



संस्थान क्रय विनिर्देश (सी.एफ.एफ.पी. - हरिद्वार)

FF 05021

Rev 01

PLANT PURCHASE SPECIFICATION

(CFFP - HARDWAR)

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SLIDE GATE REFRACTORIES

1. SCOPE

This specification governs the quality requirements of slide gate refractories used in slide gates for teeming steel.

2. APPLICATION

The refractories will be used in slide gate plates, upper and inner nozzles and seating / well blocks.

3. MANUFACTURE

The process of manufacture of slide gate refractories is left to the discretion of supplier.

4. PROPERTIES

When tested in accordance with the relevant clauses of IS: 1527 and IS: 1528, mentioned against each, the test sample shall show the following values.

4.1 CHEMICAL COMPOSITION

The material when analysed in accordance with IS: 1527 shall conform to following composition:

Elements	Refractory Plate (Drg No 02,13,005) Plate-4QC (Drg No 02-218)	Lower nozzle (Drg No 02,13,006) Exchange. nozzle (Drg No 02-218)	Upper nozzle (Drg No 02,13,003) Ladle Nozzle (Drg. No. 02-218)	Seating block (Drg No 02,13,004)
Al ₂ O ₃ (% Min)	84	80	84	74
Carbon (% Min)	8	2	-	-
Fe ₂ O ₃ (% Max)	-	-	0.5	2

4.2 MECHANICAL

Bulk Density (gm/cc)	2.90	2.60	2.85	2.70
Apparent porosity (Vol% Max)	10.0	19.0	20.0	21.0
M.O.R. at 1400°C (Kg/cm ² Min)	120	-	-	-

5. The tolerance of the dimensions shall be as per respective drawings.

6. The items must be free from surface defects like cracks, porosity etc.

Q.M.	N.K.SAHU			नाम NAME	दिनांक एवं हस्ताक्षर SIGNATURE & DATE
MPIC	K.B.SOOD				
Q.M.(HEAD)	K.K.GUPTA			निर्माणकर्ता WORKED BY	RAJIV KUMAR
सहमत विभाग AGREED DEPTT	नाम NAME	हस्ताक्षर एवं दिनांक SIGNATURE & DATE		जांचकर्ता CHECKED BY	L.K.KHANDELWAL
			स्वीकृत : संस्थान मानक समिति APPROVED : PLANT STANDARDS COMMITTEE		
			निर्माण : PREPARED : SMS	जारी : ISSUED : SMS	दिनांक : DATE : 23.11.04

 SUPPLIES
 INVENTORY NO

 माल की सूची संख्या की
 अधिकतम संख्या

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स्वतंत्रता एवं गोपनीयता

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 INVENTORY NO



संस्थान क्रय विनिर्देश (सी.एफ.एफ.पी. - हरिद्वार)

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7. SAMPLING METHOD FOR CHEMICAL ANALYSIS

The sampling of material shall be done in accordance with IS: 1528.

8. INSPECTION

- CFFP/BHEL reserves the right to inspect the material after / before despatch. Therefore the Supplier should intimate in advance enclosing a copy of test certificate of the material offered for inspection.
- Final inspection will be done at CFFP
- For results of analysis and properties of material the decision of CFFP shall be final and Binding on the supplier.
- If the material is not found suitable according to the requirements, it shall be replaced free of Cost by the supplier.

9. CLEARANCE FOR DELIVERY

- 9.1 For any deviation from this specification prior approval of CFFP shall be taken.
- 9.2 The clearance does not release the supplier from the responsibility for non-conformance determined later on.
- 9.3 Objections shall be raised in case the material does not confirm to the condition specified in specification whereby the deviations interfere to significant extent with use of the material.

10. TEST CERTIFICATE

The supplier shall furnish 4 copies of test certificates unless otherwise specified in Purchase order. The test certificate must contain the following and must reach BHEL before Or along with the material.

10.1 BHEL Reference

10.1.1 Material Specification.

10.1.2 Purchase Order No.

10.2 Supplier Reference

10.2.1 Supplier's name or emblem.

10.2.2 Material Batch No. and Serial No.

10.2.3 Container size and weight of material.

10.2.4 Test Results as per clause 4.

11. PACKING AND MARKING

The material shall be suitably packed in thick corrugated sheet boxes with foam sheet or Thermocole to avoid damage during transit. Each consignment shall be legibly marked with Following information

BHEL Order No.

Manufacturer's Name

Batch/Lot No.

Trade Mark if any

Date: 02.12.04

निर्माणकर्ता
WORKED BY

RAJIV KUMAR

जांचकर्ता
CHECKED BY

L.K.KHANDELWAL

21/12/04
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SUPERSEDES
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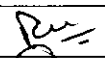
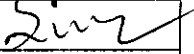
स्वाधिकार एवं गोपनीय
इस दस्तावेज़ में दी गई सूचना भारत भारी इलेक्ट्रिकल्स की संपत्ति है इसका प्रयोग एवं प्रसारण बिना लिखित अनुमति के किये जाने से बचना चाहिए

हस्ताक्षर एवं तिथि
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REVISION RECORD SHEET **MASTER COPY**

S. No.	Revision No.	Revision date	Nature of Changes
01.	01	02.12.04	➤ Format Changed. ➤ Clause 2 and 4.1 modified. ➤ Clause 5 & 6 added.

ISSUED:	SMS TECHNOLOGY	WORKED	
REVISION	01	DATE: 02.12.04	CHECKED 
AGREED	PLANT PUR. SPEC.COMMTTEE	APPROVED	P.P.S.C