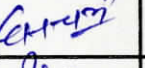


दिनांक एवं हस्ताक्षर SIGN & DATE		संस्थान क्रय विनिर्देश (सी.एफ.एफ.पी. - हरिद्वार)		FF06056 Rev 00												
		PLANT PURCHASE SPECIFICATION (CFFP - HARDWAR)		पृष्ठ Page	का 1 of 4											
SUPERSEDES INVENTORY NO.	CHROMITE SAND FOR USE IN FOUNDRIES (INDEGENOUS SOURCE)															
सामग्री सूची संख्या को अधिकृतित करता	1.0 GENERAL This specification covers the requirements of Chromite sand for use in foundries.															
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	2.0 APPLICATION The Chromite sand shall be used for facing of pattern and core boxes in mould and core making.															
	3.0 COMPLIANCE WITH NATIONAL STANDARDS This specification is based on IS 6788-1973.															
	4.0 Physical and Chemical Characteristics															
	4.1 Chromite sand grains shall be crystalline, mostly sub-angular in shape (Shape determined as per IS 1918 or equivalent international standard procedures).															
	4.2 The material shall have shining black appearance and shall be free from foreign material, e.g. low melting point minerals, carbonates.															
	4.3 The chromite sand should be compatible for sand batch making with resin & catalyst procured against CFFP purchase specification FF06056 Rev 00 to meet desired sand batch properties.															
	4.4 The mould prepared using above chromite sand batch should withstand upto temperature 1600°C during pouring of different steel grades. No metallization and sand fusion of sand batch on casting surface is acceptable.															
	4.5 CHEMICAL COMPOSITION															
	Chromite sand shall have typical analysis as under															
	<table border="0"> <tr> <td>Cr₂O₃</td> <td>44.0% min.</td> </tr> <tr> <td>FeO</td> <td>29% max.</td> </tr> <tr> <td>MgO</td> <td>12% max.</td> </tr> <tr> <td>Al₂O₃</td> <td>16.5% max.</td> </tr> <tr> <td>SiO₂</td> <td>1.1% max.</td> </tr> <tr> <td>CaO</td> <td>0.5% max.</td> </tr> </table>					Cr ₂ O ₃	44.0% min.	FeO	29% max.	MgO	12% max.	Al ₂ O ₃	16.5% max.	SiO ₂	1.1% max.	CaO
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SiO ₂	1.1% max.															
CaO	0.5% max.															
4.6 Clay (as per IS 1918 or equivalent international standard procedure) – 0.75% max.																
4.7 Moisture (as per IS 1918 or equivalent international standard procedure) – 0.2% max.																
4.8 pH value of sand (measured as per IS 6788 or any other equivalent international standard procedure) shall be in between 6.5 to 9.0.																
स्वतंत्राधिकार एवं गोपनीयता इस प्रलेख में दी गई सूचना भारत हेवी इलेक्ट्रिकल्स की सम्पत्ति है इसका प्रत्यक्ष एवं अप्रत्यक्ष रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक है।	RMI ARUN KUMAR AGARWAL	अनुवादक TRANSLATED BY	निर्माणकर्ता WORKED BY	जांचकर्ता CHECKED BY	APPROVED BY											
हस्ताक्षर एवं दिनांक	CHAIRMAN PPSC	GM VERMA	DHANANJAY AZAD	RANJIT LAKRA	A N SUDHAKAR											
सामग्री सूची संख्या INVENTORY NO.	सहमत विभाग AGREED DEPTT	नाम NAME	दिनांक एवं हस्ताक्षर DATE & SIGNATURE	स्वीकृति : संस्थान मानक समिति APPROVED : PLANT STANDARDS COMMITTEE												
				निर्माण : PREPARED : FOUNDRY TECH	जारी : फाउण्ड्री टेक्नालॉजी ISSUED : FOUNDRY TECHNOLOGY											
				दिनांक Date 05.09.2020												

दिनांक एवं हस्ताक्षर SIGN & DATE			संस्थान क्रय विनिर्देश (सी.एफ.एफ.पी - हरिद्वार) PLANT PURCHASE SPECIFICATION (CFFP - HARDWAR)		FF06056 Rev 00 पृष्ठ का Page 2 of 4									
SUPERSEDES INVENTORY NO. समग्री सूची संख्या को अधिकारित करता है		4.9 Acid Demand Value, when measured in accordance with IS 6788 or AFS Foundry Sand Handbook shall conform to the requirement as given below <table border="1" data-bbox="406 392 1311 470"> <tr> <td>pH</td> <td>3</td> <td>4</td> <td>5</td> </tr> <tr> <td>ADV (max.)</td> <td>10ml</td> <td>8 ml</td> <td>6 ml</td> </tr> </table> 4.10 Turbidity – 210-ppm max. 4.11 When tested in accordance with IS 1918 or any other equivalent international standard procedure, the fusion temperature of chromite sand shall not be less than 1800°C. 5.0 Grain size and distribution 5.1 The Grain Fineness No. (GFN) of chromite sand shall be AFS 45 to 55. GFN determination should be carried out by procedure described either in AFS Foundry Sand Handbook or as per IS 1918. Grain distribution: Total retention on ASTM Sieve Nos. 40, 50, 70, 100 and 140 shall be 90% min. (Sizes corresponding Sieve Nos. 40, 50, 70, 100 and 140 are 425, 300, 212, 150 and 105 microns) 5.2 Fines i.e. grains having size less than 75 microns (i.e., retained on ASTM No.270 and pan) shall be 1.0% max. 6.0 SAMPLING Samples shall be drawn in accordance with IS 1811 for testing purposes. When sampling and testing is carried out outside India, other sampling procedures like that described in Chromite Sand Specification of Steel Foundry Society of America or AFS Foundry Sand handbook is acceptable. 7.0 INSPECTION, DEVIATION AND REPLACEMENT 7.1 BHEL reserves the right to inspect material at site before despatch. The supplier shall intimate in advance about readiness of material enclosing a copy of test certificate of the material offered for inspection. However inspection at BHEL shall be final. The supplier shall offer BHEL representative all reasonable facilities without charge to satisfy the later that the material being furnished is in accordance with this specification. The supplier shall prepare and provide necessary test specimens for testing to be carried out at his premises. If facilities are not available at his works, the supplier shall make necessary arrangements for carrying out the prescribed tests elsewhere. 7.2 Acceptance of the material shall be on the basis of Test Certificate provided by Original Manufacturer or Inspection carried out by BHEL Representative/Third Party Inspecting Agency. However, BHEL reserves the right to carry out testing of any of the parameters mentioned in Clause 4 and 5 after receipt of material. 7.3 If the material received at BHEL is not found in accordance with the requirements, it shall be rejected and the supplier will have to replace it free of cost at the earliest. 7.4 For any deviation from the specification sought by the supplier, prior approval of BHEL must be obtained in writing.					pH	3	4	5	ADV (max.)	10ml	8 ml	6 ml
pH	3	4	5											
ADV (max.)	10ml	8 ml	6 ml											
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स्वतंत्राधिकार एवं गोपनीयता इस प्रलेखन, यदि सुचना मारता होनी इसका प्रयोजन एवं अप्रयोजन रूप से किसी भी तरह प्रयोग, जो कि कम्पनी के हित में हानिकारक हो न किया जाए।														
हस्ताक्षर एवं दिनांक SIGN & DATE														
समग्री सूची संख्या INVENTORY NO.				निर्माणकर्ता WORKED BY	Dhananjay Azad		दिनांक Date 5.09.2020							
			जांचकर्ता CHECKED BY	Ranjeet Lakra			दिनांक Date 5.09.2020							

दिनांक एवं हस्ताक्षर SIGN & DATE		संस्थान क्रय विनिर्देश (सी.एफ.एफ.पी - हरिद्वार) PLANT PURCHASE SPECIFICATION (CFFP - HARDWAR)	FF06056 Rev 00	
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सामग्री सूची संख्या को अधिकृत करता है	SUPERSEDES INVENTORY NO.	8.0 TEST CERTIFICATES 8.1 Unless otherwise specified, one original and three copies of test certificate from the original manufacturer shall be supplied with each consignment bearing the following information. In order to facilitate quick clearance of material, the supplier shall ensure to send a copy of test certificates along with despatch document. a) BHEL P.O No. with Date b) FF06056 Rev-00: CHROMITE SAND FOR USE IN FOUNDRIES (Indigenous Source) c) Supplier Reference/ Trade mark d) Identification No. / Batch No. e) Properties as per Clause 4 & 5 f) Any other specific information which the supplier would like to convey. 8.2 Suppliers other than the original manufacturer shall ensure providing original manufacturer's test certificates with linkage to supplier's invoice stating the batch No., lot No., etc. of the supply. 9.0 PACKING AND MARKING 9.1 Chromite sand shall be packed in 1/1.5 MT jumbo bags. However the purchaser may specify his own requirement in the purchase order. Adequate protection from moisture pickup/ contamination during transportation and storage shall be provided. 9.2 The packing shall be of the original manufacturer's. The bags containing chromite sand shall be clearly marked with the following: FF06056 Rev-00: CHROMITE SAND FOR USE IN FOUNDRIES (Indigenous Source) BHEL P.O No. with Date Manufacturer/ Supplier's name/ Trade mark, if any Batch/Lot No. Net weight 10.0 REFERRED STANDARDS (Latest Publications including Amendments) 1) IS 1811 2) IS 1918		
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स्वतंत्रताधिकार एवं गोपनीयता इस प्रलेख को गैर सूचना भारत हेतु उपयोग के लिए प्रेषित है। इसका प्रयोग एवं अप्रत्यक्ष रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में हानिकारक हो न किया जाए।				
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सामग्री सूची संख्या			निर्माणकर्ता WORKED BY Dhananjay Azad	Date 5.09.2020
			जांचकर्ता CHECKED BY Ranjeet Lakra	Date 5.09.2020

दिनांक एवं हस्ताक्षर SIGN & DATE		संस्थान क्रय विनिर्देश (सी.एफ.एफ.पी - हरिद्वार) PLANT PURCHASE SPECIFICATION (CFFP - HARDWAR)		FF06056 Rev 00													
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सुपरी सूची संख्या को SUPERSEDES INVENTORY NO.	RECORD OF CHANGES																
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REV CODE	NO. OF CHANGES	DOCU. NO.	SHEET NO.	SIGN	DATE												
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स्वाधिकार एवं गोपनीयता इस प्र. म. दी गई सूचना भारत हेवी इलेक्ट्रिकल्स की संपत्ति है इसका प्रयोग एवं प्रसारण बिना लिखित अनुमति के किये जाने से कानूनन रोक्का जायेगा																	
DISTRIBUTION OF PRINTS																	
RMI		✓															
STANDARD SECTION		✓															
MPIC		✓															
दिनांक एवं हस्ताक्षर SIGN & DATE	निर्माणकर्ता WORKED BY		Dhananjay Azad		दिनांक Date 5.09.2020												
सुपरी सूची संख्या INVENTORY NO.	जांचकर्ता CHECKED BY		Ranjeet Lakra		दिनांक Date 5.09.2020												

Unpriced Bid Details

Tender Reference No.	1206 P/901/0/0217E1 Dtd. 17/11/2020
Item Description	Chromite Sand for use in Foundries (Indigenous Source), Specification FF06056 Rev 00
Vendor Name	
Quotation Reference No.	
Currency	INR
Item	1
Material Code	FF5360000023
Description	Chromite Sand for use in Foundries (Indigenous Source), Specification FF06056 Rev 00
Quantity Kg	1,00,000Kg (one Lakh)
Offered Qty.	
Freight Charges per unit	
Insurance	
Packing Charges per unit	
Other Charges	
GST	
Delivery Offered at CFFP BHEL Haridwar	

Tender Reference No.	1206 P/901/0/0217E1 dtd. 17/11/2020
Item Description	Chromite Sand for use in Foundries (Indigenous Source), Specification FF06056 Rev 00
Vendor Name	
Quotation Reference No.	
Currency	INR

Price Bid Details

Item	1
Material Code	FF5360000023
Description	Chromite Sand for use in Foundries (Indigenous Source), Specification FF06056 Rev 00
Quantity Kg.	1,00,000Kg (one Lakh Kg)
Basic Price/ Unit	
Any Other charges	