
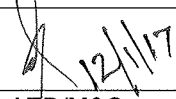
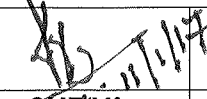



**GOVERNMENT OF INDIA  
(Ministry of Railways)**

**SPECIFICATION FOR  
ASBESTOS GASKET  
(PL No. 84980930)**

Issued by

**MECHANICAL DRAWING OFFICE  
RAIL WHEEL FACTORY  
YELAHANKA, BANGALORE-560 064  
INDIA**

 CWEW 12/02	 AED/M&C 12/1/17	 Dy. CME/Mfg 11/1/17	 SSE/D 11.01.17
APPROVED	REVIEWED	VERIFIED	PREPARED

## SPECIFICATION OF ASBESTOS GASKET

### 1.0 SCOPE

This specification covers the requirements for Asbestos Gasket to use in Rail Wheel Factory, Yelahanka, Bangalore-560 064.

### 2.0 USAGE OF ASBESTOS GASKET

Asbestos Gasket is used as a sealant between drag and pouring tube in casting of railway cast steel wheel to prevent bleeding of liquid steel. One asbestos gasket is used for casting each wheel.

### 3.0 RESTRICTIVE REQUIREMENTS

3.1 The Asbestos Gasket shall be supplied as shown in Fig.1

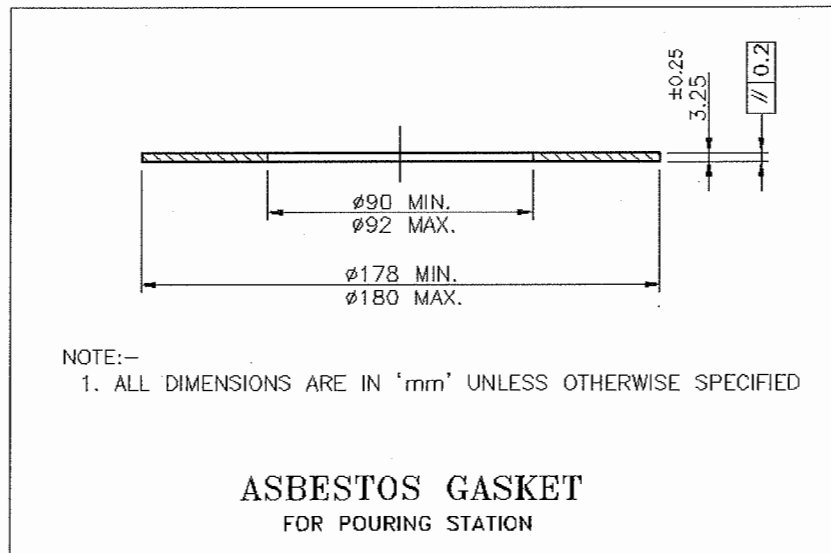


Fig.1

- 3.2 Tensile strength : 10 kg/cm<sup>2</sup>(min).
- 3.3 Bulk Density : 0.9 to 1.2 gm/cm<sup>3</sup>.

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- 3.4 Compression as measured while under load of 70 kg/cm<sup>2</sup> on the flat portion of the Asbestos gasket. : 10% Min.
- 3.5 Loss On Ignition : 20% Max. at 800°C +/-20°C for one hour.
- 3.6 Water contents : 2% Max.
- 3.7 The thickness shall be uniform and the variation shall be within 0.2 mm.

Note: 5 Nos. of circular pieces of Asbestos Gasket without punched hole shall be supplied for conducting tensile strength and for other tests 5 Nos. of punched gaskets shall be supplied.

#### 4.0 PERFORMANCE PARAMETERS

##### 4.1 GENERAL APPEARANCE AND FINISH

The finished Asbestos gasket when delivered shall be free from visible defects that impairs appearance and serviceability. The surface of the gasket shall be of uniform texture and shall have at least one smooth surface. The Asbestos Gasket shall be flat, circular and neatly trimmed, shall have no loose strands of asbestos on the inner edges.

##### 4.2 ANTI-BURNING PROPERTY

The inner edges of the Asbestos Gasket should have the property of resisting burning and disintegration when it comes in contact with hot metal at 1600°C during casting for approximately 45 seconds.

##### 4.3 QUALITY ASSURANCE PLAN (QAP)

The manufacturer shall submit their Quality Assurance Plan (QAP) along with their bid for approval by RWF, which will be followed in the manufacturing of Asbestos Gasket to satisfy the technical requirement as required under this specification. Manufacturer shall get their QAP approved from RWF in advance, unless a waiver is given to this effect.

##### 5.0 INSPECTION NORM

- 5.1 GIL II Double sample norms. The sampling norm for Dimensional check is in accordance to IS 2500:Part 1:2000.
- 5.2 Acceptance criteria as per IS 2500:Part 1:2000. The required AQL is 4

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**6.0 APPLICATION TEST**

300 numbers of Asbestos Gaskets selected at random from each lot shall be subjected to application test to confirm that the supplies meet the functional requirements in respect of effecting proper sealing and for performance parameters specified under Clause 4.0.

**7.0 TEST CERTIFICATE**

The supplier shall submit an Internal Test Certificate for each lot supplied, confirming that the product meets with the requirements of this specification.

**8.0 PACKING**

The material shall be supplied in cardboard boxes of suitable size. Each box shall be marked with Supplier's name, nomenclature and grade of material.

**9.0 TRIAL OF THE SUPPLY**

The material for trial shall necessarily meet all the requirements mentioned elsewhere in this specification prior to shop floor trial. Only after this, the material will be taken up for shop floor trial by RWF as per Trial Scheme at Annexure-1 and the corresponding Trial Report shall be prepared as per Annexure-2.

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**TRIAL SCHEME OF ASBESTOS GASKET**

1	Trial scheme No.	RWF/M/SPECN-1/001/1987 alt.... / Trial Scheme PL NO.....
2	Objective of Trial	To establish the suitability of Asbestos Gasket as per Specn No. RWF/M/SPECN-1/001/1987 alt ...
3	Description of Material PO Number & PO date PO Qty. Supplier	ASBESTOS GASKET ..... ..... .....
4	IDN Number & Date IDN Qty.	..... .....
5	Authority for conducting Trial	Dy. CME/ Mfg
6	Earlier trial details	Fist Time Supply/ Second time/ Third time ...../...../.....
7	Trial Parameters	As mentioned in Trial Scheme*
8	Specification	RWF/M/SPECN-1/001/1987 alt ....
9	Pre-trial Testing details	Met. Lab Report & MTC
10	Trial qty	Full IDN Qty/ 5% of the tendered quantity
11	Equipment / Station process	Pouring Station

( ..... to be filled by Team Members)

**Trial Parameters:**

1. Total quantity Asbestos gaskets to be drawn and trial conducted on the entire quantity under the purchase order/5% of the tendered quantity, whichever is less.
2. Inspection & testing by shop and whenever required by laboratory completely in line (not in part) with the specification. Sampling for inspection as per specification.
3. Examination of MTC (Manufacturer's Test Certificate) and comments on its suitability
4. The relevant Production & XC Data shall be compared with a similar quantity in use of other make, in addition to any specific performance requirement given in specification

**Specific Requirements:**

1. Compare instances of run-out in matching number of other makes by ensuring same process parameter during use and in the same period (or just preceding/succeeding period)
2. Compare instances of burning and disintegration of another make.

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**TRIAL REPORT OF ASBESTOS GASKET**

1	Trial No.	RWF/M/SPECN-1/001/1987 alt .... PL No.....
2	Objective of Trial	To establish the suitability of Asbestos Gasket as per Specn No. RWF/M/SPECN-1/001/1987 alt...
3	Description of Material PO Number & PO date PO Qty. Supplier	ASBESTOS GASKET ..... ..... .....
4	IDN Number & Date IDN Qty.	..... .....
5	Authority for conducting Trial	Dy. CME/ Mfg
6	Earlier trial details	Fist Time Supply/ Second time/ Third time ...../...../.....
7	Trial Parameters	As mentioned in Trial Scheme
8	Specification	RWF/M/SPECN-1/001/1987 alt ...
9	Pre-trial Testing details	Met. Lab Report & MTC
10	Trial qty	Full IDN Qty/ 5% of the tendered quantity
11	Equipment / Station process	Pouring Station
12	Nominated Officers	ACMT/W & AWM/MR

( ..... to be filled by Team Members)

**Application Test:** Shop Floor test conducted from date \_\_\_\_ to date \_\_\_\_ & H. No. \_\_\_\_**Trial Parameters:**

- 1 Total quantity Asbestos gaskets to be drawn and trial conducted on the entire quantity under the purchase order/5% of the tendered quantity, whichever is less.

Comments:

- 2 Inspection & testing by shop and whenever required by laboratory completely in line (not in part) with the specification. Sampling for inspection as per specification.

Enclosure Details:

- 3 Examination of M Lab report & MTC (Manufacturer's Test Certificate) and comments on its suitability

Comments with documents:

- 4 The relevant Production & XC Data shall be compared with a similar quantity in use of other make, in addition to any specific performance requirement given in specification

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Comments with documents:

**Specific Requirements:**

1. Compare instances of run-out in matching number of other established makes by ensuring same process parameter during use and in the same period (or just preceding/succeeding period)
2. Compare instances of burning and disintegration of other established make.

**Observations:**


AWM/WM

ACMT/W

SSE/MR

WM/W

Remarks of Dy CME/Mfg.

Remarks of AED/M&C

CWE/W

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## AMENDMENT SHEET

Alt 'k' Cl. No.	Alt 'L' Cl. No.	Description	Job No	Sign
--	4.3	(New clause added)  <b>QUALITY ASSURANCE PLAN (QAP)</b>  The manufacturer shall submit their Quality Assurance Plan (QAP) along with their bid for approval by RWF, which will be followed in the manufacturing of Asbestos Gasket to satisfy the technical requirement as required under this specification. Manufacturer shall get their QAP approved from RWF in advance, unless a waiver is given to this effect.	6912	<i>Chaudh</i>
..	9.0	(New Clause added)  <b>TRIAL OF THE SUPPLY</b>  The material for trial shall necessarily meet all the requirements mentioned elsewhere in this specification prior to shop floor trial. Only after this, the material will be taken up for shop floor trial by RWF as per Trial Scheme at Annexure-1 and the corresponding Trial Report shall be prepared as per Annexure-2.		
--	Annexure 1	<b>TRIAL SCHEME OF ASBESTOS</b> added		
--	Annexure 2	<b>TRIAL REPORT OF ASBESTOS</b> added		

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