

## **भारतीय मानक ब्यूरो**

### **DRAFT FOR WIDE CIRCULATION**

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## **भारतीय मानक मसौदा** **ब्रेज़िंग — ब्रेज़र्स और ब्रेज़िंग ऑपरेटर्स की योग्यता परीक्षण**

*Draft Indian Standard*

## **Brazing — Qualification Testing of Brazers and Brazing Operators**

ICS 25.160.01

Welding General and its Applications  
Sectional Committee, MTD 11

Last date of comment:  
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### **NATIONAL FOREWORD**

This draft standard is identical to ISO 13585 : 2021 'Brazing — Qualification testing of brazers and brazing operators' issued by the International Organization for Standardization (ISO), and subject to its finalization, is to be adopted by the Bureau of Indian Standards on the recommendation of the Welding General and its Applications Sectional Committee and approval of the Metallurgical Engineering Division Council.

The committee decided to adopt ISO 13585 : 2021 standard under dual numbering system.

The text of ISO standard has been approved as suitable for publication as an Indian Standard without deviations. Certain terminologies and conventions are, however, not identical with those used in Indian Standard. Attention is especially drawn to the following:

- Wherever the words 'International Standard' appear referring to this standard, it should be read as 'Indian Standard'.
- Comma (,) has been used as a decimal marker, while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exists. The corresponding Indian Standards which are to be substituted in their place are listed below along with their degree of equivalence for the edition indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
ISO 4063 : 2023 Welding, brazing, soldering and cutting — Nomenclature of processes and reference numbers	IS 813 (Part 2) : 2018 / ISO 4063 : 2009 Welding and allied processes Part 2 Nomenclature of processes and reference numbers (Second Revision)	Not Equivalent

ISO 17779 : 2021 Brazing — Specification and qualification of brazing procedures for metallic materials	Doc No. MTD/11/22974 Brazing — Specification and qualification of brazing procedures for metallic materials	Identical
ISO/TR 25901-1 : 2016 Welding and allied processes — Vocabulary — Part 1: General terms	Doc No. MTD/11/24183 Welding and allied processes — Vocabulary — Part 1: General terms (First Revision)	Identical

The technical committee responsible for the preparation of this standard has reviewed the provisions of following International Standards referred in these adopted standards and decided their acceptability for use in conjunction with this standard.

*International Standard*

*Title*

ISO 857-2 : 2005	Welding and allied processes — Vocabulary — Part 2: Soldering and brazing processes and related terms
ISO 17672 : 2016	Brazing — Filler metals
ISO 18279 : 2003	Brazing — Imperfections in brazed joints
EN 12797 : 2000	Brazing — Destructive tests of brazed joints
EN 12799 : 2000	Brazing — Non-destructive examination of brazed joints

For the purpose of deciding whether a particular requirement of this standard is complied with the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 ‘Rules for rounding off numerical-values (*second revision*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

The scope of the standard is as follows:

**SCOPE**

This document specifies requirements for qualification testing of brazers and brazing operators for metallic materials.

This document gives general provisions on quality requirements for brazing (see Annex A).

This document applies to the following brazing processes according to ISO 857-2 and ISO 4063 : 2009 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 is not applicable to personnel operating brazing equipment who do not have any direct influence on the quality of the brazed joint, for example, personnel performing exclusively loading/unloading the brazing unit or just initiating the brazing cycle in automatic brazing.

The principles of this document can be applied to other brazing processes and brazing of materials not listed.

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

**The complete document/text of ISO 13585 : 2021 ‘Brazing — Qualification testing of brazers and brazing operators’ may be made available, on request to:**

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