



CORPORATE PURCHASING SPECIFICATION

AA53614

Rev No. 02

PREFACE SHEET

SILICA RAMMING MASS

FOR INTERNAL USE ONLY

REMOVE THIS PREFACE BEFORE ISSUE TO SUPPLIERS

Comparable Standards:

Suggested/ Probable Suppliers and Grades

As per respective Plant's PMD

User Plant References:

- | | | |
|-------------------|---|------|
| 1) HYDERABAD | : | MP59 |
| 2) CFFP, HARIDWAR | : | - |
| 3) BHOPAL | : | - |

Revisions:
Clause No. 25.03 of MOM of MRC-FN

APPROVED:
INTERPLANT MATERIAL RATIONALISATION
COMMITTEE – MRC(FN)

Rev No.02	Amd No.	Reaffirmed	Prepared	Issued	Dt. of 1 st Issue
Dt:19-03-2014	Dt:	Year:	EPD, Bangalore	Corp.R&D	01-01-1994

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SILICA RAMMING MASS																								
1.0 GENERAL: This specification governs the quality requirements of Silica Ramming Mass, having application temperature up-to 1700°C for steel and up-to 1550°C for cast iron. The mode of setting shall be ceramic.																								
2.0 APPLICATION: Used as a lining material in Induction melting furnace to melt iron and steel.																								
3.0 COMPLIANCE WITH NATIONAL STANDARDS: There is no national standard covering this type of material.																								
4.0 CONDITION OF DELIVERY: Powder form. The maximum free iron content shall not be more than 0.05%.																								
5.0 APPLICATION TEMPERATURE:																								
5.1 For Steel : Up-to 1700° C																								
5.2 For Cast Iron : Up-to 1550° C																								
6.0 SETTING MODE : Ceramic																								
7.0 SIZE AND SHAPE: <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 50%;">Sieve size</th> <th style="width: 50%;">Percentage retention</th> </tr> </thead> <tbody> <tr> <td colspan="2">For Cast Iron Application (0 to 4 mm)</td> </tr> <tr> <td>+ 4 mm</td> <td>All pass</td> </tr> <tr> <td>- 4 mm + 1 mm</td> <td>23 – 28</td> </tr> <tr> <td>- 1 mm + 150 micron</td> <td>45 – 55</td> </tr> <tr> <td>- 150 micron</td> <td>23 – 28</td> </tr> <tr> <td colspan="2">For Steel Application (0 to 7 mm)</td> </tr> <tr> <td>+ 7 mm</td> <td>All pass</td> </tr> <tr> <td>- 7 mm + 1 mm</td> <td>30 – 35</td> </tr> <tr> <td>- 1 mm + 150 micron</td> <td>35 – 45</td> </tr> <tr> <td>- 150 micron</td> <td>25 – 30</td> </tr> </tbody> </table>			Sieve size	Percentage retention	For Cast Iron Application (0 to 4 mm)		+ 4 mm	All pass	- 4 mm + 1 mm	23 – 28	- 1 mm + 150 micron	45 – 55	- 150 micron	23 – 28	For Steel Application (0 to 7 mm)		+ 7 mm	All pass	- 7 mm + 1 mm	30 – 35	- 1 mm + 150 micron	35 – 45	- 150 micron	25 – 30
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8.0 FREEDOM FROM DEFECTS:

The material shall be dry and free from all foreign materials and other harmful contaminants.

9.0 TEST SAMPLE:

A composite sample shall be prepared from each consignment of 1000 kg or part thereof.

10.0 CHEMICAL COMPOSITION:

When analyzed as per the relevant clauses of IS: 1527, the material shall conform to the following chemical composition:

SiO ₂	98.6% minimum
Al ₂ O ₃	0.8% maximum
*Trace Elements (MgO, CaO, Na ₂ O, K ₂ O etc)	Balance

* These elements need not be determined when the material supplied conforms with the properties specified in this specification. However, the supplier shall ensure that the composition of the material lies within the limits specified above.

11.0 INSPECTION AT SUPPLIER'S WORKS:

- 11.1 BHEL reserves the right to witness the testing of the material at supplier works and therefore the supplier shall notify the readiness of the material in advance.
- 11.2 BHEL may also opt for third party inspection. If so, BHEL may either specify a third party or else give a list of third party inspection agencies, out of which supplier may select one of his choice.
- 11.3 The supplier shall offer BHEL's representative all reasonable facilities, without charge to satisfy the latter that the material is being furnished in accordance with this specification. The supplier shall prepare and provide necessary test specimens for testing to be carried out at his premises. If facilities are not available at his works, the supplier shall make necessary arrangements for carrying out the prescribed tests elsewhere.
- 11.4 BHEL may, at its discretion, test the material after receipt and acceptance of the material will be based on the BHEL's test results.
- 11.5 Supplier shall ensure that the material is free from extraneous material. The material shall be rejected if it is not free from extraneous material.
- 11.6 For result of analysis and properties of material the decision of BHEL shall be final and binding on the supplier.
- 11.7 If the material received is not found suitable according to the requirements, it shall be replaced free of cost by the supplier.
- 11.8 For any deviation, demanded by the supplier from the specification, prior approval of BHEL must be obtained.



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12.0 TEST CERTIFICATES:

Unless and otherwise stated, one original and three copies of certificates from the original manufacturer shall be supplied along with each consignment.

In addition the supplier shall ensure to enclose one copy of test certificate along with the despatch documents to facilitate quick clearance of the material.

Manufacturer supplying material directly to BHEL should include BHEL PO No. in the Test Certificate. Any other supplier should provide a covering letter along with original manufacturer Test Certificate as above mentioning BHEL PO No.

The certificate shall bear the following information.

AA53614, Rev. No.02: SILICA RAMMING MASS

BHEL Order No.

Manufacturer's / Supplier's name.

Trade mark, if any.

Batch No and Date of manufacture.

Quantity Supplied.

Test results of clauses 7.0 and 10.0.

13.0 PACKING AND MARKING:

The material shall be supplied in leak and moisture proof polythene lined gunny bags of 50 kg each. No hooks shall be used to avoid spillage during transit.

Each bag shall be legibly marked or labelled with the following information:

AA53614, Rev No.01: SILICA RAMMING MASS

BHEL Order No.

Manufacturer's / Supplier's Name.

Batch No and Date of manufacture.

Net Weight

14.0 Referred Standards (Latest publications including amendments):

- 1) IS: 1527