



CORPORATE PURCHASING SPECIFICATION

AA 533 04

Rev. No. 02

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FIRECLAY REFRACTORIES

1.0 GENERAL:

This specification governs the requirements of high heat duty fireclay refractories.

2.0 APPLICATION:

Used as refractory lining bricks for furnaces and ladles and hollow refractory sleeves for gating system in moulds and cores.

3.0 COMPLIANCE WITH NATIONAL STANDARDS:

The material shall comply, in general, with the requirements of the following National standards and also comply with the requirements of this specification.

IS: 8-2004 : High Heat Duty Fireclay Refractories.

4.0 DIMENSIONS AND TOLERANCES:

4.1 **Shape And Size:** As per BHEL order/drawing.

4.2 **Tolerances:**

± 1% or 1mm, whichever is greater on both warpage and shrinkage.

5.0 FREEDOM FROM DEFECTS:

The refractories shall be free from cracks and broken corners and edges. They shall be of homogenous texture and shall have good surface finish.

6.0 **TEST SAMPLES:** As per IS:1528.

7.0 PROPERTIES:

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

7.1 **Chemical Composition:**

Al₂O₃ content 40%, minimum.

Revisions :
CI 19.9.26 of MOM of and Email dated
17.08.2005 from CFFP

APPROVED:
INTERPLANT MATERIAL
RATIONALISATION COMMITTEE-MRC (FN)

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7.2 PHYSICAL PROPERTIES:

Property	Requirements	
	Type I	Type II
1. Apparent porosity, % volume, max :	30	23
2. Cold Crushing strength, N/mm ² , min. :	17.5	25
3. Pyrometric cone equivalent standard Orton (ASTM) No., min :	32	32
4 Refractoriness under load, ta °C, min :	1400	1425
5 Permanent linear change, % max. :		
a) After heating at 1400°C for 5 hours:	± 1.5	--
b) After heating at 1450°C for 2 hours:	--	± 1.0

7.3 Hollow refractory sleeves for gating system should be amenable to cut by abrasive cut-off wheel.

8.0 INSPECTION AT SUPPLIER'S WORKS:

BHEL reserves the right to inspect the material at site before despatch. The supplier shall intimate in advance enclosing a copy of test certificate of the material offered for inspection.

If the material received is not found suitable to our requirements, it shall be replaced free of charge by the supplier. Final tests shall be carried out at BHEL and material will be accepted or rejected based on this result. For any deviation demanded by the supplier from the specification, prior approval of BHEL must be obtained in writing.

9.0 TEST CERTIFICATES:

Unless otherwise specified, three copies of test certificates shall be supplied along with each consignment.

In addition the supplier shall ensure to send one copy of test certificates along with the despatch documents to facilitate quick change of the material.

The test certificates shall bear the followings information

- AA 53304, Rev.No.02 : Fireclay Refractories
- BHEL Order No.
- Manufacturer's/Supplier's Name.
- Trade mark, if any.; Batch No.; Date of manufacture
- Size and Quantity supplied
- Dimensional inspection as per clause 4.0.
- Test results of clause 7.0.

**10.0 PACKING AND MARKING:**

The material shall be suitably packed to avoid damage during transit.

Each consignment shall be legibly marked or labeled with the following information:

AA 53304 : Fireclay Refractories

BHEL Order No.

Manufacturer's/Supplier's Name.

Trade mark, if any.

Batch/Lot No.

Size and Quantity supplied

Date of manufacture

11.0 REFERRED STANDARDS (Latest Publications Including Amendments);

1) IS: 8

2) IS:1527

3) IS:1528