



PLANT PURCHASE SPECIFICATION (CFFP - HARDWAR)

FF 05022 Rev03

Page 1 of 3

DRY RAMMING MASS (BASIC)

1. SCOPE

This specification governs the requirement of magnesite ramming mass used for patching the hearth and bank of Electric Arc Furnace in hot condition.

2. APPLICATION

Dry ramming mass is used to patch up hearth and banks of electric arc furnaces in red hot conditions between heats.

3. CONDITION OF DELIVERY

The size should be in the range of 0-5 mm. However oversized material should not exceed 5% by weight.

4. COMPLIANCE WITH NATIONAL STANDARDS

There is no national standard for this material;

5. PHYSICAL PROPERTIES

Basic ramming mass shall conform to the requirements given below.

Properties	Content	Reference for testing
Grain Size	0 to 5 mm (95% minimum)	IS 1528 part 14
Bulk Density	2.2 (gm/cc)	
Maximum service temperature	1750°C	
Sintering Temperature	1200 °C	
Water Requirement	No water required.	
Refractoriness	38 (Orton/ °C),min	IS-1528 part 2

6. CHEMICAL COMPOSTION

The material shall conform to the following chemical composition when it is analyzed in accordance with IS: 1527 and IS: 1528

ELEMENT	% MIN	%MAX
MgO	82	-
CaO	9	14
Fe ₂ O ₃	-	6
SiO ₂	-	1.5
Al ₂ O ₃	-	1.0
Na ₂ O + K ₂ O		0.1
Loss on Ignition		1.5

RMI	S.N.GHOSH	WORKED BY	M.K.SAHU
MPIC	SHYAM BABU	CHECKED BY	RANJAN
CHAIRMAN CPSC	K.B.SUBRAMANYAM	SUPERVISED BY	S.V.S.NARAYANA
APPROVED : PLANT STANDARDS COMMITTEE			
PREPARED : SMS TECH		ISSUED : Steel Melting Shop	DATE : 7/09/09



PLANT PURCHASE SPECIFICATION

(CFFP - HARDWAR)

FF 05022 Rev03

Page 2 of 3

7. INSPECTION

- CFFP 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.
- CFFP may, at its discretion, test the material after receipt and acceptance of the material will be based on the CFFP's test results.
- For any deviation from this specification prior approval shall be taken by the supplier.
- For result of analysis and properties of material the decision of CFFP shall be final and binding on the supplier.
- If the material is not conforming to this specification, it is liable to be rejected and the supplier shall replace the same.

8. TEST CERTIFICATES

One Original and three copies of Test Certificate from the original manufacturer containing the following information should be provided.

Manufacturer's Name

Name of the material

Batch/Lot No.

Quantity.

Note:

- A manufacturer supplying directly to BHEL should include BHEL's P.O. No. and Challan No. also in the TC.
- Any other supplier should provide a covering letter along with original Manufacturer's TC as above mentioning BHEL's P.O. No. and Challan No.

9. PACKING AND MARKING

Packing should be such as to prevent loss / deterioration in quality during handling, transport and storage. It should be in the original manufacturer's packing. Each package should be marked with the following details.

Name of the material

Manufacturer's Name / Trade mark

Batch/Lot No.

Net weight.

WORKED
BY

M.K.SAHU

07/09/09

CHECKED
BY

RANJAN

07/09/09

COPYRIGHT AND CONFIDENTIAL

The information on this document is the property of Bharat Heavy Electricals Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company.

BHEL	PLANT PURCHASE SPECIFICATION	FF 05022 Rev03
	C.F.F.P. HARDWAR	PAGE: 3 OF 3

REVISION RECORD SHEET

SN	Revision No.	Revision date	Nature of Changes
01	03	07.09.2009	-Clauses 8 and 9 revised incorporating requirement of manufacturer's packing and Test certificate. - Loss on ignition under physical properties changed to 1.5 %.

ISSUED BY:	SMS	WORKED	M.K.SAHU	<i>M.K. Sahu</i>
REVISION	03	CHECKED	RANJAN	<i>Ranjan</i>
AGREED	PLANT PUR. SPEC.COMMTTEE	APPROVED	P.P.S.C.	