

AWS A5.34/A5.34M:2007
An American National Standard



Specification for Nickel-Alloy Electrodes for Flux Cored Arc Welding



American Welding Society



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Specification for
Nickel-Alloy Electrodes for
Flux Cored Arc Welding

1st Edition

Prepared by the
American Welding Society (AWS) A5 Committee on Filler Metals and Allied Materials

Under the Direction of the
AWS Technical Activities Committee

Approved by the
AWS Board of Directors

Abstract

The composition, soundness, and properties of weld metal from nine grades of flux cored electrodes are specified. Standard electrode sizes together with their package forms and package sizes are detailed.

This specification makes use of both U.S. Customary Units and the International System of Units (SI). Since these are not equivalent, each system must be used independently of the other.



American Welding Society

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Specification for Nickel-Alloy Electrodes for Flux Cored Arc Welding

1. Scope

1.1 This specification prescribes requirements for the classification of nickel-alloy electrodes for flux cored arc welding. It includes those compositions in which the nickel content exceeds that of any other element, but excludes nickel-base alloy compositions intended for the joining of cast irons.

1.2 Safety and health issues and concerns are beyond the scope of this standard and, therefore, are not fully addressed herein. Some safety and health information can be found in Annex A, Clauses A5 and A10. Safety and health information is available from other sources, including, but not limited to, ANSI Z49.1, *Safety in Welding, Cutting, and Allied Processes*, and applicable federal and state regulations.

1.3 This specification makes use of both U.S. Customary Units and the International System of Units (SI), according to the guidelines in AWS A1.1. The measurements are not exact equivalents; therefore, each system must be used independently of the other without combining in any way when referring to material properties. The specification with the designation A5.34 uses U.S. Customary Units. The specification A5.34M uses SI Units. The latter are shown within brackets [] or in appropriate columns in tables and figures. Standard dimensions based on either system may be used for sizing of filler metal or packaging or both under the A5.34 or A5.34M specification.

2. Normative References

2.1 The following standards contain provisions which, through reference in this text, constitute provisions of this AWS standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreement based on this AWS standard are encouraged to investigate the

possibility of applying the most recent editions of the documents shown below. For undated references, the latest edition of the standard referred to applies.

2.2 The following AWS standards¹ are referenced in the mandatory clauses of this document:

AWS A1.1, *Metric Practice Guide for the Welding Industry*

AWS A5.01, *Filler Metal Procurement Guidelines*

AWS A5.32/A5.32M, *Specification for Welding Shielding Gases*

AWS B4.0 or AWS B4.0M, *Standard Methods for Mechanical Testing of Welds*

2.3 The following ANSI standard² is referenced in the mandatory clauses of this document:

ANSI Z49.1 *Safety in Welding, Cutting, and Allied Processes*

2.4 The following ASTM standards³ are referenced in the mandatory clauses of this document:

ASTM A 131/A 131M, *Standard Specification for Structural Steel for Ships*

ASTM A 240/A 240M, *Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications*

¹ AWS standards are published by the American Welding Society, 550 N.W. LeJeune Road, Miami, FL 33126.

² This ANSI standard is published by the American Welding Society, 550 N.W. LeJeune Road, Miami, FL 33126.

³ ASTM standards are published by the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.