

## Pre-Qualification Requirements (Technical) for Double/Two Layer Carbon-Brush

**Material Description & Grade** Double Layer (Silver / Graphite) Carbon Brush with flexible end connections as per below detail

Silver layer grade ASG1 / Carbon layer grade HM100 of M/s Assam Carbon  
or S13 / F19 grade of M/s Schunk  
or AG20 / LFC554 of M/s Carbon Lorraine (M/s Mersen)  
or other equivalent grades for referred application.

**Application** Grounding stray charges, Rotor Earth Fault monitoring, etc. in shaft train of rotating electrical machines.

### Mandatory Pre-Qualification Requirements

1. Vendor should have experience of manufacturing & supplying at least 20 nos. of Double Layer Carbon Brushes in last 7 years (on the date of enquiry) used for grounding stray charges, Rotor earth fault monitoring, etc. in shaft-train of rotating electrical machines.
  - a. In support of above, vendor shall furnish their experience list as per the following format to BHEL.

Sl. No	Name & Address of Customer	PO No.	PO Date	Size / Dimensions (mm)	Grade	Quantity

- b. Vendor must furnish copy of at least one unpriced PO and corresponding test certificates from the above list. The test certificates must be accepted by end-user or certified by third party inspection agency. The above certificate should contain information like item details, dimensions, grade and properties.
2. Vendor to confirm that they have manufacturing facilities for Double Layer Carbon Brushes. Details of manufacturing facilities to be furnished.
3. Vendor to confirm that they have facilities for carrying out the tests as mentioned in the respective drawings and provide details of test equipment available at their works. If the vendor plans to outsource any testing; particulars of the laboratory to be furnished. The testing facilities should be duly calibrated against national or international standards.
4. Vendor to confirm to meet the technical requirements of specifications and drawings, as per tender-enquiry

### Notes

- i. All the documents should be submitted in consolidated manner and in English language

MANUFACTURER'S NAME AND ADDRESS			QUALITY PLAN				TO BE FILLED BY BHEL		TO BE FILLED BY BHEL			
BHEL	VENDOR'S NAME	ITEM			QP NO.							
					REV							
		DRG. NO.	AS PER PO									
		SPEC.	AS PER PO									
SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY			REMARKS
1	2	3	4	5	6	7	8	9	D	10		11


Note: All page of inspection documents shall be numbered in chronology with the QAP clause , dully mentioning the corresponding QAP clause nos. at the top of each page. One index page containing the documents descriptions, their page no & QAP clause shall be attached upfront the inspection documents.

MANUFACTURER/SUBCONTRACTOR		LEGEND:	FOR CUSTOMER USE	
		! RECORDS IDENTIFIED WITH 'TICK' SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION.		APPROVED BY
		M: MANUFACTURER / SUBCONTRACTOR B: BHEL / NOM. INSPECTION AGENCY N: CUSTOMER INDICATE 'P' PERFORM 'W' WITNESS AND 'V' VERIFICATION ALL 'W' INDICATED IN COLUMN 'N' SHALL BE 'CHP' OF CUSTOMER		