




ENGINEERING STAFF
MATERIAL SPECIFICATION

Section No:	MS K-3
Page No.:	1 of 6
Issue Date:	03/01/16
Superseded Date:	02/20/15

Prepared By: Engineering Staff 

Approved By: Jerome T. Schmitz 

REPAIR FITTINGS

Composite Material Repair Sleeves

1. SCOPE

This specification covers composite material repair sleeves. These sleeves are designed to repair non-leaking steel pipe damage.

2. APPLICABLE DOCUMENTS

- 2.1 American Society of Mechanical Engineers (ASME) B-31.8, "Gas Transmission and Distribution Piping Systems."
- 2.2 ASTM International (ASTM) D-2992, "Standard Practice for Obtaining Hydrostatic or Pressure Design Basis for 'Fiberglass' (Glass-Fiber-Reinforced-Thermosetting-Resin) Pipe and Fittings."
- 2.3 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" 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 technical product information that a manufacturer must submit to Southwest to determine if the product is suitable for use by Southwest, unless specifically stated otherwise.



**ENGINEERING STAFF
MATERIAL SPECIFICATION**

Section No:	MS K-3
Page No.:	2 of 6
Issue Date:	03/01/16
Superseded Date:	02/20/15

Prepared By: Engineering Staff 

Approved By: Jerome T. Schmitz 

REPAIR FITTINGS
Composite Material Repair Sleeves

4. MATERIALS AND MANUFACTURING

- 4.1 Each composite material repair sleeve kit should contain the required materials needed to complete the repair.
- 4.2 The composite material repair sleeve will be designed to return the pipe to at least its original circumferential strength for the pipe sizes and applications specified.
- 4.3 Composite material repair sleeves purchased under this specification will meet the minimum requirement of DOT 49 CFR 192, the applicable standards ASME B-31.8 and ASTM D-2992 in addition to the requirements defined in the specification.
- 4.4 The manufacturer will provide the following in a suitable format:
 - The applicable pipe size and specifications
 - Pressure limitations
 - The types and severity of defects that can be repaired
 - Complete installation and testing instructions
 - Installations training as needed



5. PERFORMANCE REQUIREMENTS

- 5.1 The composite material repair sleeve system for pipe should be capable of an installation temperature range of 0°F to 120°F.
- 5.2 Cure times for the composite material repair sleeve system must be acceptable to SWG.
- 5.3 An adhesive must be used that bonds the composite material repair sleeve to the pipe and prevent moisture from infiltrating between the pipe and adhesive.
- 5.4 All component specifications will allow the designated operations of the system in accordance with the procedures provided by the manufacturer.



**ENGINEERING STAFF
MATERIAL SPECIFICATION**

Section No:	MS K-3
Page No.:	3 of 6
Issue Date:	03/01/16
Superseded Date:	02/20/15

Prepared By: Engineering Staff 
Approved By: Jerome T. Schmitz 

REPAIR FITTINGS
Composite Material Repair Sleeves

6. DIMENSIONS AND TOLERANCES

The dimensions and tolerances must be in accordance with Section 13 of this specification.


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 Southwest 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.
- 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.**



**ENGINEERING STAFF
MATERIAL SPECIFICATION**

Section No:	MS K-3
Page No.:	4 of 6
Issue Date:	03/01/16
Superseded Date:	02/20/15

Prepared By: Engineering Staff 

Approved By: Jerome T. Schmitz 

REPAIR FITTINGS
Composite Material Repair Sleeves

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. PRODUCT MARKING

All composite material repair sleeves sold to Southwest will be marked with the manufacturer's name or trademark, manufacturer's part number and pipe size.


11. PACKAGING


All products covered in this specification will be packaged to prevent damage during shipping.



ENGINEERING STAFF
MATERIAL SPECIFICATION

Section No:	MS K-3
Page No.:	5 of 6
Issue Date:	03/01/16
Superseded Date:	02/20/15

Prepared By: Engineering Staff 

Approved By: Jerome T. Schmitz 

REPAIR FITTINGS

Composite Material Repair Sleeves

12. STOCK CLASSIFICATION DESCRIPTION

COMPOSITE MATERIAL REPAIR SLEEVE, _____ PIPE SIZE (INCHES), _____
PRESSURE RATING, _____ TEMPERATURE.