



PLANT PURCHASE SPECIFICATION (CFFP - HARDWAR)

FF 05047Rev 02

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DUPLEX HOT TOP (EXOTHERMIC CUM INSULATING)

1. SCOPE

This specification governs the quality requirements of Exothermic cum Insulating hot tops used in SMS.

2. APPLICATION

Used in top part of ingot moulds for manufacturing of ingots of following sizes.
470² D, 570² D, 770⁸ D, 950⁸ D.

3. CONDITION OF DELIVERY

- 1) Duplex hot top should be supplied as per drawing no 02-217.
- 2) MS strips to be supplied as per drawing no 02,226 with hot top as per details below:-

Hot Top Type	No of strips per set
φ 470/570	12
φ 770	16
φ 950	20

4. COMPLIANCE WITH NATIONAL STANDARDS

There is no National standard covering this type of material.

5. PROPERTIES

When tested, it shall have the following values:-

a) Calorific Value for :

470² D & 570² D : 1450 cal/kg of exothermic facing at 1200°C at constant volume
770⁸ D & 950⁸ D : 1280 -----do-----

b) Permeability : 30-50 ASTM

c) Density : 0.45 – 0.55 gm/cc

e) % Moisture : 1% max.

The quality of hot top should be duplex consisting of in the ratio of 40% exothermic facing and 60% insulating within.

6. SAMPLING AND METHOD FOR ANALYSIS

As agreed between the supplier and CFFP, BHEL or specified in the purchase order.

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			APPROVED : PLANT STANDARDS COMMITTEE		
			PREPARED : SMS TECH	ISSUED : Steel Melting Shop	DATE : 07.09.09



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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) A manufacturer supplying directly to BHEL should include BHEL's P.O. No. and Challan No. also in the TC.
- b) 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.

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BY

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02/09/09

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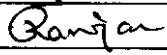
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REVISION RECORD SHEET

SN	Revision No.	Revision date	Nature of Changes
01.	01	24.03.2007	- Clauses 3 & 7 modified.
02.	02	07. 09.2009	-Clauses 8 and 9 revised incorporating requirement of manufacturer's packing and Test certificate.

ISSUED BY:	SMS	WORKED	M.K.SAHU 
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DATE: 07-09-2009			
AGREED	PLANT PUR. SPEC.COMMTTEE	APPROVED	P.P.S.C.