

### PLANT PURCHASE SPECIFICATION

(CFFP - HARDWAR)

FF 05064 Rev 1

Page

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#### FERRO NIOBIUM

#### 1. SCOPE

Limited.lt must

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This specification governs the quality of Ferro Niobium with the following requirements.

#### 2. APPLICATION

The material shall be used as alloying addition for the melting and refining of special alloy steel.

#### 3. CONDITION OF DELIVERY

The size should be in the range of 20-50 mm. However oversized or undersized material should not exceed 10% each by weight.

#### 4. COMPLIANCE WITH NATIONAL STANDARDS

The specification in general is based on Indian standards specification IS 3014-1993; Grade: 02FeNb55.

### 5. FREEDOM FROM CONTAMINATION

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

#### 6. CHEMICAL COMPOSTION

The material shall have the following chemical composition..

ELEMENT	% MIN	%MAX
Niobium	50	60
Carbon	-	0.25
Manganese		2.00
Silicon	ND P	3.50
Sulphur	-	0.03
Phosphorus	-	0.03
Aluminium	-	1.50
Tantalum	-	2.00
Iron	-	Remainder

		RMI	S.N.GHOSH	1	WORKED BY	M.K.SAHU	Jahr
		MPIC	SHYAM BABU	Myand	CHECKED BY	RANJAN	Rangian
		CHAIRMAN CPSC	K.B.SUBRAMANYAM	Han manyour.	SUPERVISED BY	SVS NARAYANA	may and 1919
:			APPROVED: PLANT STANDARDS COMMITTEE				
-					PREPARED : SMS TECH	ISSUED: Steel Melting Shop	DATE :

RANJAN

CHECKED BY

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	7 INCOME CONTON						
	7. INSPECTION		saden ans				
	<ul> <li>CFFP reserves the right to witness the testing of the material therefore the supplier shall notify the readiness of the material in</li> </ul>	* *	OTKS and				
	CFFP may, at its discretion, test the material after receipt and according to the material according to the material according to the material accord		e materia				
	will be based on the CFFP's test results.	epitanee or in					
	<ul> <li>For any deviation from this specification prior approval shall be to</li> </ul>	aken by the su	pplier.				
	<ul> <li>For result of analysis and properties of material the decision of CFFP shall be final and binding on the supplier.</li> </ul>						
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N ITAL at Heavy by detriment	8. TEST CERTIFICATES						
DEP of Bhar any wa	•						
CONFIDEN I property of Bharat I directly in any way d	One Original and three copies of Test Certificate from the original man	ufacturer cont	aining th				
D CC the pro indires the cor	following information should be provided.						
AND ents is the setly or in	Manufacturer's Name						
3HT docum sed dim inter	Name of the material						
YRI on this of be u	Batch/Lot No.						
COPYRIGHT mation on this docum must not be used din inter	Quantity.						
e informated it	Note:	HEL'- DO M					
f.j.	<ul> <li>A manufacturer supplying directly to BHEL should include B Challan No. also in the TC.</li> </ul>	HEL'S P.O. N	o. and				
;	b) Any other supplier should provide a covering letter along with	h original					
	Manufacturer's TC as above mentioning BHEL's P.O. No. an						
	9. PACKING AND MARKING						
	Packing should be such as to prevent loss / deterioration in quality during	a handling tra	neport ar				
	Packing should be such as to prevent loss / deterioration in quality during storage. It should be in the original manufacturer's packing. Each page						
	with the following details.	and a second					
	Name of the material						
. •	Manufacturer's Name / Trade mark Batch/Lot No.						
	Net weight.						
	That Weight.						
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# REVISION RECORD SHEET

SN	Revision No. I	Revision date	Nature of Changes
01.	01	07.09.2009	-Clauses 8 and 9 revised incorporating requirement of manufacturer's packing and Test certificate.
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ISSUED BY:	SMS	WORKED M.K.SAHU Wall	h
REVISION	01 - DATE: 07/69/6	9 CHECKED RANJAN Queija	in
AGREED	PLANT PUR. SPEC.COMMTT	EE APPROVED P.P.S.C.	