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**Welding consumables — Wire and strip  
electrodes, wires and rods for arc  
welding of nickel and nickel alloys —  
Classification**

*Produits consommables pour le soudage — Fils-électrodes et  
feuillards, fils et baguettes pour le soudage à l'arc du nickel et des  
alliages de nickel — Classification*



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## Foreword

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 18274 was prepared by the European Committee for Standardization (CEN) in collaboration with Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 3, *Welding consumables*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

Throughout the text of this document, read "...this European Standard..." to mean "...this International Standard...".

It should be noted that, with regard to the corresponding EN standard, the designations given in Clause 9 have been adapted to the needs of international standardization.

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## Foreword

This document (EN ISO 18274:2004) has been prepared by Technical Committee CEN/TC 121 "Welding", the secretariat of which is held by DIN, in collaboration with Technical Committee ISO/TC 44 "Welding and allied processes".

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2004, and conflicting national standards shall be withdrawn at the latest by September 2004.

Annexes A, B and C are informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

## Introduction

For nickel welding consumables there is no unique relationship between the product form (solid wire, strip or rod) and the welding process used (e.g. gas-shielded metal arc welding, gas tungsten arc welding, plasma arc welding, submerged arc welding, strip overlay welding, laser welding or other welding processes). For this reason the solid wire, strip or rod may be classified on the basis of any of the above product forms and can be used as appropriate, for more than one of the above processes.

## 1 Scope

This standard specifies requirements for classification of solid wires, strips and rods for fusion welding of nickel and nickel alloys. The classification of the solid wires, strips and rods is based on their chemical composition.

## 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

EN ISO 544, *Welding consumables – Technical delivery conditions for welding filler metals – Type of product, dimensions, tolerances and markings (ISO 544:2003)*.

ISO 31-0:1992, *Quantities and units – Part 0: General principles*.

ISO 14344, *Welding and allied processes – Flux and gas shielded electrical welding processes – Procurement guidelines for consumables*.

## 3 Classification

The classification is divided into two parts:

- a) the first part indicates the product form being solid wires, strips or rods, see 4.1;
- b) the second part gives a numerical symbol indicating the chemical composition of the solid wire, strip or rod, see Table 1.

## 4 Symbols and requirements

### 4.1 Symbols for the product form

The symbol for the solid wire and rod shall be S and for the solid strip it shall be B.

NOTE One product form may be used for more than one welding process.