

ENGINEERING STAFF

MATERIAL SPECIFICATION*Prepared By:* Engineering Staff *Approved By:* Jerome T. Schmitz 

Section No:	MS O-1
Page No.:	1 of 7
Issue Date:	03/01/16
Superseded Date:	02/23/15

MISCELLANEOUSWelding Electrodes and Wire

1. SCOPE

This specification covers welding electrodes and wire used for the shield metal arc (SMAW), and gas metal arc welding (GMAW).

2. APPLICABLE DOCUMENTS

- 2.1 American Welding Society (AWS) A-5.1, "Carbon Steel Electrodes For Shielded Metal Arc Welding."
- 2.2 American Welding Society (AWS) A-5.4, "Stainless Steel Electrodes For Shielded Metal Arc Welding."
- 2.3 American Welding Society (AWS) A-5.5, "Low Alloy Steel Covered Arc Welding Electrodes."
- 2.4 American Welding Society (AWS) A-5.18, "Carbon Steel Electrodes and Rods For Gas Shielded Arc Welding."
- 2.5 United States Department of Transportation (DOT), Code of Federal Regulations (CFR), Title 49, Part 192, "Transportation of Natural and Other Gas by Pipeline; Minimum Safety Standards."

NOTE: Unless otherwise specified, the editions of the above documents incorporated by DOT 49 CFR 192 are applicable. Documents not incorporated by DOT 49 CFR 192 will be the most recent edition.

3. TERMINOLOGY**3.1 General**

- 3.1.1 "Southwest Gas," "Southwest" or "SWG" wherever used in this specification and other related documents will refer exclusively to Southwest Gas Corporation.
- 3.1.2 The terms "approved," "as approved," "satisfactory," "as directed," "or equal" or other similar terms wherever used in this specification and other related documents will mean "as determined by Southwest Gas," unless specifically stated otherwise.
- 3.1.3 "Product Information Package" or "PIP" wherever used in this specification and other related documents will mean the required information that a manufacturer must submit to Southwest Gas to determine if the product is suitable for use by Southwest Gas, unless specifically stated otherwise.

ENGINEERING STAFF

MATERIAL SPECIFICATION*Prepared By:* Engineering Staff *Approved By:* Jerome T. Schmitz 

Section No:	MS O-1
Page No.:	2 of 7
Issue Date:	03/01/16
Superseded Date:	02/23/15

MISCELLANEOUSWelding Electrodes and Wire

4. MATERIALS AND MANUFACTURING

Welding electrodes and wire will be manufactured in accordance with the specifications and testing requirements of the American Welding Society (AWS) specifications listed in Appendix A.

5. PERFORMANCE REQUIREMENTS

- 5.1 Welding electrodes and wire will perform as specified by the manufacturer when stored and used according to instructions supplied by the manufacturer.
- 5.2 Welding electrodes and wire will produce satisfactory welds using Southwest's qualified welding procedures.

6. DIMENSIONS AND TOLERANCES

Dimensions and tolerances shall be in accordance with Appendix A.

7. INSPECTION

- 7.1 Successful review of the Product Information Package (PIP), as well as any future reference by SWG to the Seller's part number or internal code number in any future contract or purchase, will mean only that no conflict with the specification was found, and will not relieve the Seller from meeting all the requirements of this specification.
- 7.2 SWG retains the option to inspect the manufacture and testing of any and all materials, products or systems referenced in this specification that are sold to SWG.
- 7.3 SWG will make appropriate inspections and tests of any and all materials, products or systems supplied to this specification. SWG will have the right, at their option, to reject any material which fails to conform to this specification. Any such rejection may take place at the manufacturer's facility; the supplier's warehouse or any subsequent delivery location, before or after SWG assumes possession. Notice of the rejection will be made promptly to the supplier by SWG. The defective product will be replaced or returned for credit at the manufacturer's expense.



ENGINEERING STAFF
MATERIAL SPECIFICATION

Prepared By: Engineering Staff 

Approved By: Jerome T. Schmitz 

Section No:	MS O-1
Page No.:	3 of 7
Issue Date:	03/01/16
Superseded Date:	02/23/15

MISCELLANEOUS

Welding Electrodes and Wire

7. INSPECTION (Cont'd)

7.4 Any changes in the manufacturing of previously approved materials, products or systems described in this material specification for sale to SWG, must be approved by SWG's Engineering Staff. **Failure to obtain SWG's approval may be cause for rejection and disqualification as an approved supplier.**

8. CERTIFICATION

The manufacturer's or supplier's certification will be furnished to SWG. This certification will state that samples representing each lot have been manufactured, tested, and inspected in accordance with this specification and that all requirements have been met. When requested or specified in the purchase order or contract, a report of test results will be provided.

Upon the request of Southwest, the certification of an independent third party indicating conformance to the specification may be considered at Southwest's expense.

9. SAFETY DATA SHEETS

In accordance with law, the Seller will supply Safety Data Sheets for all applicable items supplied under this specification to the following:

- 1) The Receiving Location
- 2) Engineering Staff
- 3) Southwest Gas Corporation
Corporate Safety
Mail Station LVA-120
P. O. Box 98510
Las Vegas, NV 89193-8510



ENGINEERING STAFF

MATERIAL SPECIFICATION

Prepared By: Engineering Staff 

Approved By: Jerome T. Schmitz 

Section No:	MS O-1
Page No.:	4 of 7
Issue Date:	03/01/16
Superseded Date:	02/23/15

MISCELLANEOUS

Welding Electrodes and Wire

10. PRODUCT MARKING

All welding electrodes and wire shall be marked with the manufacturer's name or trademark.

11. PACKAGING

Welding electrodes that are susceptible to absorbing moisture will be packaged in a sealed container.

12. STOCK CLASSIFICATION DESCRIPTION

ELECTRODE, WELDING, _____-INCH, _____ (MANUFACTURER'S NAME AND PART NUMBER).

WIRE, WELDING, _____-INCH, TYPE 88, _____ SPOOL, _____ (MANUFACTURER'S NAME AND PART NUMBER).