

भारतीय मानक ब्यूरो

DRAFT FOR WIDE CIRCULATION

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भारतीय मानक मसौदा

**वेल्डिंग उपभोग्य — निकल और निकल मिश्रधातुओं के संलयन वेल्डिंग के लिए
ठोस तार इलेक्ट्रोड, ठोस पट्टी इलेक्ट्रोड, ठोस तार और ठोस छड़ें — वर्गीकरण**
(आईएस 5857 का पहला पुनरीक्षण)

Draft Indian Standard

**Welding Consumables — Solid Wire Electrodes, Solid Strip
Electrodes, Solid Wires and Solid Rods for Fusion Welding of
Nickel and Nickel Alloys — Classification**
(First Revision of IS 5857)

ICS 25.160.20

Welding General and its Applications
Sectional Committee, MTD 11

Last date of comment:
21/12/2023

NATIONAL FOREWORD

This draft standard is identical to ISO 18274 : 2023 ‘Welding consumables — Solid wire electrodes, solid strip electrodes, solid wires and solid rods for fusion welding of nickel and nickel alloys — Classification’ 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.

This standard was originally published in 1970. The first revision of this standard has been undertaken to align it with the latest version of ISO 18274 : 2023 under dual numbering system to harmonize it with the latest developments that have taken place at international level.

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 544 : 2017 Welding consumables — Technical delivery conditions for filler materials and fluxes — Type of product, dimensions, tolerances and markings	Doc : MTD/11/22952 Welding consumables — Technical delivery conditions for filler materials and fluxes — Type of product, dimensions, tolerances and markings	Identical
ISO 14344 : 2010 Welding consumables — Procurement of filler materials and fluxes	Doc : MTD/11/22964 Welding consumables — Procurement of filler materials and fluxes	Identical
ISO 80000 - 1 : 2022 Quantities and units — Part 1 : General	IS / ISO 80000 - 1 : 2022 Quantities and units Part 1 General (First Revision)	Identical

This standard also makes a reference to the BIS Certification Marking of the product, details of which are given in National Annex A.

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 classification of solid wire electrodes, solid strip electrodes, solid wires and solid rods for fusion welding of nickel and nickel alloys. The classification of the solid wire electrodes, solid strip electrodes, solid wires and solid rods is based on their chemical composition. It includes those compositions in which the nickel content exceeds that of any other element.

The principles of this document can be applied to metal powders for cladding, hard facing and additive manufacturing.

The complete document/text of ISO 18274 : 2023 'Welding consumables — Solid wire electrodes, solid strip electrodes, solid wires and solid rods for fusion welding of nickel and nickel alloys — Classification' may be made available, on request to:

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National Annex A
(National Foreword)

A-1 BIS CERTIFICATION MARKING

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act*, 2016 and the Rules and Regulations framed thereunder, and the products may be marked with the standard mark