



**FERRO SILICON (LUMPS)**

**1. SCOPE**

This specification governs the quality of Ferro Silicon Lumps with the following requirements.

**2. APPLICATION**

The material shall be used for melting and refining of steel.

**3. CONDITION OF DELIVERY**

The size should be in the range of 40-150 mm. However oversized or undersized material should not exceed 10% each by weight.

**4. COMPLIANCE WITH NATIONAL STANDARDS**

The specification has been drawn from Indian standards specification IS 1110-1990;  
Grade: FeSi73A115.

**5. FREEDOM FROM CONTAMINATION**

The material shall be free from extraneous contamination such as slag.

**6. CHEMICAL COMPOSTION**

The material shall conform to the following chemical composition when it is analyzed in accordance with IS: 1559. Composite sample shall be prepared by drawing samples from each consignment of 1000Kg or part thereof.

ELEMENT	% MIN	%MAX
Carbon	-	0.15
Silicon	70	75
Sulphur	-	0.05
Phosphorus	-	0.05
Aluminium	-	1.50

Trace elements are for information purpose only.

The test results are to be rounded off as per IS 2-1960 (reaffirmed 2000).

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			PREPARED : SMS TECH	ISSUED : Steel Melting Shop	DATE : 24.12.10

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**7. INSPECTION AT SUPPLIER'S WORKS:**

- 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.
- Supplier shall ensure that the material is free from extraneous material. The material shall be rejected if it is not free from extraneous material.
- For result of analysis and properties of material the decision of CFFP shall be final and binding on the supplier.

**8. TEST CERTIFICATES**

One Original and three copies of Test Certificate from the **Manufacturer** containing the following information **along with test result of clause 3 and the chemical composition as per clause 6** should be provided.

Manufacturer's Name  
 Name of the material  
 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. Supplier shall give the packing detail of material in the guarantee certificate.

**9. PACKING AND MARKING**

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

Name of the material  
 Manufacturer's Name / Trade mark  
 Net weight.

**10. REFERRED STANDARDS**

IS: 1110 , IS: 1559

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**REVISION RECORD SHEET**

SN	Revision No.	Revision date	Nature of Changes
01.	04	17.07.2006	- Packing clause modified.
02.	05	07.09.2009	- Clauses 8 and 9 revised incorporating requirement of manufacturer's packing and Test certificate.
03	06	24.12.2010	<ul style="list-style-type: none"><li>- Clause 3: Size range redefined and size for multi hopper system has been removed.</li><li>- Clause 4&amp;6: The material is based on grade FeSi73A115. Earlier it was based upon FeSi76. In this grade the range of Si content is 70-75%. Sampling of material for chemical analysis will be done as per this specification.</li><li>- Clause 8 &amp; 9: Batch no &amp; lot no removed.</li></ul>

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