



**Bharat Heavy Electricals Limited
Tiruchirappalli-620 014**

Fuel Systems/PE (FB)



Title Sheet

Specification for

SPIRAL WOUND GASKET

Specification Number: TFS: 1007

Revision No. : 00

Rev. No.	Date	Revision statement	Checked & Approved

	Name	Signature	Date
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1. General information

- 1.1 This technical specification specifies the constructional, functional and qualitative requirement of metallic spiral wound gaskets with graphite filler with centering plate for use with flanges (ASME B16.5) at different pressures and temperature.
- 1.2 The ordering will be done with specific size and rating indicating Flange size (NPS) as per ASME standards.

2. Design standard:

The design standard for the metallic spiral wound gasket shall be as per ASME B16.20 latest edition

3. Material:

The material of metallic spiral wound gasket shall be of Graphite. The centering ring and inner ring material shall be of AISI 304 stainless steel.

4. Special construction features:

- 4.1 Metallic Spiral Wound Gaskets, including centering ring and inner ring are identified by flange size (NPS), pressure class and appropriate flange standard (ASME B16.5).
- 4.2 The spiral wound gaskets shall be made of alternate plies of preformed metal winding and filler, tightly wound spirally.
- 4.3 The filler shall protrude above the metal strip by a maximum amount of 0.125 mm on either face of the gasket. At the start and conclusion of the spiral form, minimum 3 no. of metal plies can be provided without any filler material; however, the number of such plies shall not exceed 5 at each end.
- 4.4 The metal winding around the entire inside circumference of the gasket shall be suitably spot welded in equal spacing not exceeding 25mm with a minimum of 3 welds.
- 4.5 The metal winding on the outside shall be welded with a minimum of three welds, out of which one weld shall be at the terminal point.

5. Inspection & Testing:

5.1 Visual Inspection

- 5.1.1 The gasket shall be undamaged and the windings shall be intact.
- 5.1.2 At random, few samples shall be selected and subjected to dimensional inspection. Dimension shall conform to those given as per ASME B16.20.
- 5.1.3 The metal strip used shall be analyzed for its chemical composition and it shall conform to the specification.
- 5.1.4 The filler material shall be analyzed to estimate the percentage loss on ignition, graphite content and binder content.



5.2 Compression Test

- 5.2.1 The test shall consist of subjecting the gaskets to predetermined loads in the compression testing machine the thickness of the gaskets under the applied loads and after removal of loads.
- 5.2.2 The gaskets shall be subjected to a uniform unit compressive load as per ASME B16.20.
- 5.2.3 The thickness of the gasket shall be measured using dial indicators with the applied load on the gasket. The thickness shall be within the limits specified in ASME B16.20.
- 5.2.4 After the load is removed, the gasket shall recover at least 0.25 mm over the compressed thickness obtained in the compression test.
- 5.2.5 The gasket shall be visually examined after the compression test. No buckling on the inner edge of the gasket shall be allowed. The spot welds should not foil and the windings should be intact.

6. Test Certificate

Supplier shall give the following test certificates for each item, for each lot and should contain all details of the following tests.

- 6.1 Compression Test Certificate.
- 6.2 Material Test Certificate.
- 6.3 Visual Inspection and dimensional Checks.

7. Packing:

Metallic Spiral Wound Gasket shall be packed in nos. of 10 in suitable cardboard containers to avoid damage during transit. It should carry proper identification giving the size, type, drawing number and supplier's name.

8. Documents to be submitted:

- 8.1 **Along with offer**
 - i. 2 sets of technical data sheet.
- 8.2 **After placement of order**
 - i. Test certificates

**9.0 Check list for Metallic Spiral Wound Gaskets:**

S.No	Description	Vendor Confirmation (mark to conform)	
		Yes	No
I	Along with the offer:		
a.	Technical data sheet		
II	After placement of order:		
a.	Test certificates		
III	GENERAL:		
<i>Without the above Details/confirmation the Offer will be treated as Incomplete and liable for Rejection.</i>			

10.0 Sizes

S.No	Description
1	Spiral wound gasket 0.5" 150# ASME B16.5
2	Spiral wound gasket 1" 150# ASME B16.5
3	Spiral wound gasket 1.5" 150# ASME B16.5
4	Spiral wound gasket 2" 150# ASME B16.5
5	Spiral wound gasket 3" 150# ASME B16.5
6	Spiral wound gasket 4" 150# ASME B16.5
7	Spiral wound gasket 6" 150# ASME B16.5
8	Spiral wound gasket 8" 150# ASME B16.5
9	Spiral wound gasket 10" 150# ASME B16.5
10	Spiral wound gasket 12" 150# ASME B16.5
11	Spiral wound gasket 16" 150# ASME B16.5
12	Spiral wound gasket 0.5" 300# ASME B16.5
13	Spiral wound gasket 1" 300# ASME B16.5
14	Spiral wound gasket 1.5" 300# ASME B16.5
15	Spiral wound gasket 2" 300# ASME B16.5
16	Spiral wound gasket 3" 300# ASME B16.5
17	Spiral wound gasket 4" 300# ASME B16.5
18	Spiral wound gasket 6" 300# ASME B16.5
19	Spiral wound gasket 8" 300# ASME B16.5
20	Spiral wound gasket Heater oil side(30, 40, 50 Sq.m) 4-42-030-04077 VAR:01
21	Spiral wound gasket Heater oil side(60 Sq.m) 4-42-030-04077 VAR:02
22	Spiral wound gasket Heater Steam side(30, 40, 50 Sq.m) 4-42-030-04078 VAR:01
23	Spiral wound gasket Heater Steam side(60 Sq.m) 4-42-030-04078 VAR:02