

Domain :	bhel.abcprocure.com		
Parent department:	BHEL Trichy		
Unit name	: BHEL Trichy		
Purchase group	: FB Consumable-PRDN	RFQ/NIT/Enquiry Officer	: RAJAPRAKASH K
Event ID	: 30734	RFQ/NIT/Enquiry no.	: 1901900144
Enquiry Date	: 04/07/2019 05:30:00		
Tender Description	: SUPPLY OF NON ASBESTOS MATERIALS AS PER SPECIFICATION		
Terms & Conditions	: SPECIAL TERM(S) 1. The Enquiry is a two part Enquiry through EPS. Offer from any other mode will not be accepted. 2. Suppliers should give acceptance for supply of non-asbestos material as per plant standard issued by BHEL. 3. Delivery terms will be full quantity within 6 weeks from the date of PO. 4. Quantity tolerance of +-1% is included in this Enquiry. 5. OFFERS from Manufacturers will be accepted, offers from traders will summarily be rejected. 6. SUPPLIERS SHOULD ATTACH THE DULY FILLED & SIGNED SCANNED COPY OF ALL ANNEXURES. 7. Suppliers who belong to MSE category should submit attested copies of either Udyog AADHAAR MEMORANDUM (UAM) along with attested copy of a CA certificate applicable for the relevant financial year (latest audited) ATTACHMENT: 1. ANNEXURE A 2. ANNEXURE I 3. TP SPECIFICATIONS		
Product / service / work keywords	: Non Asbestos Sheet,		
No. of Bid Parts	: Multiple	Envelope	: Techno-commercial bid , Price bid
Type of contract	: Goods	Project duration / delivery or completion period	: 42 days
Download document	: Before login	RFQ floated under the policy	: PP-PURCHASE POLICY
Estimated Category	: A	No. of items already attached	: 5
Delivery/Location At	: BHEL TRICHY	Delivery Date	: 30/07/2019 05:30:00
Inspection by Agency	: TPI/ENGINEER IN CHARGE, BHEL	Inspection Location	: THIRD PARTY INSPECTION APPOINTED BY BHEL AT VENDOR WORKS AND ENGINEER IN CHARGE, BHEL AT BHEL TRICHY
Min. bid required	: 2		

Bid submission configuration

Bid evaluation	:	Item wise	Bidding access	:	Open Tender
Base currency	:	INR	Bidding type	:	NCB/Indigenous

Key configuration

Pre-bid meeting	:	Don't allow
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Dates configuration

Document downloading start date	:	13/07/2019 12:10:00	Document downloading end date	:	24/07/2019 14:00:00
Bid submission start date	:	13/07/2019 12:10:00	Bid submission end date	:	24/07/2019 14:00:00
Bid opening date	:	24/07/2019 14:30:00			

Document / EMD / Security fee detail

Document fees	:	Not required	EMD	:	Not required
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Bidding forms

PRICE BID

PRICEBID TEMPLATE

Note:

Unit rate quoted should be exclusive of GST

MATERIAL CODE	ITEM NAME	QUANTITY	UNIT OF MEASUREMENT
000000220300020000	GASKET-5MMTP 23292 Rev02	150.00	KG
000000220300050000	PACKING ROPE SQ.12MM - TP23299 Rev02)	50.00	KG
000000220300200000	NONASBESTOS COMPRESSED FIBREJOINTING-2MMTP 23294 Rev02	1000.00	KG
000000220300460000	PACKING ROPE SQ.40MM - TP23299 Rev 02	20.00	M
000000220300600000	CARBON/SILICON FIBRE MILLBOARD-5MMTP-23296/REV 02	50.00	KG

Information for Online Participation

Bidder who wish to participate in this tender needs to procure Digital Certificate as per Information Technology Act-2000 using that they can digitally sign their electronic bids. Bidders can procure the same from any or the CCA approved certifying agencies, or they may contact e-Procurement Technologies Ltd. at below mentioned address and they will assist them in procuring the same. Bidders who already have a valid digital Certificate need not to procure the same. In case bidders need any clarification regarding online participation, they can contact,

e-Procurement Technologies Ltd.

Corporate Office:

Address : A-201/208, Wall Street - 2, Opp. Orient Club,
Nr. Gujarat College, Ellis Bridge,
Ahmedabad - 380006, Gujarat(INDIA)

Digital Certificate Contacts

Contact Person : Mr. Himalay Vaishnav

Cell : +91-9099090830

Phone Nos. : +91-9099090830

Fax No :

e-Mail : info@abcProcure.com

Support Team Contacts

Contact Person : BHEL Support Team Ahmedabad

Cell : +91-9265562819

Phone Nos. : +91-79-68136809/871/861/823/872

Fax No :

e-Mail : Bhel.Support@abcProcure.com

Bidder who wish to participate in e-Tender need to fill data in predefined forms of Price bid available in respective tender only. After filling data in predefined forms bidders need to click on final submission link to submit their encrypted bid. Bidder need to submit Document Fees, EMD & Reference Documents in hard copy if such instruction are given by tendering authority. As Per the new Inter-operability guidelines released by Controller of Certifying Authorities(CCA), the Secured Socket Layer(SSL) certificate for a e-procurement application is generated on a new algorithm, SHA2.

Also, the Digital Certificates that will be applicable for these platforms have to be SHA2 algorithm complaint. For the same, the users have to ensure that they have Windows XP(SP3)/Windows Vista/Windows7 installed in their respective PC/Laptop. In case of Windows XP Service pack - 3, if you get any issue you can install the SSL patch, which is available at our download section of our e-Tender/e-Auction Portal and also at our corporate website www.abcprocure.com just below the label of "Knowledge section".

Fraud Prevention

Bidder along with its associate/collaborators/sub-contractors/sub-vendors/consultants/service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website <http://www.bhel.com> and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.

Preference to Make in India

For this procurement, Public Procurement (Preference to Make in India), order 2017 dated 15.06.2017 & 28.05.2018 and subsequent orders issued by the respective Nodal ministry shall be applicable even if issued after issue of this NIT but before finalization of contract/PO/WO against this NIT. In the event of any Nodal Ministry prescribing higher or lower percentage of purchase preference and/ or local content in respect of this procurement, same shall be applicable. Default margin of purchase preference shall be 20% to local suppliers with default minimum local content of 50%.



Annexure A

QUOTATIONS:

1.

a. Interested bidders / Suppliers shall submit their offer through e-Procurement mode at <https://bhel.abcpocure.com>. Offers in any other mode will not be accepted. For Enterprise Procurement System (EPS) Bidders/Suppliers are requested to follow these steps.

REQUIREMENTS

1. Computer with good Internet Connection (Minimum 256 kbps).
2. Operating System should be Windows Vista / Windows 7 and above.
3. Web Browsers: IE 9.0 (32-bit Browser only) & above, Mozilla Firefox up to version 51 (32 bit / 64 bit), Google Chrome 20.0 to 41.0
4. System Access with Administrator Rights
5. Digital Certificate: To participate in an e-Tender, you need to have a Class-II/III Digital Signature Certificate (DSC) for Signing & Encryption (Required both digital signature certificate: Signing & Encryption) of bids issued by any of the valid Certifying Authorities (approved by Controller of Certifying Authorities) in India. Valid Digital Signature Certificate (DSC) must be installed in a computer system from where you want to access the website.

Steps for registration & bidding:

For registration & submitting bids, vendors shall follow the link "Bidder manual for BHEL Bidders" in <https://bhel.abcpocure.com>.

In case of any assistance, please call the following Nos for support:

Contact: +91-79-40270549/560/590

General Conditions:

- a. Bidders are requested to quote their offer price on F.O.R Destination (BHEL/Stores) basis only (The basic price of the material quoted in the bid should be inclusive of Packing, Forwarding, freight and transit insurance, etc.,). Ex-works offers will be summarily rejected without further clarification.
 - b. No charges shall be indicated as "Lumpsum" or "Approximate" in absolute value. All charges like taxes and duties should be clearly specified as "percentage" of the quoted rates.
 - c. Manufacturer's name, trademark or patent no. if any should be specified. Illustrative leaflets giving technical particulars are required along with quotation wherever necessary.
 - d. Products with I.S.I. certification marks will be preferred.
 - e. The Purchaser shall be under no obligation to accept the lowest or any other tender and shall be entitled to accept in Part or full without assigning any reason whatsoever.
 - f. The bidder has to keep track of any changes by viewing the addendum / Corrigendum's issued by the Purchaser on time-to- time basis in the E-Procurement platform. The Company calling for tenders shall not be responsible for any claims/problems arising out of this.
 - g. The user should complete all the processes and steps required for bid submission. The successful bid submission can be ascertained once acknowledgement is given by the system through bid submission number after completing all the processes and steps. BHEL and M/s. e-Procurement Technologies limited. will not be responsible for incomplete bid submission by users. Users may also note that the incomplete bids will not be saved by the system and are not available for the Purchaser for processing.
 - h. Before uploading scanned documents if any, the bidders shall sign on all the statements, documents, certificates uploaded by him, owning responsibility for their correctness / authenticity.
2. Offers should have a validity of minimum 90 days from the date of Tender opening. The quoted/Finalized rates shall be Firm till completion of the supplies including amendment / deviation / extension if any in quantity / date.
3. On the due date of tender opening, only technical bids will be opened. The opened technical bids will be evaluated by us and clarifications required, if any, will be called for from the bidders on technical and commercial points. If no reply is received from the vendor for the clarification raised by BHEL with in the final cut-off date those vendors offer will be processed with the documents available / submitted against

this tender. Offers not meeting the required specification and technical condition will be summarily rejected. The price bids of technically suitable bidders will be opened on a later date with prior intimation to techno-commercially suitable bidders.

4. Ranking L-1, L-2 etc. shall be done for individual items for the techno-commercially acceptable offers on landed cost to BHEL, Trichy basis and BHEL reserves the right to place order for individual items with different vendors. In the event of more than one vendor becoming L1 for the item, the enquiry quantity will be shared equally among all the L1 vendors.

5. BHEL reserves the right to negotiate with L1 vendor or re-float the tender for items where, L1 price is not the lowest acceptable price; BHEL reserves the right to increase or decrease the tender quantity.

6. Payment term is 100% direct EFT payment after 60 days from the date of receipt and acceptance of materials.

Any deviation in the above payment terms, any other conditions in Payment terms or any other payment terms will not be accepted.

7. LD clause & Risk purchase clause are applicable.

(Any deviations in the LD shall attract loading to the extent of relaxation sought to which it is not agreed by the bidder at offered value).

Single delivery schedule:

If the Supplier fails to deliver the P.O quantity within the period specified in the contract, then the Purchaser shall deduct liquidated damages, 0.5% of the total order value per week of delay or part thereof subject to a maximum of 10% of the total order value.

RISK PURCHASE: Alternatively the purchaser at his option will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or dispatch within the time stipulated as aforesaid or if the same were not available, the best and the nearest available substitutes therefor. The supplier shall be liable for any loss, which the purchaser may sustain by reason of such risk purchases in addition to penalty at the rate mentioned in LD clause above.

8. **GST:** For supplies after implementation of GST i.e. after 30.06.2017, the following conditions will apply and supplier shall fully comply to the below points.

Indigenous suppliers:

- a. Response to Tenders for Indigenous supplier will be entertained only if the vendor has a valid GST registration no which should clearly mentioned in the offer. If any specific exemption is available, a declaration with due supporting documents need to be furnished for considering the offer.
- b. Supplier shall mention their GSTN registration number in all their invoices and invoices shall be in the format as specified/prescribed under GST laws. Invoices shall necessarily contain Invoice number (in case of multiple numbering system is being followed for billing like SAP invoice no, commercial invoice no etc., then the Invoice No which is linked/uploaded in GSTN network shall be clearly indicated), item description as per PO, Quantity, Rate, Value, applicable taxes with nomenclature (like IGST, SGST, CGST & UTGST) separately, HSN/ SAC Code, etc.
- c. All invoices shall bear the HSN Code for each item separately (Harmonized System of Nomenclature)/ SAC code (Services Accounting Code).
- d. A declaration to the effect that all invoice particulars are/were uploaded in the GSTN network/ portal & all tax liability as per GST rules and regulations have been and will be discharged, shall be mentioned in the invoice. If not mentioned in the invoice, a separate declaration shall be submitted as per the requirement of BHEL.
- e. All documents like Mill Test Certificate, LR copy, Guarantee/Warranty certificate, work completion certificate, any other document mentioned in PO, shall be sent along with the vehicle/consignment. For all consignments received within the calendar month, input credit will be availed within that month in line with monthly returns filing cycle. In case of any discrepancy in the document or non-submission of documents mentioned in the PO, then BHEL will not be able to accept or account the material, in such case availing of tax credit will be deferred to next month or so.

- f. In case of discrepancy in the data uploaded by supplier in the GSTN portal or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit and will notify the supplier of the same. Supplier has to rectify the data discrepancy in the GSTN portal or issue credit note (details to be uploaded in GSTN portal) for the shortages or rejections in the suppliers, within the calendar month notified by BHEL.
 - g. For any such delay in availing of tax credit for reasons attributable to supplier (as mentioned above), interest (calculated @ SBI MCLR Rate + 6%) alongwith penalty if any will be deducted for the delayed period i.e. from the month of receipt till the month tax credit is availed, from the running bills.
 - h. Under GST regime, BHEL has to discharge GST liability on LD recovered from suppliers / contractors. Hence applicable GST shall also be recoverable from suppliers/contractors on LD amount. For this Debit note will be issued by BHEL indicating the respective supply invoice number.
- 9. PACKING AND MARKING:** The supplier shall arrange for securely protecting and packing the stores to avoid loss or damages during transit.

10. Special Provisions for Micro and Small Enterprises (MSE) bidders:

- Payment for MSE Indigenous vendors will be as per MSMED Act, 2006
- MSE sharing clause benefits will be applicable to MSE Manufacturers only and not for the Traders/ Dealers of Service Category - as per Office Memorandum circular of Micro, Small & Medium Enterprises, Clause – i, dt: 09.02.17.
- Declaration of Udyog Aadhar Memorandum (UAM) number by MSE bidder is mandatory to avail intended benefit available to MSEs as contained in Public Procurement Policy for MSEs Order, 2012 issued by MSME.
- Bidders fail to submit will be considered as non-MSE bidder.
- At least 25% of the tendered quantity is earmarked for MSE suppliers in this tender. If L1 offer is from a Micro / Small enterprise, this provision is not applicable.
- Out of the 25% tendered quantity reserved for MSE suppliers, 6.25% shall be earmarked for procurement from MSE owned by SC / ST entrepreneurs. In the event of failure of such Micro and Small enterprises to participate in the tender process or meet the tender requirements and the L1 price, the 6.25% sub-target for procurement ear-marked MSE owned by SC / ST entrepreneurs shall be met with other MSE enterprise/s.
- Minimum of 3% reservation for women owned MSEs within the above mentioned 25% reservation. In the event of failure of such Micro and Small enterprises to participate in the tender process or meet the tender requirements and the L1 price, the 3% sub-target for procurement ear-marked MSE owned by women entrepreneurs shall be met with other MSE enterprise/s. (The definition for MSEs owned by Women Entrepreneurs is clarified as:
 - i) In case of proprietary MSE, proprietor shall be woman.
 - ii) In case of partnership MSE, the women partners shall be holding at least 51% share in the unit.
 - iii) In case of private limited companies, at least 51% share shall be held by the women promoters.
- In the event of more than one vendor becoming L1 for any of the item, the enquiry quantity for the items will be shared equally among all the L1 vendors.
- MSE suppliers can avail the intended benefits only if they submit along with the offer, attested copies of either EM II certificate having deemed validity (five years from the date of issue in acknowledgement in EM II) or valid NSIC certificate or EM II certificate along with attested copy of a CA certificate (Format enclosed as per Annexure I where deemed validity of EM II certificate of five years have expired) applicable for the relevant financial year (latest audited). Date to be reckoned for determining the deemed validity will be the date of bid opening (Part 1 in case of two part bid). Non submission of such documents will lead to consideration of their bids at par with other bidders. No benefits shall be applicable for the enquiry if any deficiency in the above required documents is not submitted before the price bid opening. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal. Documents should be notarized or attested by a

Gazetted officer. This provision for MSE will apply subject to the condition that the participating MSE meets the tender requirements.

- In case of any change in the MSE status of the bidder, it shall be the responsibility of the bidder to notify the change as a part of the bid document. If at a later date it comes to the knowledge of BHEL, that the change in the status has not been intimated by the bidder and the order is obtained under the premise of an MSE then BHEL would cancel the pending order against this tender and take necessary steps for suspension of the business dealing with the bidder as per the procurement policy of BHEL.
- All supplier (new/old) will be eligible for registration/renewal with BHEL as MSE supplier and provided at least any one of the following documents are submitted along with tender documents
 - a) Valid NSIC Certificate (or)
 - b) Entrepreneurs Memorandum part II (EM II) certificate (valid based on deemed validity of 5 years) (or)
 - c) EM II certificate along with attest copy of CA certificate (as per prescribed format at Annexure-I) applicable for the relevant financial year (latest audited), where the deemed validity of EM II is over. However credential of all MSE suppliers will be verified before considering the intended benefits for MSE suppliers as per clause (i) at the time of tender evaluation.
 - d) Udyog Aadhar memorandum with Attested copy of latest audited CA certificate (relevant financial year as per prescribed format at Annexure-I).

11. Sharing of Quantity

- a. If L1 vendor is Non MSE and in case MSE vendor participating in the tender quotes within the price band of L1 + 15%, they will be allowed to supply the entire quantity of that item subject to acceptance of L1 price by MSE vendor.
- b. In case of counter offering rate has not been accepted by MSE vendors or L1 vendor is MSE, entire quantity will be ordered on L1 vendor.
- c. The quantities indicated in this tender are tentative annual requirement of BHEL. Order will be placed on actual requirement basis.

12. Conditional offers are likely to be rejected.

13. The correspondences between the bidder and BHEL through email are considered as valid document legally though not signed. It is treated as valid confirmations made on behalf of the respective company and comes under the legal ambit of the business transaction and hence binding on both the parties.

14. Disclaimer Clause: Neither the Organization (Bharat Heavy Electricals Ltd.) nor the service provider (M/s. e-Procurement Technologies limited.) is responsible for any failure of submission of bids due to failure of internet or other connectivity problems or reasons thereof.

15. Bidders participating in the tender should declare in their technical bid whether they have been black-listed / kept on hold / given Business holiday for a specified period by any Public Sector Undertaking or Government Departments. The reasons for such action with details and the current status of such hold shall be clearly furnished to BHEL. If no such details are mentioned in the offer, it will be construed that the bidder is not under any such hold. However, at a later date if it comes to the notice of BHEL about any such hold under enforcement, BHEL reserves the right to reject the offer at any point of time and also under any stage of the finalization of the tender. Such bidders will not be permitted to participate in the further tender proceedings and will be communicated suitably.

16. BHEL reserves the right to negotiate or re-float the enquiry opened if L1 price is not the lowest acceptable price to them inter-alia other reasons.

17. In case of any quality rejection of materials, the supplier has to collect the materials at his own cost within the 10 days of rejection of advice. Otherwise the materials will be scrapped

- 18.** Unloading at BHEL has to be done by the suppliers and BHEL will not be in a position to provide any handling / unloading facilities.
- 19.** Bidders not confirming to the enquiry specifications will be disqualified.
- 20.** If Guarantee / Warranty period is applicable as per tender specification, No deviation permitted and deviated offers are liable for rejection.
- 21.** IMPORTANT NOTE: BHEL WILL CONSIDER THE RANKING AFTER THE LOADING IS APPLIED AS REFERRED ABOVE WHEREVER DEVIATIONS ARE OBSERVED.
- 22.** No revision of prices will be entertained at any circumstances after tenders are opened.
- 23.** The Tender Due date falling on public holiday due to any circumstances, the tender will be opened on next working day.
- 24.** Vendors currently not register with BHEL Trichy & wish to participate to in this tender should furnish the following documentary proof / information along with technical bid.
- a) Copy of Registration certificate.
 - b) PAN Card (Copy to be submitted).
 - c) Banker's Information with copy of Bank Pass Book first Page.
 - d) MSE registration along with NSIC/SSI Certificate, (If applicable)
 - e) Complete postal address of the company with Pin Code.
 - f) Contact Person /s, Phone No, Mobile No, FAX No, Email ID etc.
 - g) Copy of statutory document – GST REGISTRATION.
 - h) Copy Purchase Order & Experience certification as proof of supply of similar item to any Govt. Agencies / PSU / Organizations.
 - i) Balance Sheet for last three financial years along with audit report is to be submitted.
 - j) Partnership Deed if applicable.
- 25.** For verification of data submitted towards evaluation of bidder's capability, BHEL may decide to visit the bidder(s) works. Any fact found deviating from submitted data shall make the bidder liable to be disqualified.
- 26.** Delivery goods/ items should be securely and suitably packed to avoid transit damages.
- 27.** The vendor should attach scanned copies of the following annexures duly filled in, sealed and signed by the vendor (Part-I).
- Annexure I (CA certificate).
 - Annexure A (Terms and conditions).
 - Annexure B (Commercial confirmation format).
- 28.** The commercial confirmation format (as per annexure B) should be submitted along with the technical bid, without fail. Terms and conditions to be confirmed /accepted/mentioned in your technical bid and the format (which we have mentioned in our enquiry as per annexure B) should be the same, without any variation/deviation. In case of variation/deviation between the technical bid and format, the details furnished in the format (as per annexure B) only are considered for evaluation.
- 29.** Any communication / clarification regarding the tender shall be sent to the following

E-mail: pgavictor@bhel.in
Phone no. 0431-2577645

Certificate by Chartered Accountant on letter head

This is to Certify that M/s ,
(herein-after referred to as 'company') having its registered office at
..... is registered under MSMED Act 2006, (Entrepreneur
Memorandum No (Part—II) dtd.....
Category:(Micro/Small)). (Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as per the
latest audited financial year as per MSMED Act 2006 is as follows:

- 1. For Manufacturing Enterprises:** Investment in plant and machinery (i.e. original cost
excluding land and building *and* the items specified by the Ministry of Small Scale Industries vide its
notification No.8.0.1722(E) dated October 5, 2006:

Rs.....Lacs

- 2. For Service Enterprises:** Investment in equipment (original cost excluding land and building and furniture,
fittings and other items not directly related to the service rendered or as may be notified under the MSMED Act, 2006:

Rs.....Lacs

(Strike off whichever is not applicable)

The above investment of RsLacs is within permissible limit of
Rs.Lacs forMicro / Small (**Strike off which is not applicable**)
Category under MSMED Act 2006.

Or

The company has been graduated from its original category (Micro/ Small) (**Strike off which Is not applicable**) and the date of graduation of such enterprise from its original category is
(dd/mm/yyyy) which Is within the period of 3 years from the date of graduation of such
enterprise from its original category as notified vide S.O. No. 3322(E) dated 01.11.2013
published in the gazette notification dated 04.11.2013 by Ministry of MSME.

Date:

(Signature)

Name -

Membership number -

Seal of Chartered Accountant

TECHNO COMMERCIAL BID
TO BE SUBMITTED ALONG WITH PART – I (TECHNO COMMERCIAL BID)

ANNEXURE –B

S. NO	DESCRIPTION	BHEL REQUIREMENTS	SUPPLIER CONFIRMATION / DEVIATION (STRIKEOUT WHICHEVER IS NOT APPLICABLE)
1	VALIDITY	90 DAYS FROM DATE OF TECHNICAL BID OPENING	NON DEVIATABLE
2	PRICE QUOTED	FOR-DESTINATION BHEL STORES / TRICHY	NON DEVIATABLE
3	LD CLAUSE	(For details please read S.No:07 of "Annexure – A")	NON DEVIATABLE
4	RISK PURCHASE CLAUSE	(For details please read S.No:07 of "Annexure – A")	NON DEVIATABLE
5	ACCEPTANCE FOR SUPPLYING MATERIALS AS PER PLANT STANDARD INDICATED FOR EACH ITEM		CONFIRM / NOT CONFIRM
6	DEIVERY SCHEDULE *	Delivery terms will be full quantity within 6 weeks from the date of PO.	CONFIRM / NOT CONFIRM
7	PREVIOUS EXERIENCE	Suppliers should enclose any one of the purchase order copy against their experience in supplying Non-Asbestos materials during past three years from Jan 2015.	ATTACHED / NOT ATTACHED
8	Whether the suppliers have been black listed by any PSU / Other units of BHEL.		BLACK LISTED / NOT BLACK LISTED
9	Offers from Manufacturers will be accepted, Offers from traders will summarily be rejected.		MANUFACTURER / TRADER
10	Suppliers should submit the test certificate from any approved lab and samples shall be identified by BHEL/TPI but final acceptance will be given on the basis of test conducted at BHEL Lab.		ACCEPTED / NOT ACCEPTED
11	CONTACT PERSON DETAILS	NAME: MOBILE NO: EMAIL :	

* Bidders are requested to adhere to BHEL Delivery schedule strictly.

SIGN AND SEAL OF AUTHORIZED PERSON

ANNEXURE - PQC

ENQ.NO:

	Material: NON ASBESTOS MATERIALS	
Sl.No	PRE QUALIFICATION CRITERIA —Points	Vendor to confirm
01	<i>Acceptance for supplying NON ASBESTOS MATERIALS as per standard indicated for Each item</i>	<i>ACCEPTED / NOT ACCEPTED</i>
02	<i>Bidders have to confirm whether they have been black-listed / kept on hold / given Business holiday for a specified period by any Public Sector Undertaking or Government Departments/any other units of BHEL. (With reference to S.No.15 of Annexure – A).</i>	<i>YES / NO</i>
03	<i>Offers from Manufacturers will only be accepted. Offers from traders will summarily be rejected.</i>	<i>Manufacturer / Trader</i>
04	<i>Suppliers should enclose any one of the purchase order copy against their experience in supplying Non-Asbestos materials during past three years from Jan 2014.</i>	<i>ENCLOSED / NOT ENCLOSED</i>

NOTE:

Offers meeting the above prequalification criteria points only will be evaluated further. Otherwise it will summarily be rejected.

SIGN AND SEAL OF AUTHORIZED PERSON



**PLANT PURCHASING
SPECIFICATION**
HPBP-TIRUCHIRAPPALLI

TP 23292
Rev. No. **02**
PAGE **1** OF **4**

NON ASBESTOS COMPRESSED FIBRE JOINTING SHEETS
(HIGH PRESSURE STEAM & WATER)

1. SCOPE

This specification governs the quality of non-asbestos compressed fibre jointing sheets for high pressure steam and water.

2. APPLICATION:

The supplied material shall be suitable for use in steam turbines, boilers, thermal insulation, packing & sealing purposes at maximum operating pressures of 14.0 N/mm² and temperature of 450 C.

3. DIMENSIONS AND TOLERANCES:

3.1. Dimensions: the material should be supplied to the dimensions specified on the order.

3.2. Thickness: the thickness of the sheets shall preferably be selected from the following,
0.40, 0.50, 0.75, 1.00, 1.50, 2.00, 3.00, 5.00 mm

3.3. Tolerance: Maximum permissible deviation on the nominal thickness of the sheets shall be as

Nominal thickness (mm)		Permissible deviation from nominal thickness $\pm$ mm	Max. Deviation between points not more than 250 mm apart, $\pm$ mm
Above	Up to & including		
-	0.50	0.05	0.05
0.50	1.00	0.10	0.10
1.00	2.00	0.15	0.10
2.00	3.00	0.20	0.15
3.00	5.00	0.20	0.15

4. MATERIAL

The material used for manufacturing this Non Asbestos Compressed Fibre Jointing Sheets is glass, ceramic or aramid fibre with suitable high temperature binder material.

Revisions 1. Requirement of withstanding Flue gas with 6% sulphur deleted. 2. Parameters and test revised as per discussion with MM.			Approved: STANDARDS SECTION ITS&S HPBP. TIRUCHIRAPPALLI		
Rev. No. 02	Amd. No.	Reaffirmed	Prepared:	Issued:	Dt. of 1 st issue
Dt. 15-09-16	Dt.	Dt.	STANDARDS	STANDARDS	21.02.2014



**PLANT PURCHASING
SPECIFICATION**
HPBP-TIRUCHIRAPPALLI

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5. FREEDOM FROM DEFECTS

- The sheets shall have uniform texture, smooth on both sides and free from irregularities such as blisters tears and lumps.
- The sheets shall have square and evenly cut edges and they shall be smooth flat, free from cracks, as well as foreign mechanical inclusions.
- The Non-Asbestos Compressed Fibre jointing sheets shall be of uniform thickness and suitable for easy shearing. The variations in thickness in one sheet should not exceed 10%.

6. TEST SAMPLE

Supplier shall supply a test sample to BHEL for acceptance before regular supplies.

7. PROPERTIES:

For Properties and Conditions refer TABLE-1 attached herewith.

Thickness(mm)	Material Code	**Weight/unit area(kg/m ²)
0.4	220300280000	-
0.5	220300290000	-
0.75	220300440000	-
1	220300310000	-
1.5	220300700000	2.85
2	220300300000	3.8
3	220300150000	5.7
5	220300020000	5.75

***weight indicated is approximate only. Vendor to provide actual weight per square meter.*

8. TYPE APPROVAL

Samples for the type approval shall be accepted only from those manufacturers whose manufacturing and testing facilities are considered satisfactory, to ensure continuous supply of good products.



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9. TEST CERTIFICATES.

Unless otherwise stated, three copies of the test certificate shall be supplied along with each consignment, giving the following information.

TP 23292-Rev No 01: Non-Asbestos Compressed Fibre Jointing Sheets for high pressure steam and water applications

BHEL Order No.
Manufacturer's /Supplier's Name
Trade mark , if any
Batch/ Lot No.
Date of manufacture
Quantity supplied
Test results of clause 3 and TABLE -1

10. PACKING AND MARKING

Unless otherwise stated, the material shall be supplied either flat or in rolls suitably packed to prevent damages during transit.

Manufacturer's name and grade shall be clearly marked on a piece of 300 x 300 mm cut from any position of the sheet.

Each package shall be legibly marked with following information,

TP 23292-Rev No 01: Non Asbestos Compressed Fibre Jointing Sheets for high pressure steam and water applications

BHEL Order No.
Manufacturer's /Supplier's Name
Trade mark , if any
Batch/ Lot No.
Date of manufacture
Quantity supplied



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TABLE – 1

SI No	Characteristic	Requirement	Method of Test
1	Material (preferable. Better material meeting physical properties may be used. But must be certified in TC)	Glass, ceramic or aramid fibre with suitable high temperature binder.	The supplier shall certify the product as asbestos free by doing the test methods like FT-IR, XRD, Microscopic or any other standard test methods.*
2	Density gm/CC	1.57 to 2.20	ASTM C1185 [#]
3	Tensile Strength a) 0.4 to 1.0 mm thick b) Above 1 mm thick	14 N/mm ² minimum	ASTM F 152 [#]
4	Compressibility %	6-14	ASTM F36 [#]
5	% Recovery	40 minimum	ASTM F36 [#]
6	Water Absorption - % increase in mass. Duration – 24 hrs	10 max.	ASTM C1185 [#]
7	Loss of ignition at 500 °C ± 5 °C. Duration – 1 hr	30 % max	ASTM F495 [#]
8	Flexibility Test (after accelerated ageing)	No sign of cracking	ASTM C1185/ASTM F147 [#]
9	Stress relaxation – residual Stress	23 N/mm ² minimum	ASTM 6147/BS 7531 [#]
10	Moisture content 105 °C ± 5°C	2 max	ASTM C1185 [#]

- * - Test Report shall be submitted by the vendor along with materials as a compliance certificate to confirm the material supplied is asbestos free.
- # - Standard Methods along with applicable test and acceptance standard applied at test centres shall be declared in TC. Other international standard testing methods are also valid.
- The compressibility, tensile strength of the fibre shall not be sacrificed due to use of non-asbestos material. Vendor may guarantee the above and these properties shall be certified by Vendor on Test Certificate.



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**NON ASBESTOS COMPRESSED FIBRE JOINTING SHEETS
(LOW PRESSURE STEAM AND WATER)**

1. SCOPE:

This specification covers the quality of Non asbestos compressed fibre jointing sheets for low pressure steam and water applications.

2. APPLICATION:

Suitable for use in boiler applications for thermal insulation, packing and sealing purposes up to a maximum operating pressure of 2.0 N/mm² and temperature of 350°C.

3. DIMENSIONS AND TOLERANCES:

3.1 Dimensions: The material shall be supplied to the dimensions specified on the order.

3.2 Thickness: The thickness of sheets shall preferably be selected from the following:
0.40, 0.50, 0.75, 1.00, 1.50, 2.00, 3.00 mm.

3.3 Tolerances: Maximum permissible deviation on nominal thickness of sheets shall be as follows:

Sl.No	Nominal Thickness (mm)		Permissible deviation from nominal thickness (±)mm	Max. deviation on thickness between points not more than 300mm apart (±) mm
	Above	Upto & Including		
1.	-	0.5	0.05	0.05
2.	0.5	1.0	0.10	0.10
3.	1.0	2.0	0.15	0.10
4.	2.0	3.0	0.20	0.15

4. MATERIAL:

The material used for manufacturing this Non Asbestos Compressed Fibre Jointing Sheets shall be glass, ceramic or aramid fibre with suitable binder material meeting the temperature requirement as specified under application.

Revisions

- Requirement of withstanding Flue gas with 6% sulphur deleted.
- Parameters and test revised as per discussion with MM.

Approved:

STANDARDS SECTION
ITS&S
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5. FREEDOM FROM DEFECTS:

The supplied sheets shall be of uniform texture, smooth on both sides without any crack and free from irregularities.

The sheets shall have square and evenly cut edges and they shall be smooth flat, free from cracks, as well as foreign mechanical inclusions.

The Non-Asbestos Compressed Fibre Jointing Sheets shall be of uniform thickness and suitable for easy shearing. The variations in thickness in one sheet should not exceed 10%.

6. TEST SAMPLE:

Supplier shall supply a test sample to BHEL for acceptance before regular supplies.

7. PROPERTIES:

For Properties and conditions refer TABLE-1 attached

Thickness(mm)	Material Code	**Weight/unit area(kg/m ²)
0.4	220300380000	-
0.5	220300390000	-
0.75	220300410000	-
1	220300420000	-
1.5	220300010000	2.9
2	220300200000	4.2
3	220300900000	6.3

***weight indicated is approximate only. Vendor to provide actual weight per square meter.*

8. TYPE APPROVAL:

Samples for type approval testing shall be accepted only from those manufacturers whose manufacturing and testing facilities are considered satisfactory, to ensure continuous supply of good product.



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9. TEST CERTIFICATES:

Unless otherwise stated, three original copies of the test certificate shall be supplied along with each consignment, giving the following information.

TP 23294-Rev.No.:01 Non asbestos compressed fibre jointing sheets for low pressure steam and water applications.

BHEL Order No.

Manufacturer's/Supplier's Name.

Trade Mark, if any.

Batch/Lot No.

Quantity supplied.

Test results of Clauses 3 and TABLE-1.

10. PACKING AND MARKING:

Unless otherwise stated, the material shall be supplied either flat or in rolls suitably packed to prevent damages during transit.

Manufacturer's name and grade shall be clearly marked on one corner of each sheet.

Each package shall be legibly marked with the following information:

TP 23294-Rev. No.01: Non asbestos compressed fibre jointing sheets for Low pressure steam and water applications.

BHEL Order No.

Manufacturer's/Supplier's Name.

Trade Mark, if any.

Batch/Lot No.

Date of manufacture.

Quantity supplied



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TABLE -1

SI No	Characteristic	Requirement	Method of Test
1	Material of the fibre jointing	Glass, ceramic or aramid fibre with suitable high temperature binder.	The supplier shall certify the product as asbestos free by doing the test methods like FT-IR, XRD, Microscopic or any other standard test methods.*
2	Density gm/CC	1.57 to 2.20	ASTM C1185 #
3	Tensile strength N/mm ²	6.7 min	ASTM F152 #
4	Compressibility %	6 to 14	ASTM F 36 #
5	Recovery %	40 min	ASTM F 36 #
6	Water Absorption- % increase in mass. Duration – 24 hrs	10 max	ASTM C1185 #
7	Loss on ignition at 400 °C ± 5 °C Duration – 1 hr	30% max	ASTM F495 #
8	Flexibility Test (after accelerated ageing)	No sign of crack	ASTM C1185/ASTM F147 #
9	Stress relaxation – residual Stress	15 N/mm ² minimum	ASTM 6147/BS 7531 #
10	Moisture content 105 °C ± 5°C	2 max	ASTM C1185 #

- * - Test Report shall be submitted by the vendor along with materials as a compliance certificate to confirm the material supplied is asbestos free.
- # - Standard Methods along with applicable test and acceptance standard applied at test centres shall be declared in TC. Other international standard testing methods are also valid.
- The compressibility, tensile strength of the fibre shall not be sacrificed due to use of non-asbestos material. Vendor may guarantee the above and these properties shall be certified by Vendor on Test Certificate.



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CERAMIC FIBRE MILL BOARD

1. SCOPE

This standard covers asbestos free ceramic fibre mill board used as fire proof thermal insulating material.

2. MATERIAL

The material used for manufacturing this mill board is ceramic fibre base with suitable high temperature binder.

The mill board shall have uniform texture, smooth on both sides and free from irregularities such as blisters tears and lumps.

The mill board shall have square and evenly cut edges and they shall be smooth flat, free from cracks, as well as foreign mechanical inclusions.

The mill board should withstand the required temperature of steam or the flue gases of coal fired boilers containing 6% sulphur.

3. APPLICATION

Ceramic fibre mill board used as fire proof thermal insulating material.

4. TECHNICAL REQUIREMENTS

Properties and conditions refer table 1.

The ceramic fibre mill board shall be of uniform thickness and suitable for easy shearing. The variations in thickness in one sheet should not exceed 10%.

Tolerance on the size and thickness shall be as

On size : ± 10 mm

On thickness

Upto and including 2 mm : ± 0.2 mm

Above 2 mm : ± 0.3 mm

Revisions

- Description changed from silicon fibre to ceramic fibre.
- Parameters and test revised as per discussion with MM.

Approved:

STANDARDS SECTION
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Thickness of mill board	Material code	**Weight kg/sq.m
5	220300600000	4.875
10	220300060000	9.750
25	220300070000	24.375

***weight indicated is approximate only. Vendor to provide actual weight per meter length.*

5. DESIGNATION

Ceramic fibre mill board thickness 10 mm, according to this specification shall be designated on drawings as:

- i. Material specification column : 220300060000
- ii. Description column : Ceramic fibre mill-board 10 mm.
- iii. drawing number column : **TP 23296**

6. ORDERING DESCRIPTION

For placing indents, issuing enquiries and on purchase order, for 1 meter length and width, the ordering description given below shall be followed:

ASBESTOS FREE MILL BOARD 10 mm THICK, 1 m X 1 m,
As per BHEL STANDARD **TP 23296**

7. ADDITIONAL INFORMATION

- i. Copies of this standard shall be enclosed along with purchase order.

8. FINISH

The millboards shall have uniform texture, smooth on both sides and free from irregularities such as blisters, tears and lumps.

* The FT-IR report shall contain the following.

- A) Spectral Range
- B) Resolution
- C) Finger print

** Standard methods along with applicable tests and acceptance standard applied at test canters shall be declared in TC.



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TABLE -1

1	Material (preferable. Better material meeting physical properties may be used. But must be certified in TC)	Ceramic fibre base with suitable high temperature binder.	The supplier shall certify the product as asbestos free by doing the test methods like FT-IR, XRD, Microscopic or any other standard test methods.*
2	Density (gm/cc)	0.5 to 1	ASTM C1185 #
3	Moisture at 105°C ± 5 °C	2 max	ASTM C1185 #
4	Loss on ignition at 550°C ±5°C after exposure for 30 minutes	20% max	ASTM F495 #
5	Continuous service temperature	450 °C	-----
6	Maximum resistance temperature	500 °C	-----
7	pH of water extract	7 to 8.5	Standard Method #
8	Chloride content of water extract ppm	200max	Standard Method #
9	Sulphur content of water extract ppm	50max	Standard Method #
10	Longitudinal tensile strength N/mm ²	10 (max)	ASTM F152 #
	Transverse tensile strength N/mm ²	9 (max)	ASTM F152 #
11	Shore hardness(A)	55 to 65	Standard Method #
12	Thermal conductivity at 800 °C (W/m °C)	0.17	ASTM F433 #
13	Linear shrinkage % (max)	3	Standard Method #

- * - Test Report shall be submitted by the vendor along with materials as a compliance certificate to confirm the material supplied is asbestos free.
- # - Standard Methods along with applicable test and acceptance standard applied at test centres shall be declared in TC. Other international standard testing methods are also valid.
- The compressibility, tensile strength of the fibre shall not be sacrificed due to use of non-asbestos material. Vendor may guarantee the above and these properties shall be certified by Vendor on Test Certificate.



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CERAMIC FIBRE GLAND PACKINGS
(Excluding those for Corrosive Acid Services)

1. SCOPE

1.1 This specification covers free ceramic fibre gland packing.

2. APPLICATION

2.1 Suitable for flanged joints of ducts and fans for leakage prevention, valves, expansions provisions for refractory, thermal insulation, furnace joints, air heaters and doors in boiler

3. DIMENSIONS & SIZES :

Dimensions and sizes shall be as per table-1 of this standard. For technical parameters, refer to Table-2.

4. DESIGNATION :

Carbon Fibre / Ceramic Fibre gland packing of sizes 10 mm, square shape shall be designated as :

ON DRAWING :

- | | |
|--------------------------|-------------------------|
| 1. Description column | : Packing Rope SQ 10 mm |
| 2. Drawing number column | : TP 23299 |
| 3. Material code column | : 220300400000 |

4.1 Ordering description

For placing indents, issuing enquiries and on purchase order, the ordering description given below shall be followed.

Gland Packing carbon fibre/ceramic fibre, 6 mm round.

5. SAMPLING AND ACCEPTANCE

5.1 The density of packing rope shall be provided by vendor/supplier and shall be determined in dry condition.

6. ADDITIONAL INFORMATION.

6.1 For procurement purpose, this standard shall be enclosed along with purchase order.

Revisions 1. Lubrication requirements specified in table-2 (Sl. No.9 & 10) deleted & Sl. No. re-numbered. 2. Parameters and test revised as per discussion with MM. 40 mm SQ rope added.			Approved: STANDARDS SECTION ITS&S HPBP, TIRUCHIRAPPALLI		
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TABLE-1

SHAPE	SIZE	MATERIAL CODE	**WEIGHT (KG) PER METRE LENGTH
Round	10	220300400000	0.08
Square	6	220300160000	0.03
	8	220300170000	0.06
	10	220300030000	0.09
	12	220300050000	0.14
	15	220300080000	0.22
	20	220300040000	0.38
	40	220300460000	1.54

****** - Weight indicated is approximate only. Vendor to provide actual weight per meter length.



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Table-2 (Technical parameters)

1	Material of the Gland Packings	Glass ply or Ceramic fibre	The supplier shall certify the product as asbestos free by doing the test methods like FT-IR, XRD, Microscopic or any other standard test methods.*
2	Density gm/cc (in Dry condition)	The density shall be indicated by vendor / supplier	ASTM C1185 #
3	Chloride content max	50 ppm	Standard Method #
4	Sulphur content max	50 ppm	Standard Method #
5	Temperature resistance	450 °C Min	----
6	Continuous service temperature	400 °C	----
7	Loss on ignition at 500 °C $\pm$ 5 °C for 30 minutes by mass %	To be specified by the supplier	ASTM F495 #
8	Moisture content at 105 °C $\pm$ 5 °C % by mass	2 max	ASTM C1185 #
9	The wire Dia of the reinforcement	0.15 to 0.2 mm	----
10	Reinforcement wire	Inconel/SS 304 Grade	----

- * - Test Report shall be submitted by the vendor along with materials as a compliance certificate to confirm the material supplied is asbestos free.
- # - Standard Methods along with applicable test and acceptance standard applied at test centres shall be declared in TC. Other international standard testing methods are also valid.
- The compressibility, tensile strength of the fibre shall not be sacrificed due to use of non-asbestos material. Vendor may guarantee the above and these properties shall be certified by Vendor on Test Certificate.

A. Finish: The Gland packing shall be smooth and it shall not have torn-out threads.

B .The compressibility, tensile strength of fiber shall not be sacrificed due to use of non-asbestos material. Vendor to guarantee the above and these properties shall be certified by Vendor on Test Certificate