

## भारतीय मानक ब्यूरो

### DRAFT FOR WIDE CIRCULATION

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### भारतीय मानक मसौदा

## वेल्डिंग कर्मी — धातु सामग्री के मशीनीकृत और स्वचालित वेल्डिंग के लिए वेल्डिंग ऑपरेटरों और वेल्ड सेटर्स की योग्यता परीक्षण

### *Draft Indian Standard*

## **Welding Personnel — Qualification Testing of Welding Operators and Weld Setters for Mechanized and Automatic Welding of Metallic Materials**

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 14732 : 2013 'Welding personnel — Qualification testing of welding operators and weld setters for mechanized and automatic welding of metallic materials' 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 14732 : 2013 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>
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ISO 3834-2 : 2021 Quality requirements for fusion welding of metallic materials — Part 2: Comprehensive quality requirements	IS 15326 (Part 2) : 2022 / ISO 3834-2 : 2021 Quality requirements for fusion welding of metallic materials — Part 2: Comprehensive quality requirements (Second Revision)	Identical
ISO 3834-3 : 2021 Quality requirements for fusion welding of metallic materials — Part 3: Standard quality requirements	IS 15326 (Part 3) : 2022 / ISO 3834-3 : 2021 Quality requirements for fusion welding of metallic materials — Part 3: Standard quality requirements (Second Revision)	Identical
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 9606-1 : 2012 Qualification testing of welders — Fusion welding — Part 1: Steels	IS 7310 (Part 1) : 2019 / ISO 9606-1 : 2012 Qualification Testing of welders — Fusion welding Part 1 Steels (First Revision)	Identical
ISO 9606-2 : 2004 Qualification test of welders — Fusion welding — Part 2: Aluminium and aluminium alloys	IS 7310 (Part 2) : 2019 / ISO 9606-2 : 2004 Qualification test of welders — Fusion Welding Part 2 Aluminium and aluminium alloys (First Revision)	Identical
ISO 9606-3 : 1999 Approval testing of welders — Fusion welding — Part 3: Copper and copper alloys	IS 7310 (Part 3) : 2019 / ISO 9606-3 : 1999 Approval testing of welders — Fusion welding Part 3 Copper and copper alloys (First Revision)	Identical
ISO 9606-4 : 1999 Approval testing of welders — Fusion welding — Part 4: Nickel and nickel alloys	IS 7310 (Part 4) : 2019 / ISO 9606-4 : 1999 Approval testing of welders — Fusion welding Part 4 Nickel and nickel alloys (First Revision)	Identical
ISO 9606-5 : 2000 Approval testing of welders — Fusion welding — Part 5: Titanium and titanium alloys, zirconium and zirconium alloys	IS 7310 (Part 5) : 2019 / ISO 9606-5 : 2000 Approval testing of welders — Fusion welding Part 5 Titanium and titanium alloys, zirconium and zirconium alloys (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.

<i>International Standard</i>	<i>Title</i>
ISO 14555 : 2017	Welding — Arc stud welding of metallic materials
ISO 15609-1 : 2019	Specification and qualification of welding procedures for metallic materials — Welding procedure specification — Part 1: Arc welding
ISO 15609-3 : 2004	Specification and qualification of welding procedures for metallic materials — Welding procedure specification — Part 3: Electron beam welding
ISO 15609-4 : 2009	Specification and qualification of welding procedures for metallic materials — Welding procedure specification — Part 4: Laser beam welding
ISO 15609-5 : 2011	Specification and qualification of welding procedures for metallic materials — Welding procedure specification — Part 5: Resistance welding
ISO 15613 : 2004	Specification and qualification of welding procedures for metallic materials — Qualification based on pre-production welding test
ISO 15614-1 : 2017	Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 1: Arc and gas welding of steels and arc welding of nickel and nickel alloys
ISO 15614-2 : 2005	Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 2: Arc welding of aluminium and its alloys
ISO 15614-5 : 2004	Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 5: Arc welding of titanium, zirconium and their alloys
ISO 15614-6 : 2006	Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 6: Arc and gas welding of copper and its alloys
ISO 15614-7 : 2016	Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 7: Overlay welding
ISO 15614-8 : 2016	Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 8: Welding of tubes to tube-plate joints
ISO 15614-11 : 2002	Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 11: Electron and laser beam welding
ISO 15614-13 : 2023	Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 13: Upset (resistance butt) and flash welding
ISO 15614-14 : 2013	Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 14: Laser-arc hybrid welding of steels, nickel and nickel alloys

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 International Standard specifies requirements for qualification of welding operators and also weld setters for mechanized and automatic welding.

This International Standard does not apply to personnel exclusively performing loading or unloading of the automatic welding unit.

This International Standard is applicable when qualification testing of welding operators and weld setters is required by the contract or by the application standard.

The requirements for testing of stud welding operators and setters are given in ISO 14555. The qualification and revalidation is in accordance with this International Standard.

Annex A dealing with functional knowledge forms an integral part of this International Standard. Annex B dealing with welding technical knowledge, Annex C outlining the qualification test certificate and the Bibliography are informative.

**The complete document/text of ISO 14732 : 2013 'Welding personnel — Qualification testing of welding operators and weld setters for mechanized and automatic welding of metallic materials' may be made available, on request to:**

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