

AWS A5.29/A5.29M:2010
An American National Standard

Specification for Low-Alloy Steel Electrodes for Flux Cored Arc Welding



American Welding Society



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An American National Standard

Approved by the
American National Standards Institute
September 18, 2009

Specification for **Low-Alloy Steel Electrodes** **for Flux Cored Arc Welding**

4th Edition

Supersedes AWS A5.29/A5.29M:2005

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

This specification prescribes the requirements for classification of low-alloy steel electrodes for flux cored arc welding. The requirements include chemical composition and mechanical properties of the weld metal and certain usability characteristics. Optional, supplemental designators are also included for improved toughness and diffusible hydrogen. Additional requirements are included for standard sizes, marking, manufacturing, and packaging. A guide is appended to the specification as a source of information concerning the classification system employed and the intended use of low-alloy steel flux cored electrodes.

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.



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Foreword

This foreword is not part of AWS A5.29/A5.29M:2010, *Specification for Low-Alloy Steel Electrodes for Flux Cored Arc Welding*, but is included for informational purposes only.

This document is the second of the A5.29 specifications which uses of both U.S. Customary Units and the International System of Units (SI) throughout. The measurements are not exact equivalents; therefore, each system must be used independently of the other, without combining values in any way. In selecting rational metric units, AWS A1.1, *Metric Practice Guide for the Welding Industry*, and ISO 554, *Welding consumables—Technical delivery conditions for welding filler materials—Type of product, dimensions, tolerances, and markings*, are used where suitable. Tables and figures make use of both U.S. Customary and SI Units, which, with the application of the specified tolerances, provides for interchangeability of products in both the U.S. Customary and SI Units.

This is the third revision of A5.29 that was issued initially in 1980. In this revision, the quantity of “Mn + Ni” has been corrected from 1.5% to 1.50% in Note “d” of Table 7.

Historical Background

ANSI/AWS A5.29-80 *Specification for Low-Alloy Steel Electrodes for Flux Cored Arc Welding*

ANSI/AWS A5.29:1998 *Specification for Low-Alloy Steel Electrodes for Flux Cored Arc Welding*

AWS A5.29/A5.29M:2005 *Specification for Low-Alloy Steel Electrodes for Flux Cored Arc Welding*

Comments and suggestions for the improvement of this standard are welcome. They should be sent to the Secretary, AWS A5 Committee on Filler Metals and Allied Materials, American Welding Society, 550 N.W. LeJeune Road, Miami, FL 33126.