



FERRO TUNGSTEN

1. SCOPE

This specification governs the quality of **FERRO TUNGSTEN** with the following requirements.

2. APPLICATION

The material shall be used as an alloying addition for manufacturing of steel.

3. CONDITION OF DELIVERY

A) The size of material should be in the range of 10-50 mm size. However oversized shall not exceed 10% by weight and undersized material shall not exceed 5% by weight.

B) The size of material should be in the range of 3-8 mm size However oversized shall not exceed 10% by weight and undersized material shall not exceed 5% by weight.

4. COMPLIANCE WITH NATIONAL STANDARDS

The specification in general is based on Indian standards specification IS 1467-1993;
Grade: **Fe W 80C 60**

5. FREEDOM FROM CONTAMINATION

The material shall be free from extraneous contamination such as slag and non metallic inclusion.

6. CHEMICAL COMPOSTION

The material shall conform to the following chemical composition when it is analyzed in accordance with IS: 1559-1961. Each batch of the material shall be sampled in accordance with IS 1472: 1977. All the test results are to be rounded off as per IS 2-1960.

ELEMENT	% MIN	%MAX
Tungsten	75.00	85.00
Carbon	-	0.60
Silicon	-	1.00
Phosphorous	-	0.06
Sulphur	-	0.05

COPYRIGHT AND CONFIDENTIAL
 The information on this documents is the property of Bharat Heavy Electrical Limited It must not be used directly or indirectly in any way detrimental to the interest of the company

RMI	S.N.GHOSH	<i>[Signature]</i>	WORKED BY	M.K.SAHU	<i>[Signature]</i>
MPIC	N.K.VERMA	<i>[Signature]</i>	CHECKED BY	RANJAN	<i>[Signature]</i>
CHAIRMAN CPSC	R PARTHASARTHY	<i>[Signature]</i>	SECRETARY COMMITTEE	Dr M.S.RAWAT	<i>[Signature]</i>
			APPROVED : PLANT STANDARDS COMMITTEE		
			PREPARED : SMS TECH	ISSUED : Steel Melting Shop	DATE : 30.07.10



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.

8. TEST CERTIFICATES

One Original and three copies of Test Certificate from the **Manufacturer** containing the following information **along with test result of clause 3,5 and the chemical composition as per clause 6** should be provided.

- Manufacturer's Name
- Name of the material
- Batch No.
- Lot Size
- Packing size details
- All parameters mentioned in clause 3 and 6
- 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

The material shall be packed in **Tamper proof metallic drum** 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
- Batch No.
- Net weight.

10. REFERRED STANDARDS

IS: 1467 -1993, IS: 1559, IS: 1472.

Handwritten signature/initials

WORKED BY	M.K.SAHU	<i>[Signature]</i>	30.07.10
CHECKED BY	RANJAN	<i>[Signature]</i>	30.07.10

COPYRIGHT AND CONFIDENTIAL
 The information on this documents is the property of Bharat Heavy Electrical Limited It must not be used directly or indirectly in any way detrimental to the interest of the company



PLANT PURCHASE SPECIFICATION

FF 05068 Rev01

(CFFP - HARDWAR)

Page 3 of 3

REVISION RECORD SHEET

SN	Revision No.	Revision date	Nature of Changes
1	1	30.07.2010	-Clause 3: Size range redefined. -Clause 8: Clause 5 included in the T.C. - Clause 9: Tamper proof metallic drum incorporated as per SP-0612 dated 11.03.2010.

Copyright and Confidential
The information on this documents is the property of Bharat Heavy Electrical Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company

Printed

WORKED BY	M.K.SAHU	<i>M.K. Sahu</i>	30.07.10
CHECKED BY	RANJAN	<i>Ranjana</i>	30.07.10