

Published in Switzerland

This is a preview of "ISO 11745:2022". Click here to purchase the full version from the ANSI store.

| Contents |  |   |  | Page |
|----------|--|---|--|------|
| Forev    | word   |   |  | v    |
| Intro    | duction  | ı   |  | vi   |
| 1        | Scope  |   |  | 1    |
| 2        | Normative references   |   |  | 1    |
| 3        | Terms and definitions  |   |  | 1    |
| 4        | Requirements for the brazing coordinator   |   |  | 3    |
| 5        | Condi  | Conditions required for brazer and brazing operator qualification tests |  |      |
| 6        | Qualification test requirements 6.1 Brazing processes                                |   |  | 3    |
|          | 6.1 Brazing processes  |   |  |      |
|          | 6.3 Material thickness   |   | ial thickness  | 4    |
|          | 6.4  |   | ng position  |      |
| _        | 6.5  |   | material   |      |
| 7        | Special qualification tests 7.1 General requirements                                 |   |  |      |
|          | 7.1  |   | l qualification tests for brazers                                      |      |
|          |  |   | ll qualification tests for brazing operators                           |      |
| 8        | Desig  | ignation for qualification test   |  |      |
| 9        | Performing the brazer and brazing operator qualification test                        |   |  | 6    |
|          | 9.1  | Genera  | al   | 6    |
|          | 9.2<br>9.3   |   | y testcal testing  |      |
|          |  | 9.3.1   | General  |      |
|          |  | 9.3.2   | Brazer   |      |
|          |  | 9.3.3<br>9.3.4  | Brazing operator   |      |
| 10       | Ewam   |   | and testing  |      |
| 10       | 10.1   |   | al   |      |
|          | 10.2   | Visual  | and dimensional examination  | 9    |
|          | 10.3<br>10.4<br>10.5   |   | est  |      |
|          |  |   | graphic examinationographic examination                                |      |
| 11       | Acceptance criteria  |   |  |      |
|          | 11.1 General   |   |  |      |
|          | 11.3 Brazing operator qualification test   |   | r qualification test   |      |
|          |  |   |  |      |
| 12       | •  | Qualification test certificate  |  |      |
| 13       |  | Period of validity of the qualification  Requalification test           |  |      |
| 14       | ex A (informative) Brazer qualification test record in accordance with this document |   |  |      |
|          | •  |   | · · · · · · · ·  | 12   |
| Anne     |  |   | ve) Brazing operator qualification test record in accordance with this | 13   |
| Anne     | <b>x C</b> (info   | ormativ   | e) Brazer qualification test certificate                               | 14   |
| Anne     | <b>x D</b> (inf  | ormativ   | /e) Brazing operator qualification test certificate                    | 15   |
| Anne     | <b>x E</b> (inf  | ormativ   | re) Guidelines for the theory test                                     | 17   |

# ISO 11745:2022(E)

This is a preview of "ISO 11745:2022". Click here to purchase the full version from the ANSI store.

Bibliography 18

This is a preview of "ISO 11745:2022". Click here to purchase the full version from the ANSI store.

## 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 documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see <a href="www.iso.org/directives">www.iso.org/directives</a>).

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 <a href="https://www.iso.org/patents">www.iso.org/patents</a>).

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 <a href="https://www.iso.org/iso/foreword.html">www.iso.org/iso/foreword.html</a>.

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 11745:2010), which has been technically revised. It also incorporates the Amendment ISO 11745:2010/Amd 1:2015.

The main changes are as follows:

- <u>Clause 5</u>: visual inspection aligned with ISO 24394;
- designation for filler material added;
- editorial revisions.

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

### ISO 11745:2022(E)

This is a preview of "ISO 11745:2022". Click here to purchase the full version from the ANSI store.

## Introduction

The application of this document ensures that a qualification test can be carried out in accordance with a standard test specification on standard test pieces under standard conditions. A brazer or brazing operator qualification test properly passed in accordance with this document ensures that the brazer or brazing operator concerned has proved possession of at least the minimum degree of manual skills and technical knowledge demanded by the state of the art.