



SOUTHWEST GAS CORPORATION

® ENGINEERING STAFF

MATERIAL SPECIFICATION

Prepared By: Engineering Staff 

Approved By: Jerome T. Schmitz 

Section No:	MS B-4
Page No.:	1 of 10
Issue Date:	02/05/19
Superseded Date:	06/19/18

PIPE FITTINGS

Pipe Nipples, Threaded and Weld-End

1. SCOPE

This specification covers steel pipe nipples with weld ends and threaded ends.

2. APPLICABLE DOCUMENTS

- 2.1 American National Standard Institute (ANSI), B-1.20.1 "NPT American National Standard Pipe Thread."
- 2.2 American National Standard Institute (ANSI), Z-55.1 "Finishes for Industrial Apparatus and Equipment."
- 2.3 American Petroleum Institute (API), Standard 5L (45th Edition, Dec. 2012), "Specification for Line Pipe."
- 2.4 ASTM International (ASTM), Specification A-53 "Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded Seamless."
- 2.5 ASTM International (ASTM), Specification A-106 "Standard Specification for Seamless Carbon Steel Pipe for High Temperature Service."
- 2.6 Title 49, Code of Federal Regulations, Part 192, "Transportation of Natural and Other Gas by Pipeline; Minimum Safety Standards."

NOTE: Unless otherwise specified, the editions of the document incorporated in whole or in part by 49 CFR 192 are applicable. The above documents, and parts of documents (including annexes), not incorporated by 49 CFR 192 are incorporated by this Material Specification and will be the most recent edition. If a conflict exists between the applicable documents and/or this Material Specification, the requirements of 49 CFR 192 shall govern, and in the event of all other conflicts, the more stringent requirement shall govern.



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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 SWG to determine if the product is suitable for use by SWG, unless specifically stated otherwise.

4. MATERIALS AND MANUFACTURING

- 4.1 Threaded nipples purchased to this specification will be produced from pipe manufactured in accordance with ASTM A-106, ASTM A-53 or API 5L as shown in Table B-4.1.

ACCEPTABLE PIPE SPECIFICATIONS FOR THREADED NIPPLES									
Nipple Schedule	ASTM A-106		ASTM A-53 Grade A	ASTM A-53 Grades A or B			API 5L Grade A25		API 5L Grade B
	Grade A	Grades B or C	Type F	Type E	Type S	Class I	Class II		
40 (STD)	T	T	T	T	T	T	T	T	
80 XS		T		T	T			T	
160		T		T	T			T	
XXS		T		T	T			T	

TABLE B-4.1



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4. MATERIALS AND MANUFACTURING (Cont'd)

- 4.2 Threaded nipples will be threaded in accordance with ANSI B-1.20.1.
- 4.3 Weld end pipe nipples will be manufactured in accordance with ASTM A-53, ASTM A-106 or API 5L specifications or as specified on the purchase order.
- 4.4 Unless otherwise specified, all threaded pipe nipples less than 2 inches in diameter shall be coated with an Industrial Gray Coating No. 49 per ANSI Z-55.1. The paint system used will be one of the systems listed on Tables B-4.2 or B-4.3 or a pre-approved equivalent.
- 4.5 The nipples will be deburred, cleaned and free of rust, scale, steel chips, paint, dirt, sand and debris.
- 4.6 The pipe from which threaded, and weld end pipe nipples are manufactured will be tested by the pipe manufacturer in accordance with the applicable pipe specification.
- 4.7 Weld end pipe nipples, unless specified on the purchase order, will be beveled in accordance with Figure B-4.1.
- 4.8 The coating shall be a minimum of 3 mils thick, unless otherwise approved by Southwest Gas due to the coating process.
- 4.9 The coating will cover no more than 4 threads. There must not be any major coating build-up on the threads. Overspray beyond the first 4 threads and on female threads is allowable so long as it does not exceed 0.5 mil film thickness.



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4. **MATERIALS AND MANUFACTURING** (Cont'd)

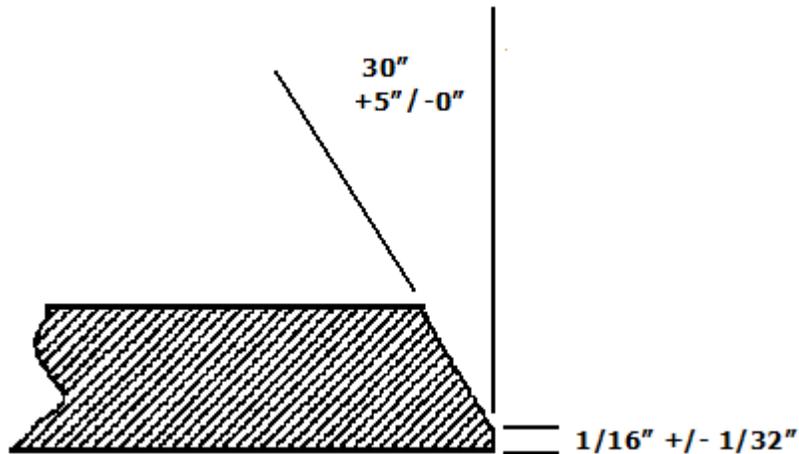


FIGURE B-4.1



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4. MATERIALS AND MANUFACTURING (Cont'd)

APPROVED PAINT SYSTEMS				
SYSTEM NUMBER	SURFACE PREPARATION	PRIMER COAT	INTERMEDIATE COAT	FINISH COAT
1	Solvent Cleaning (SSPC-SP 1) THEN Near White Blast Cleaning (SSPC-SP 10)	High-Build Polyamide Epoxy, DFT 4.0 to 5.0 Mils.	None	Aliphatic Polyurethane, 3.0 Mils.
2	Solvent Cleaning (SSPC-SP 1) THEN Near White Blast Cleaning (SSPC-SP 10)	Modified Alkyd, Inhibited, Chromate and Lead-Free, DFT 2.0 Mils.	Alkyd Enamel, DFT 1.5 to 2.0 Mils.	Alkyd Enamel, 3.0 Mils.
3	Solvent Cleaning (SSPC-SP 1) THEN Near White Blast Cleaning (SSPC-SP 10)	Aluminum Flake Epoxy Mastic, DFT 4.0 to 5.0 Mils.	None	Aliphatic Polyurethane, 3.0 Mils.

TABLE B-4.2



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4. MATERIALS AND MANUFACTURING (Cont'd)

APPROVED PAINT SYSTEMS MANUFACTURER'S PART NUMBERS				
SYSTEM NUMBER	CARBOLINE	SHERWIN WILLIAMS	RUSTOLEUM	KRYLON
1 ¹	801	B58 T 104	9100 Series	
	834	B65 W 300 Series	9400 Series	
2 ¹	GP-818	B50 HZ 1	7669	00691
	Subsil B	B56 Series	7686	00871
3 ¹	Carbomastic 15	B62 S 100		
	834	B65 W 300 Series		

NOTE: ¹For each paint system, the top part number is for the primer and the bottom part number is for the top coat.

TABLE B-4.3

5. PERFORMANCE REQUIREMENTS

Each pipe nipple will provide satisfactory assembly performance and will not leak under operating conditions when assembled in accordance with Southwest procedures.

6. DIMENSIONS AND TOLERANCES

All fittings manufactured to this specification will meet the dimension and tolerance requirements of the applicable pipe specification and ANSI B-1.20.1.



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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 manufacturer and testing of all products sold to SWG that is referenced in this specification.
- 7.3 Southwest 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 Southwest assumes possession. Notice of rejection will be made promptly thereafter by SWG. The defective product will be replaced or returned for credit at the manufacturer's expense.
- 7.4 No changes will be made in the manufacturing of previously approved materials, products or systems described in this materials specification for sale to SWG, without prior approval by Southwest's Engineering Staff. **Failure to obtain SWG's approval may be cause for rejection and disqualification as an approved supplier.**



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8. CERTIFICATION

The manufacturer's or supplier's certification will be furnished to Southwest. 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

10. PACKAGING AND PACKAGE MARKING

All fittings will be packaged in a manner to prevent damage during transportation and storage.



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10. PACKAGING AND PACKAGE MARKING (Cont'd)

10.2 Each package of pipe nipples will be marked with the following as a minimum:

- Manufacturer's Trademark
- Manufacturer's Part Number or Designation
- Pipe Specifications
- Nipple Size

11. STOCK CLASSIFICATION DESCRIPTION

NIPPLE, STEEL, COATED/UNCOATED, SCHEDULE ____ (40, 80), ____-INCH (DIAMETER) X ____-INCH (LENGTH), _____ THREADED.

NIPPLE, STEEL, COATED/UNCOATED, SCHEDULE ____ (40, 80), ____-INCH (DIAMETER) X ____-INCH (LENGTH), PLAIN END.