



Ref. Enquiry No.: PE/PG/RTC/E-5647/2017

Dated: 14/06/2017

TENDER ENQUIRY THROUGH E-PROCUREMENT

DUE DATE
24/06/2017
BY 1400 HRS

SUBJECT: TENDER ENQUIRY FOR RATE CONTRACT OF FIRE SEALING SYSTEM AS PER TECHNICAL SPECIFICATION NO. PE-RC-999-507-E016

OUR REF: TENDER ENQUIRY NO: PE/PG/RTC/E-5647/2017, DTD-13/06/2017

Dear Sir/ Ma'am,

We are pleased to invite your offer for subject package in two parts strictly as per Clause-2.0 of the enclosed "Instructions to Bidders" of the General Conditions of Contract (GCC) Rev-06 available at following link:- <http://www.bhelpem.com/Documents/GCC/GCC-Rev-06.pdf>. Please upload your best quotation/ offer on <https://bheleps.buyjunction.in> for the requirement strictly as per schedule of price format before above mentioned due date & time. The details of the tender enquiry are as mentioned below:

Sl. No	Description for which Rate Contract is desired	Tentative Quantity	Delivery required
1	<u>FIRE SEALING SYSTEM -</u> Refer Technical specification no PE-RC-999-507-E016 for detailed description.	As per BOQ cum price schedule (in Annexure-I) cumulative for the Prospective Projects (Annexure-III)	Supply: - "Four (04) months from drgs. /docs. approval in CAT-I issued by BHEL. Successful bidder to make 1st submission of drawing/docs as per list mentioned in Cl No. 4.3 of Technical Specification-PE-RC-999-507-E016 within 2 weeks from the date of P.O./LOA. Vendor to re-submit documents within 10 days, taking care of all the comments of BHEL. Any deficiency in documents submitted w.r.t. agreed specification/ comments from BHEL shall be treated as non-submission and no. of days delay in submission of complete documents during approval process, on account of this, would be reduced from the delivery. The vendor shall be responsible for getting approval from BHEL as early as possible and BHEL will support the process, in full, within above time frame and terms & conditions". E&C: - Vendor shall depute their personnel within 15 days of intimation of BHEL.

Your best quotation/offer for the above requirement, in line with our terms and conditions, should be submitted online via e-procurement system. It shall be the responsibility of the bidder to ensure that the Tender is submitted on or before the due date by 2 p.m. Part-I bids shall be opened at 3 p.m. on the due date in the presence of authorized representatives of the bidders, who may like to be present.

KUNAL GANDHI
SR ENGR/CMM
BHEL/PS-PEM
POWER PROJECT ENGINEERING INSTITUTE,
PLOT NO. 25, SECTOR - 16A, NOIDA (UP)
(OFF) 0120-4368574, 9650183377

Regd. Office:
BHEL House
Siri Fort
New Delhi-110049



Ref. Enquiry No.: PE/PG/RTC/E-5647/2017

Dated: 14/06/2017

TENDER ENQUIRY THROUGH E-PROCUREMENT

DUE DATE
24/06/2017
BY 1400 HRS

Note: -

- 1. Documents and Credential as per Technical PQR, Techno Commercial Bids and Price Bids should be uploaded on the e-procurement portal.**
- 2. Evaluation will be done on overall L1 (Total cost to BHEL) basis with necessary loading as applicable. Incomplete offer or offer for part of NIT BOM/BOQ shall be summarily rejected.**

Please refer GCC Rev-06 which is available on www.bhhelpem.com. You are requested to kindly download the same.

- 1. Rate contract on firm price basis is proposed for 2 years from placement of Rate Contract PO with a provision for further extension after review on mutual consent.**

Rate Contract is proposed to be done with 2 vendors in ratio of 60: 40, value wise at L1 FOR site price for subject package (% of splitting of RC between 2 vendors may be changed during ordering process, if L1 bidder is not customer approved); however, order for a project (only for the BOQ required as per specific project requirement) shall not be split and will be placed on single vendor.

Evaluation will be done on overall L1 (Total cost to BHEL) basis with necessary loading as applicable.

- 2. Prices shall be firm.**
- 3. Bidders to note the following: -**
 - a) Rate contract shall be decided on the basis of grand Total FOR site price of Total BOQ as listed in price format [Annexure-I].**
 - b) Though evaluation is proposed on Grand Total FOR site, but there is % allocation weightage against BOQ quantity of each item which shall be used for arriving at price break up. Bidders need to give only their total Ex Works price for given BOQ at Row 37-38 Column F-G for Indian supplier in Price Format [Annexure I].**
 - c) Bidders also requires to mention % of taxes/ duties (against respective column for ED, CST & Service Tax) applicable for each item of the BOQ.**
 - d) Bidder to include freight charges in the Ex-works price for delivering the package anywhere in India.**
 - e) Rest of the prices shall be derived by BHEL in line with % allocation fixed for each item.**
 - f) For better clarity to the bidders where value is to be filled is noted as “to be quoted” and for other columns it will be noted as “derived” which denotes shall be derived by BHEL as per % allocation fixed against each item.**
 - g) All the columns to be filled by supplier have been highlighted in yellow. Bidders do not need to write anything on the remaining columns. The bidders need to mention the word “QUOTED” in the unpriced format wherever the words “To be quoted” have been mentioned in the highlighted section of the price format. Further, in the Price format, bidders need to mention their Ex-Works price (total) and percentage of ED, CST and Service Tax as applicable.**



Ref. Enquiry No.: PE/PG/RTC/E-5647/2017

Dated: 14/06/2017

TENDER ENQUIRY THROUGH E-PROCUREMENT

DUE DATE
24/06/2017
BY 1400 HRS

- L1 rates shall be counter offered to vendors (L2, L3 & so on) in succession. If none accepts L1 rates, RC shall be done with L1 vendor for 100 % value. Vendors shall be asked to quote prices with CST against form C and same state ordering shall not be done to save VAT.
- Vendor shall be informed that evaluation shall be done on CST basis, however in case, the entire business volume goes to one vendor (or volume of business shared between the vendors in line with enquiry) having manufacturing facility in the same state, then BHEL may do suitable amendment in PO on case to case basis for taking care the provision of VAT in case of project falling in the same State where manufacturing factory of the vendor is also located.

TERMS AND CONDITIONS

- Procurement of the subject package shall be done through e-procurement.
- Enquiry No., due date etc. must be legibly super scribed on the offers as per clause no. 2.0 of "Instructions to Bidders" of the General Conditions of Contract (GCC) Rev-06.
- Offers should be uploaded in two parts online at <https://bheleps.buyjunction.in> as follows:
 - Part-I Bid:** - Documents and Credential as per Technical PQR mentioned at Annexure-IV and Techno-Commercial offer (along with un-priced copy of un-priced bid and un-priced schedule of Technical-Commercial Deviation, Annexure I & VI). *For filling up of Un-priced bid, refer Instructions mentioned in Cl. No. 3 at Page 2 of NIT.*
 - Part II Bid:** - Price Bid. *For filling up of Un-priced bid, refer Instructions mentioned in Cl. No. 3 at Page 2 of NIT.*
- Terms and conditions: -
 - Part I bid will be opened on date & time mentioned in the NIT or subsequent corrigenda/amendments, if any.
 - Techno-commercial offer of only those bidders shall be evaluated who will meet the Technical pre-qualifying requirement of the tender.**
- Vendors shall quote in accordance with the requirements mentioned in the tender documents. In case of deviations (Technical/ Commercial), the same shall be highlighted separately giving Clause references along with the Cost of withdrawal of Deviations as per **Annexure-II to GCC Rev 06 of "DEVIATION SHEET (COST OF WITHDRAWAL)"** along with reasons for taking such deviations.
However, it may be noted that part bids/ incomplete offers may be rejected.
Bidder to note all the points mentioned in "Notes" of Annexure-II to GCC Rev 06.
- Please note the following:**
 - Price format is enclosed for compliance. (Annexure-I)**
 - SCC enclosed for compliance. (Annexure-II)**
 - GCC enclosed for compliance.****GCC Rev-06 is available at <http://www.bhelpem.com/Documents/GCC/GCC-Rev-06.pdf>. You are requested to kindly download the same.**



Ref. Enquiry No.: PE/PG/RTC/E-5647/2017

Dated: 14/06/2017

TENDER ENQUIRY THROUGH E-PROCUREMENT

DUE DATE
24/06/2017
BY 1400 HRS

7. Tenders shall be submitted strictly in accordance with the requirements of the above tender documents.
8. Standard pre-printed terms & conditions of the tenderers shall not be considered valid.
9. Validity of offer shall be as per **Clause No. 7.0, "Instructions to Bidders" of GCC Rev 06.**
10. Unsolicited fresh/revised Price Bids shall not be entertained.
11. Purchaser shall be under no obligation to accept the lowest or any other tender and shall be entitled to accept or reject any/all tender(s) in part or full without assigning any reason whatsoever.
12. Late tenders will be rejected.
13. Tenders and all correspondence thereof, shall be addressed to the undersigned by name & designation and sent at the following address:

Mr. KUNAL GANDHI, Sr. Engr./CMM
M/s Bharat Heavy Electricals Ltd.,
Project Engineering Management,
Power Project Engineering Institute,
HRD & ESI Complex,
Plot No 25, Sector-16 A, Noida-201301
Kind Attn: KUNAL GANDHI/ CMM
E-MAIL: kunalgandhi@bhelpem.co.in
Ph. No. 0120-4368574/ 9650183377

Mr. I P SINGH, SR MANAGER, CMM
M/s Bharat Heavy Electricals Ltd.,
Project Engineering Management,
Power Project Engineering Institute,
HRD & ESI Complex,
Plot No 25, Sector-16 A, Noida-201301
Kind Attn: I P SINGH/ CMM
E-MAIL: indra@bhelpem.co.in
Ph. No. 0120- 4218749, 09818989654

14. **PRE-QUALIFICATION REQUIREMENT: -**
Bidders is requested to submit the documents satisfying the "TECHNICAL PRE-QUALIFYING REQUIREMENT" as per the conditions mentioned in the PQR.
Bids of only those bidders shall be evaluated who meet the Technical pre-qualifying requirements (if applicable).
Pre-qualifying requirement for the same is attached as Annexure-IV.
15. Bidders to note that their bid shall be conditional subject to qualify PQR by registered vendors & non-registered vendors have to qualify PQR & get registered with PEM for the package.
For registration in PEM "Bidders needs to apply & get registered for subject package with PEM before P-2 (price bid opening) & hence you need to apply online for registration on PEM web portal & have to enclose acknowledgement with this effect with the bid documents else your bid will not be considered for evaluation".
16. Limit on quantity variation shall be plus 30% of Contract Value (Ex Works) till validity of Rate Contract. The Purchaser shall have the right to increase or decrease quantities and scope up to the above extent of value and Seller/ Contractor shall be bound to accept the same at the contracted prices without any escalation.

KUNAL GANDHI
SR ENGR/CMM
BHEL/PS-PEM
POWER PROJECT ENGINEERING INSTITUTE,
PLOT NO. 25, SECTOR - 16A, NOIDA (UP)
(OFF) 0120-4368574, 9650183377

Regd. Office:
BHEL House
Siri Fort
New Delhi-110049



Ref. Enquiry No.: PE/PG/RTC/E-5647/2017

Dated: 14/06/2017

TENDER ENQUIRY THROUGH E-PROCUREMENT

DUE DATE
24/06/2017
BY 1400 HRS

17. Project list is indicative only, BHEL may ask for delivery anywhere in India for any of the project added in the prospective project/ existing projects during RC period.
18. Bidder has to submit "NO DEVIATION CERTIFICATE FOR COMMERCIAL TERMS AND CONDITIONS AS PER GCC (06), SCC AND NIT". In case of deviations, bidder to clearly mention the same with their techno-commercial offer as per Point No-5 of Terms and Conditions at Page 3 of NIT.
19. For E&C: -
a) Vendor shall depute their personnel within 15 days of intimation of BHEL.
b) Failure to meet Cl. No. a) above may lead to levying of LD @0.5% per week or part thereof of the total contract value for supervision of that project limited to 10% of the total supervision value.
20. All the above Tender Documents shall automatically become a part of the Order/Contract after its finalization.
21. **The offers of the bidders who are on the banned list as also the offer of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL website www.bhel.com.**
22. **"The 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."**
BHEL Fraud prevention policy is also uploaded in vendor's section on www.bhelpem.com.
23. **Bidders are requested to visit constantly our website to update them self for any technical or commercial change in the NIT.**
24. **All corrigenda, addenda, amendments, time extensions, clarifications etc. to the tender will be hosted on BHEL websites only (www.bhelpem.com, www.bhel.com & <https://bheleps.buyjunction.in>) under subject tender reference. Bidders are requested to visit our websites from time to time to keep themselves updated. **Bidders may go through the Sellers' manual & Help documents provided on E-Procurement Portal website & obtain required Digital Signature Certificate for participating in the subject Tender. For Bidders' convenience, the Helpdesk Nos. of E-Procurement Portal m-junction are also listed below:****

MJUNCTION HELPDESK Nos. 033-6601 1717, 9163348283 / 9163348284 / 9163348285 / 9163348286 / 8584008116 / 8584008205, eps.customercare@mjunction.in

CRM Contact Details:

Mr. Santosh Kumar - Cell No. 09717149600, santosh.kumar@mjunction.in

KUNAL GANDHI
SR ENGR/CMM
BHEL/PS-PEM
POWER PROJECT ENGINEERING INSTITUTE,
PLOT NO. 25, SECTOR - 16A, NOIDA (UP)
(OFF) 0120-4368574, 9650183377

Regd. Office:
BHEL House
Siri Fort
New Delhi-110049



Ref. Enquiry No.: PE/PG/RTC/E-5647/2017

Dated: 14/06/2017

TENDER ENQUIRY THROUGH E-PROCUREMENT

DUE DATE
24/06/2017
BY 1400 HRS

Ms. Rimi Ghosh – Cell No 09650044156, rimi.ghosh@mjunction.in

25. **CIF allocation is not applicable for this tender. Bidder to quote accordingly.**
26. Bidders to submit their offers strictly in line with the enclosed price format.
27. Inspection shall be done by BHEL/ END CUSTOMER/Third party Agency (finalized by BHEL).
28. Any other taxes & duties applicable on the date of bid but not quoted by the bidders shall be to bidder account.
29. Delivery terms for dispatches shall be FOR Dispatch Station.
30. This enquiry is subject to Conditions/ limits if any imposed in PMD / Vendor registration.
31. Bidders participating through open tender will necessarily have to but class III DSCs issued by the certifying authorities in India. Basic procedure/ checklist is uploaded on www.bhel.com.
32. Non- registered bidder to submit the credentials required for Registration in BHEL PEM: -
“Online Registration Portal is operational in BHEL. Non-registered Vendors, who wish to apply for registration with BHEL-PEM, have to apply through Online Registration Portal available at www.bhelpem.com - vendor section - Online Supplier Registration. All credentials and/or documents duly signed and stamped related to registration has to be uploaded on the website and submit the application for registration. One set of hard copy of the filled-up SRF downloaded from Online Registration Portal duly signed and stamped has to be submitted.”
33. Purchaser reserves the right to split up the scope of the tender enquiry and place the orders for different scope/ items with different bidders and also increase or decrease the quantity.
34. BHEL reserves the right to go for Reverse Auction (RA) (Guidelines as available on www.bhel.com) instead of opening the sealed envelope price bid, submitted by the bidder. This will be decided after techno-commercial evaluation. Bidders to give their acceptance with the offer for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids, in case BHEL decides to go for RA.
Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit ‘Process compliance form’ (to the designated service provider) as well as ‘Online sealed bid’ in the Reverse Auction. Non-submission of ‘Process compliance form’ or ‘Online sealed bid’ by the agreed bidder(s) will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines for suspension of business dealings with suppliers/ contractors (as available on www.bhel.com).

KUNAL GANDHI
SR ENGR/CMM
BHEL/PS-PEM
POWER PROJECT ENGINEERING INSTITUTE,
PLOT NO. 25, SECTOR - 16A, NOIDA (UP)
(OFF) 0120-4368574, 9650183377

Regd. Office:
BHEL House
Siri Fort
New Delhi-110049



Ref. Enquiry No.: PE/PG/RTC/E-5647/2017

Dated: 14/06/2017

TENDER ENQUIRY THROUGH E-PROCUREMENT

DUE DATE
24/06/2017
BY 1400 HRS

The bidders have to necessarily submit online sealed bid less than or equal to their envelope sealed price bid already submitted to BHEL along with the offer. The envelope sealed price bid of successful L1 bidder in RA, if conducted, shall also be opened after RA and the order will be placed on lower of the two bids (RA closing price & envelope sealed price) thus obtained. The bidder having submitted this offer specifically agrees to this condition and undertakes to execute the contract on thus awarded rates.

If it is found that L1 bidder has quoted higher in online sealed bid in comparison to envelope sealed bid for any item(s), the bidder will be issued a warning letter to this effect. However, if the same bidder again defaults on this count in any subsequent tender in the unit, it will be considered as fraud and will invite action by BHEL as per extant guidelines for suspension of business dealings with suppliers/ contractors (as available on www.bhel.com)."

As a reminder to the bidders, system will flash following message (in RED Color) during the course of 'online sealed bid':

"Bidders to submit online sealed bid less than or equal to their envelope sealed bid already submitted to BHEL"

Detailed guidelines of reverse auction 2016 are available in "information section" of www.bhelpem.com, same are applicable for subject tender.

The Bidders has to quote the Single Price (i.e. Total Cost to BHEL) in Reverse Auction. Price are to be inclusive of Packing & Forwarding charges, all the routine & type tests as per tender scope, ED + cess, CST against C-form/VAT, Freight as applicable, insurance charges, etc. including loading (if any). De-loading (if any) shall be done in line with SCC.

Statutory variation shall be applicable. Any new tax structure (like Goods & Services Tax) as and when implemented by the Government shall become applicable in addition to or in lieu of existing tax structure.

Note: - Applicable taxes & duties shall be determined as per location of works of bidder".

IMPORTANT INSTRUCTION TO BIDDERS IN CASE OF REVERSE AUCTION

The Bidders has to quote the Single Price (i.e. Total Cost to BHEL) in Reverse Auction i. e Price mentioned in Row 37-38 Column F-G with loading/de loading (if any). Price are to be inclusive of Packing & Forwarding charges, all the routine & type tests as per tender scope, ED + cess, CST against C-form/VAT, Freight as applicable, including loading (if any). De-loading (if any) shall be done in line with NIT terms.

Following Condition in Reverse Auction shall be treated as follows:

Case-I (Taxes & duties and freight are identical in Reverse Auction & Conventional Price Bid)

Resolution: - Ordering shall be done on lower of the two bids (RA closing price & Conventional Price Bid). After successful completion of reverse auction L1 bidder shall be asked to submit break up in line with taxes & duties, freight quoted in their Conventional Price Bid.

Case-II (In case Bidder has quoted 'CST' in Conventional Price Bid and applicable Tax is 'VAT')

Resolution: - "Total Cost to BHEL shall be maintained by reducing proportion amount in Ex-works quoted by Bidder".

KUNAL GANDHI
SR ENGR/CMM
BHEL/PS-PEM
POWER PROJECT ENGINEERING INSTITUTE,
PLOT NO. 25, SECTOR - 16A, NOIDA (UP)
(OFF) 0120-4368574, 9650183377

Regd. Office:
BHEL House
Siri Fort
New Delhi-110049



Ref. Enquiry No.: PE/PG/RTC/E-5647/2017

Dated: 14/06/2017

TENDER ENQUIRY THROUGH E-PROCUREMENT

DUE DATE
24/06/2017
BY 1400 HRS

Case-III (In case Bidder has quoted 'VAT' in Conventional Price Bid and applicable Tax is 'CST')

Resolution: - Conventional Bid/RA quoted Prices shall be reduced and CST will be allowed.

Statutory variation shall be applicable.

Any new tax structure (like Goods & Services Tax) as and when implemented by the Government shall become applicable in addition to or in lieu of existing tax structure.

Note: - Applicable taxes & duties shall be determined as per location of works of bidder.

Kindly consider the same while quoting the tender.

35. L1 bidder will have to submit Bank Guarantee for each POs (irrespective of value) which will be placed under the Rate Contract finalised through this tender considering RA as original contract as per format mentioned in Annexure VI to NIT instead of format mentioned in GCC Rev 06.

The PBG Format has been attached as Annexure-VI-B.

36. Bidder to note that all other terms and condition shall be strictly as per NIT, GCC Rev. 06 & SCC. In the event of any contradiction in the terms and conditions mentioned, the order of preference shall be NIT (this letter) / SCC / GCC Rev. 06.

37. "If any bidder uploads price bid in the unpriced section (techno-commercial attachment page) of the tender in e-procurement, in that case bidder(s) shall only be responsible for such mistake and any consequences thereof. Hence all bidders are requested to be more careful at the time of uploading the Unpriced and Price Bid for Part-I and Part-II respectively to avoid mismatch".

Note: Tenderer must submit UN-PRICED Price format duly filled mentioning the word "QUOTED" in place of actual price given in sealed price bid.

Thanking you,

Yours faithfully,

For and on behalf of BHEL

(Signature of official with Name & Designation)

Enclosures:

- NIT (this letter itself)
- Annexure-I: Price Format
- Annexure-II: Special Conditions of Rate Contract (SCC).
- Annexure-III: List of prospective projects
- Annexure-IV: PQR (Pre-qualifying Requirement)
- Annexure-V: Technical Specification No. PE-TS-20-145-I916
- Annexure-VIA Cost of Withdrawal sheet (Annexure-II of GCC Rev. 06)
- Annexure-VIB PBG Format

KUNAL GANDHI
SR ENGR/CMM
BHEL/PS-PEM
POWER PROJECT ENGINEERING INSTITUTE,
PLOT NO. 25, SECTOR - 16A, NOIDA (UP)
(OFF) 0120-4368574, 9650183377

Regd. Office:
BHEL House
Siri Fort
New Delhi-110049

BOQ-CUM PRICE SCHEDULE												
FIRE SEALING SYSTEM												

S. No.	Item Code	Item Description	Unit of Measurement	Quantity required	% weightage of Total quantity of Item	Total price of Item= Total Ex-Works {X} *Column F	Unit price of item =Column G/Column E	ED (Including cess) (Rs.) (%)	CST against from C and form E (%)	Service Tax	FREIGHT CHARGES in % of Ex-works (Including Service Tax) (Rs.)	TOTAL F.O.R. SITE PRICE (Rs.)
A. MAIN SUPPLY												
1	507-26037-A	FSS-TYPE B FLOOR OPENINGS BELOW PANELS-1 hour	SQM	2900	0.1827	Derived	Derived	% TO BE QUOTED	% TO BE QUOTED		% TO BE QUOTED	Derived
2	507-26038-A	FSS-TYPE B FLOOR OPENINGS BELOW PANELS-2 hour	SQM	3400	0.215	Derived	Derived	% TO BE QUOTED	% TO BE QUOTED			Derived
3	507-26039-A	FSS-TYPE B FLOOR OPENINGS BELOW PANELS-3 hour	SQM	1200	0.076	Derived	Derived	% TO BE QUOTED	% TO BE QUOTED			Derived
4	507-26034-A	FSS-TYPE B FLOOR OPENINGS-1 hour	SQM	400	0.026	Derived	Derived	% TO BE QUOTED	% TO BE QUOTED			Derived
5	507-26035-A	FSS-TYPE B FLOOR OPENINGS-2 hour	SQM	800	0.051	Derived	Derived	% TO BE QUOTED	% TO BE QUOTED			Derived
6	507-26036-A	FSS-TYPE B FLOOR OPENINGS-3 hour	SQM	420	0.0263	Derived	Derived	% TO BE QUOTED	% TO BE QUOTED			Derived
7	507-26040-A	FSS-TYPE B WALL OPENINGS-1 hour	SQM	450	0.03	Derived	Derived	% TO BE QUOTED	% TO BE QUOTED			Derived
8	507-26041-A	FSS-TYPE B WALL OPENINGS-2 hour	SQM	600	0.04	Derived	Derived	% TO BE QUOTED	% TO BE QUOTED			Derived
9	507-26042-A	FSS-TYPE B WALL OPENINGS-3 hour	SQM	200	0.013	Derived	Derived	% TO BE QUOTED	% TO BE QUOTED			Derived
10	507-26046-A	PIPE SLEEVES-200 nb-1 hour	No.	1200	0.005	Derived	Derived	% TO BE QUOTED	% TO BE QUOTED			Derived
11	507-26047-A	PIPE SLEEVES-200 nb-2 hour	No.	2000	0.008	Derived	Derived	% TO BE QUOTED	% TO BE QUOTED			Derived
12	507-26048-A	PIPE SLEEVES-200 nb-3 hour	No.	300	0.002	Derived	Derived	% TO BE QUOTED	% TO BE QUOTED			Derived
13	507-26055-A	COATING ON CABLE LAID ON CABLE TRAYS-40 min	SQM	9600	0.105	Derived	Derived	% TO BE QUOTED	% TO BE QUOTED			Derived
14	507-26053-A	COATING ON CABLE LAID ON CABLE TRAYS-40 min with 2 mm thickness	SQM	1200	0.02	Derived	Derived	% TO BE QUOTED	% TO BE QUOTED			Derived
15	507-26013-A	TOOLS & TACKLE	SET	REFER NOTE NO. 2								
B. ERECTION & COMMISSIONING												
1	507-26037-C	FSS-TYPE B FLOOR OPENINGS BELOW PANELS-1 hour	SQM	2900	0.05	Derived	Derived		% TO BE QUOTED			Derived
2	507-26038-C	FSS-TYPE B FLOOR OPENINGS BELOW PANELS-2 hour	SQM	3400	0.06	Derived	Derived		% TO BE QUOTED			Derived
3	507-26039-C	FSS-TYPE B FLOOR OPENINGS BELOW PANELS-3 hour	SQM	1200	0.02	Derived	Derived		% TO BE QUOTED			Derived
4	507-26034-C	FSS-TYPE B FLOOR OPENINGS-1 hour	SQM	400	0.007	Derived	Derived		% TO BE QUOTED			Derived
5	507-26035-C	FSS-TYPE B FLOOR OPENINGS-2 hour	SQM	800	0.014	Derived	Derived		% TO BE QUOTED			Derived
6	507-26036-C	FSS-TYPE B FLOOR OPENINGS-3 hour	SQM	420	0.007	Derived	Derived		% TO BE QUOTED			Derived
7	507-26040-C	FSS-TYPE B WALL OPENINGS-1 hour	SQM	450	0.007	Derived	Derived		% TO BE QUOTED			Derived
8	507-26041-C	FSS-TYPE B WALL OPENINGS-2 hour	SQM	600	0.01	Derived	Derived		% TO BE QUOTED			Derived
9	507-26042-C	FSS-TYPE B WALL OPENINGS-3 hour	SQM	200	0.003	Derived	Derived		% TO BE QUOTED			Derived
11	507-26046-C	PIPE SLEEVES-200 nb-1 hour	No.	1200	0.002	Derived	Derived		% TO BE QUOTED			Derived
12	507-26047-C	PIPE SLEEVES-200 nb-2 hour	No.	2000	0.0039	Derived	Derived		% TO BE QUOTED			Derived
13	507-26048-C	PIPE SLEEVES-200 nb-3 hour	No.	300	0.0006	Derived	Derived		% TO BE QUOTED			Derived
13	507-26055-C	COATING ON CABLE LAID ON CABLE TRAYS-40 min	SQM	9600	0.012	Derived	Derived		% TO BE QUOTED			Derived
14	507-26053-C	COATING ON CABLE LAID ON CABLE TRAYS-40 min with 2 mm thickness	SQM	1200	0.0035	Derived	Derived		% TO BE QUOTED			Derived

TOTAL EX-WORKS PRICE	
----------------------	--

NOTES:-
1. The Type Test charges ,if asked to perform as per clause 4.5 (a) of Section -II of the Technical specification, shall be reimbursed extra at actual against Original money receipt of CBRI Roorkee.
2. One set of tools and tackels to be provided for each project and cost of same shall be included in the bid price. No separate charges shall be paid for Tools & tackles.
3. Bidders are required to mention their total price (X) in Cell highlighted in Row No. 41-42. Bidders to note that here the Total Ex-Works Price X= Price for Main Supply+ Price for Erection & Commissioning + Price for Type Test
4. Value is to be filled only where "To be quoted" has been mentioned. The other cells where "Derived" has been mentioned is NOT required to be filled by bidders. The same shall be DERIVED by BHEL as per the percentage allocation mentioned in Column No. E
5. For simplicity, the cells required to be filled by Suppliers have been highlighted in YELLOW.
6. Further, the supplier is required to quote the prices for Excise Duty, Service Tax, CST, Freight (as applicable). The same shall be used to Derive the total F.O.R. Price.
7. Please refer Technical Specification PE-RC-999-507-E016 for details.

ANNEXURE-II

Special Condition of Rate Contract for Fire Sealing System

1. BHEL/PEM intends to enter into Rate Contract for the tendered quantity of Fire Sealing System mentioned in Annexure-I along with E&C for a period of two years. The Rate Contract shall come into force from the date of issue of Purchase order for Rate Contract.
2. The items will be required against respective projects. Exact quantities and Project name shall be intimated while placing order for a specific project based on the Rate Contract.
3. The unit rate for each item should be quoted inclusive of ex-works including packing & forwarding (excepted sea worthy packing) for tendered specifications/sizes as per price schedule format. Other elements of prices such as Excise Duty, Sales Tax, and freight charges (Including service tax) % of Ex-works are also to be indicated. Destination may be anywhere in India as per project requirement.
4. The freight charges shall be paid on percentage on ex-works prices or actual freight charges paid to transporter whichever is lower against production of documentary evidence. Vendor to quote freight charges as percentage (%) of ex-works price for destination anywhere in India.
5. Vendor to note that Excise Duty is payable on self-manufacturing item only as per clause no 4.1.2 of GCC Rev 06 & hence for their BOI may quote Excise Duty is inclusive or Nil.
6. The prices shall remain firm during the period of two years.
7. Inspection of materials shall be carried out by BHEL / CQA and or by Customer or by an authorized agency at manufacture's works before dispatch, if required. Dispatch of material to be done, only after receipt of BHEL/Customer MDCC. It is responsibility of vendor to for obtain Material Dispatch Clearance Certificate (MDCC) from BHEL or CUSTOMER as required before dispatch of material.
8. Items have to be manufactured as per specification and supplied strictly in accordance with the approved BHEL / Customer's Drawings & Quality Plan. The items/ test certificate of items, which for any reason are not acceptable to BHEL / Customer, shall be required to be retested. No extra charge shall be payable on those account by BHEL.
9. Mode dispatch shall be by road through Schedule Bank/BHEL (PEM) approved transporters.
10. Other terms and conditions shall be as per Standard Technical specification no. PE-RC-999-507-E016 & GCC Rev 06, Enquiry letter.
11. Order shall be placed with CST for respective projects keeping FOR site price same, vendors to quote accordingly.
12. This enquiry is subject to Conditions/ limits if any imposed in PMD/ Vendor registration.
13. Tentative quantity is given in enquiry.
14. Bidders to submit offer for RC of said items ONLINE via e-Procurement System only. Complete tender in all respects duly signed & stamped on each and every page by the authorized signatory of the bidder as a token of acceptance of all the terms and conditions of tender.
15. The Bidder along with its associate/ collaborators/ sub-contractors/ sub-vendor/ 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 as soon as it comes to their notice.

K. K. Gandhi
14/6/12

LISTS OF PROJECTS FOR FIRE SEALING SYSTEM

With reference to proposed execution of rate contract of Fire Sealing System package, the indicative list of projects as on date are listed below:

S.No	Project List
1	1X370 MW YELAHANKA CCPP
2	2X500 MW NEYVELLI NEW TPS
3	1X800 MW KOTHAGUDEM
4	2X660 MW OPGCL IB TPP
5	3X660 MW NORTH KARANPURA STPP
6	4X270 MW BHADRADRI TPS

It may be noted that project list is indicative only, BHEL may ask for delivery anywhere in India for any of the project added in the prospective project list/ requirement of existing projects during RC period.



**PRE-QUALIFICATION REQUIREMENTS FOR
FIRE SEALING SYSTEM**

PE-PQ-999-507-E006

REVISION NO. 03 DATE 29/04/2016

SHEET NO. 1 OF 1

ITEMS : Fire sealing system, fire retardant cable coating

Vendor may be considered for evaluation for one or more of the following type of Fire sealing system:

Type 1 : RTV Silicone Foam

Type 2 : Panel based

Type 3 : Mortar/ Powder based

Type 4 : Individual blocks for each cable

SCOPE: Supply : YES; Erection & Commissioning : YES;

1	Availability of type test certificates conducted at independent Lab or witnessed by third party for the applicable type of fire sealing system and fire retardant cable coating as per IS/ International standards.
2	Bidder should be OEM for the applicable type of fire sealing system. In case bidder is not OEM, the offer / application for registration shall be evaluated as per point no. 1 of "general points of PQR" available at http://bhelpem.com/vensection/PMD/PMD.aspx
3	Repeat order received from at least one end user/ purchaser for supply and E&C of applicable type of fire sealing system during last 5 years provided the gap between award of two POs is minimum 2 years. OR Completion certificate from at least one end user/ BHEL PEM for successful execution of supply and E&C for applicable type of fire sealing system.
4	Minimum two (2) nos. purchase orders for fire sealing system of applicable type shall be submitted which should not be more than five (5) years old from the date of application for registration or date of techno-commercial bid opening (as applicable) for establishing continuity in business.

NOTE:

Supplier to comply to "general points of PQR" available at <http://bhelpem.com/vensection/PMD/PMD.aspx>
In case supplier is not OEM, the offer shall be evaluated as per point no 1 of "general points of PQR".

VOLUME-II

TECHNICAL SPECIFICATION

FOR

FIRE SEALING SYSTEM SUPPLY & INSTALLATION

SPECIFICATION NO: *PE-RC-999-507-E016*

REVISION: 0



BHARAT HEAVY ELECTRICALS LIMITED

POWER SECTOR

PROJECT ENGINEERING MANAGEMENT

NOIDA, UP (INDIA) – 201301



**TECHNICAL SPECIFICATION FOR
FIRE SEALING SYSTEM
SUPPLY & INSTALLATION**

SPECIFICATION NO. PE-RC-999-507-E016

VOLUME II

SECTION

REVISION 0

DATE: 31.05.2017

SHEET 1 OF 1

CONTENTS

Sl. No.	DESCRIPTION	NO. OF SHEETS
1.0	SECTION- I	
	COMPLIANCE CERTIFICATE	01
	SPECIFIC TECHNICAL REQUIREMENTS	02
	DATA SHEET – A	01
	DATA SHEET – C	02
2.0	SECTION- II	
	STANDARD TECHNICAL REQUIREMENTS	11
	FORMAT OF QUALITY PLAN	02

Total nos. of sheets including cover & separator sheets = 23 sheets



**TECHNICAL SPECIFICATION FOR
FIRE SEALING SYSTEM
SUPPLY AND INSTALLATION**

SPECIFICATION NO. PE-RC- 999-507-E016

VOLUME II

SECTION I

REVISION 0

DATE: 31.05.2017

SHEET 1 of 1

COMPLIANCE CERTIFICATE

The bidder shall confirm compliance to the following by signing/ stamping this compliance certificate and furnishing same with the offer.

1. The scope of supply, technical details, construction features, design parameters etc. shall be as per technical specification & there are no exclusion/ deviation with regard to same.
2. There are no deviation with respect to specification other than those furnished in the 'schedule of deviations'.
3. Only those technical submittals which are specifically asked for in NIT to be submitted at tender stage shall be considered as part of offer. Any other submission, even if made, shall not be considered as part of offer.
4. Any comments/ clarifications on technical/ inspection requirements furnished as part of bidder's covering letter shall not be considered by BHEL, and bidder's offer shall be construed to be in conformance with the specification.
5. Any changes made by the bidder in the price schedule with respect to the description/ quantities from those given in 'BOQ-Cum-Price schedule' of the specification shall not be considered (i.e., technical description & quantities as per specification shall prevail).

BIDDER'S STAMP & SIGNATURE



**TECHNICAL SPECIFICATION FOR
FIRE SEALING SYSTEM
SUPPLY & INSTALLTION**

SPECIFICATION NO. PE-RC-999-507-E016

VOLUME II

SECTION I

REVISION 0

DATE: 31.05.2017

SECTION – I

STANDARD TECHNICAL REQUIREMENTS



TECHNICAL SPECIFICATION FOR FIRE SEALING SYSTEM SUPPLY & INSTALLTION

SPECIFICATION NO. PE-RC-999-507-E016

VOLUME II

SECTION I

REVISION - 0

DATE: 31.05.2017

SHEET 1 OF 2

1.0 PURPOSE

This specification is intended for finalization of rate contract between BHEL PEM and Bidder. Standard technical detail as indicated in the specification shall be agreed upon between BHEL PEM and bidder. Project specific technical detail shall be made available to the bidder along with project enquiry.

2.0 SCOPE OF ENQUIRY

- 2.1 This enquiry covers the Design, manufacturing, inspection & testing at manufacturer's works, proper packing, delivery to site, handling and erection & commissioning of **Fire Sealing System** for cable openings through walls, floors & below panels, pipe sleeves and fire protection coating on installed cables conforming to this specification.
- 2.2 It is not the intent to specify herein all the details of design & manufacture of material. However, the material shall, conform in all respects to high standard of design, engineering and workmanship and shall be capable of performing in continuous commercial operation at site conditions.
- 2.3 Technical requirements of the **FIRE SEALING SYSTEM** are indicated in Datasheet-A and Section-II.
- 2.4 The stipulation of Data Sheet-A shall prevail in case of any conflict between the stipulations of Data Sheet-A & Section-II.

3.0 BILL OF QUANTITIES:

- 3.1 The bidder to quote for items as per 'BOQ-cum-Price Schedule' attached with NIT. The BOQ excludes civil works done in the opening and includes cross section area of cables and cable support materials within the area to be fire sealed.

The quantity as mentioned in the BOQ is only for evaluation purpose. However actual ordered quantity may vary from project to project throughout the contract.

- 3.2 Successful bidder shall submit calculations for supply of material based on area to be provided with fire sealing, cured density (based on type test certificate accepted by BHEL/CUSTOMER) & thickness as applicable for the project, wastage, space occupied by cables, etc. for approval during contract stage.

For the first lot cleared by BHEL, the calculations shall be made based on the average of the minimum & maximum cured density (wherever a range is specified for the cured density by the manufacturer) & minimum thickness. For subsequent lots cleared by BHEL, the calculation shall be based on the cured density & thickness as per accepted type test results, duly adjusting the quantities cleared in earlier lot.



**TECHNICAL SPECIFICATION FOR
FIRE SEALING SYSTEM
SUPPLY & INSTALLTION**

SPECIFICATION NO. PE-RC-999-507-E016

VOLUME II

SECTION I

REVISION - 0

DATE: 31.05.2017

SHEET 2 OF 2

4.0 DRAWINGS & DOCUMENTS TO BE SUBMITTED

4.1 After rate contract against specific project requirement, BOQ (Bill of Quantities) shall be furnished by BHEL.

4.2 The following information shall be furnished with the bid:

- a) Data Sheet-B
- b) Type test certificates for fire sealing system and cable coating material
- c) Type test procedure
- d) Typical drawings showing arrangement of various components and thickness etc.
- e) Complete detail of the system

4.3 Following documents shall be submitted for specific project requirement after placement of order for BHEL & customer's approval:-

S. No	Document No.	Document title	Document type	First Submission	Re-submission
1.	Technical Data Sheet	PE-V0-XXX-507-E041	Primary	Within 2 weeks of PO	Within 10 days after comments
2.	Installation Drawings	PE-V0-XXX-507-E042	Primary	Within 2 weeks of PO	Within 10 days after comments
3.	Type test certificates	PE-V0-XXX-507-E043	Primary	Within 2 weeks of PO	Within 10 days after comments
4.	Manufacturing Quality Plan	PE-V0-XXX-507-E905	Primary	Within 2 weeks of PO	Within 10 days after comments
5.	Field Quality Plan	PE-V0-XXX-507-E906	Secondary	Within 2 weeks of PO	Within 10 days after comments
6.	Bill of material for fire stop system	PE-V0-XXX-507-E044	Secondary	Within 2 weeks of PO	Within 10 days after comments

4.4 Drawings/ documents shall be submitted through Document Management System (DMS).



DOCUMENT TITLE

**TECHNICAL SPECIFICATION FOR
FIRE SEALING SYSTEM
SUPPLY & INSTALLATION**

SPECIFICATION NO. PE-RC-999-507-E016

VOLUME II

SECTION -I

REVISION 0

DATE: : 31.05.2017

SHEET 1 OF 1

DATASHEET-A**1.0 REFERENCE CODES & STANDARDS**

The latest edition of following standards shall be applicable:

- a) ASTM-E-814: Standard test methods for fire test of Through-penetration fire stops.
- b) ASTM E-119: Standard test methods for Fire resistance rating and hose stream test
- c) IS-12458: Method of fire resistance test of fire stop
- d) UL-1479: Standard test methods for Fire resistance rating
- e) BS-476: Standard test methods for Fire resistance rating
- f) IEC-60332-3-23: Flammability test for fire retardant coating
- g) ASTM D-2863: Limiting oxygen index test for fire retardant coating
- h) IS: 6005- Pretreatment shall conform to the requirement of IS: 6005.
- i) IS: 2629- Galvanizing shall be done in accordance with IS: 2629.

2.0 Rating of fire stop : One (1)/ Two (2)/ Three (3) hours
(Project specific requirement will be furnished later)

3.0 Rating of Fire protection coating : 40 min/ 40 min. with 2mm dry thickness
(Project specific requirement will be furnished later)

4.0 Type of application : Horizontal/ Vertical/ Below panels/ Across Trenches

5.0 Cable laying conditions : Cables on cable trays

6.0 Suitability of fixing arrangement : In masonry work/ In concrete work

7.0 Surface Treatment of Steel Material
(for frame work as applicable)

- a) Surface protection : Galvanization conforming to IS:2629
- b) Mass of Zinc : 460 g/m²

8.0 Type of fire stop system : 1) fire stop system [Panel/ Mortar]
2) fire retardant coating

9.0 Minimum shelf life : 12 months
of most perishable material

10.0 Life expectancy of material : Greater than 40 years

11.0 Packing suitable for : Storage on dry Surface



DOCUMENT TITLE

**TECHNICAL SPECIFICATION FOR
FIRE SEALING SYSTEM
SUPPLY & INSTALLATION**

SPECIFICATION NO. PE-RC-999-507-E016

VOLUME II

SECTION -I

REVISION 0

DATE: : 31.05.2017

SHEET 1 OF 2

DATASHEET-B/C**(Guaranteed technical Particulars to be submitted along with the bid/ after award of contract)****1.0 GENERAL**

1.1 Name of vendor :

1.2 Address :

2.0 APPLICABLE STANDARDS

- 2.1 ASTM-E-814 & ASTM-E-119 For fire rating test and hose Stream test : YES / NO
- 2.2 IS-12458: Method of fire resistance test of fire stop : YES / NO
- 2.3 UL-1479: Standard test methods for Fire resistance rating : YES / NO
- 2.4 BS-476: Standard test methods for Fire resistance rating : YES / NO
- 2.5 IEC-60332-3-23: Flammability test for fire retardant coating : YES / NO
- 2.6 ASTM D-2863: Limiting oxygen index test for fire retardant coating : YES / NO
- 2.7 IS: 6005- Pretreatment shall conform to the requirement of IS: 6005 : YES / NO
- 2.8 IS: 2629- Galvanizing shall be done in accordance with IS: 2629 : YES / NO

3.0 TECHNICAL DETAILS

- 3.1 Type of system : 1) fire stop system [Panel/ Mortar]
2) fire retardant coating []
- 3.2 Fire rating : 1) fire stop system
2) fire retardant coating
- 3.3 Pressure withstand capacity of Fire stop : kg/mm²
- 3.4 Weight of fire stop assembly (without cables) : kg/mm²
- 3.5 Shelf life of most perishable Material : years
- 3.6 Life of total assembly : Years



DOCUMENT TITLE

**TECHNICAL SPECIFICATION FOR
FIRE SEALING SYSTEM
SUPPLY & INSTALLATION**

SPECIFICATION NO. PE-RC-999-507-E016

VOLUME II

SECTION -I

REVISION 0

DATE: : 31.05.2017

SHEET 2 OF 2

4.0 TYPE TEST

Whether Type Tests are applicable : YES/ NO

- a) If Type tests are applicable, the same shall be conducted as per clause 3.0, 4.0 and 5.0 of Section-II of this specification and as per relevant standards.
- b) If Type tests are not applicable, Type test reports of all the type tests as listed at clause no. 5.0 of section -II and relevant standards for fire sealing system materials shall be submitted.



**TECHNICAL SPECIFICATION FOR
FIRE SEALING SYSTEM
SUPPLY & INSTALLTION**

SPECIFICATION NO. PE-RC-999-507-E016

VOLUME II

SECTION II

REVISION 0

DATE: 31.05..2017

SECTION – II

STANDARD TECHNICAL REQUIREMENTS



DOCUMENT TITLE

**STANDARD SPECIFICATION FOR
FIRE SEALING SYSTEM
SUPPLY & INSTALLATION**

SPECIFICATION NO. PE-RC-999-507-E016

VOLUME II

SECTION II

REVISION 0

DATE: 31.05.2017

SHEET 1 OF 11

1.0 CODES AND STANDARDS

- 1.1 The material shall comply with all currently applicable safety codes and statutory regulations of India as well as of the locality where the material is to be installed.
- 1.2 The design, material, construction, manufacture, inspection, testing and performance of Fire Sealing System shall conform to the latest revision of relevant standards as per Data Sheet-A. Any other international standards will also be considered if it ensures performance equivalent or superior to standards listed.
- 1.3 In case of conflict between the applicable reference standard and this specification, this specification shall govern.

2.0 TECHNICAL REQUIREMENTS

- 2.1 Fire sealing system and fire retardant coating shall be supplied as per technical particulars specified in Data Sheet – A and Section-II.

2.2 DESIGN REQUIREMENTS FOR FIRE STOP SYSTEM

- 2.2.1 Type-B fire sealing system shall be out of any of the following system:
- i) Panel based sealing system (Comprising encasing panels, cavity fill material & sealant).
 - ii) Powder/ mortar based sealing system (Comprising mixing mortar curing with water).
- 2.2.2 The fire stop system, in case of fire, shall prevent spreading of fire in cables/systems beyond the fire stops.
- 2.2.3 Cables shall be generally laid in cable trays/cable racks/ conduits and fire stop system shall be designed in such a way that the basic supporting structure of cables is not disturbed.
- 2.2.4 The system shall be retrofit design, physically and chemically stable.
- 2.2.5 Through penetration cable openings on floors and walls shall be divided into modules. Each module shall have spare capacity to accommodate additional cables in future. The fire stop system shall be designed to accept additional cables without impairing fire stop capability and without disturbance/ wastage of material in the nearby modules.
- 2.2.6 The system shall be mechanically secured to the masonry work/concrete work to resist dislocation.

	DOCUMENT TITLE STANDARD SPECIFICATION FOR FIRE SEALING SYSTEM SUPPLY & INSTALLATION	SPECIFICATION NO. PE-RC-999-507-E016	
		VOLUME II	
		SECTION II	
		REVISION 0	DATE: 31.05.2017
		SHEET 2 OF 11	

2.2.7 The system shall remain unaffected due to any vibrations or expansion in cables. The system must also remain unaffected due to adverse temperature and humidity variations in the atmosphere. The system shall be suitable for ambient temperature of 50°C and relative humidity of 100%.

2.2.8 The system should be equally effective in horizontal & vertical formations.

2.2.9 The system should not affect the current carrying capacity of cables passing through the fire stop.

2.2.10 The system should provide firm grip on the outer surface of the cable in the event of fire.

2.2.11 The system shall be capable of withstanding mechanical loads, foot traffic, drop loads and wind pressure etc.

2.2.12 The fire stop system shall be completely gas & smoke tight.

2.2.13 Materials used for fire stop system shall meet the following requirements:

- a) Should not get affected over a period of time due to humidity, moisture, ozone and variation in ambient temperature.
- b) Should not contain volatile solvents after the setting period of system.
- c) Should be able to withstand stresses due to expansion/ vibrations.
- d) Should be free from shrinkage and cracking and should maintain smoke and gas tightness during fire.
- e) Should not react with cable sheaths, galvanized and painted steel material etc.
- f) Should be easy to apply/ install using conventional methods.
- g) Should be non-toxic and harmless to the working personnel
- h) Should have anti –rodent properties and should be repellent to pest & termites.
- i) Should not produce any acid or alkali during gas generation.
- j) Should not produce suffocating/ corrosive gas.

	DOCUMENT TITLE STANDARD SPECIFICATION FOR FIRE SEALING SYSTEM SUPPLY & INSTALLATION	SPECIFICATION NO. PE-RC-999-507-E016	
		VOLUME II	
		SECTION II	
		REVISION 0	DATE: 31.05.2017
		SHEET 3 OF 11	

- k) Should have a very low Expansion co-efficient, which is to be comparable with masonry concrete.
- l) Should not be soluble and reactive to acid and alkali water.
- m) Should have a low thermal conductivity.
- n) The material in contact with the cables in the fire-proof sealing system shall be compatible with the material used for outer sheath of cables.

2.2.14 The system shall have a fire resistance rating of duration as per Data Sheet-A. Fire resistance rating shall be in accordance with ASTM E-119, ASTM E-814, BS-476, UL-1479 and integrity & stability shall be maintained by the system after application of water jet on the exposed side in order to extinguish fire.

2.3 DESIGN REQUIREMENTS FOR FIRE RETARDANT COATING

2.3.1 Materials used for fire retardant coating shall meet the following requirements:

- a) Asbestos free, non-volatile, not eatable by vermin, harmless and non-irritant to skin of human.
- b) Not affecting the current carrying capacity of the cables and the properties of the installed cables.
- c) Coating material shall show no signs of cracking and peeling when the coated cable is bent to the radius of minimum sized cable at 180 degree C.

2.4 WELDING

- a) All welded connections if applicable shall be made by electric arc welding. All welding work shall be carried out by qualified and experienced welders and adequately protecting the already laid cables.
- b) All arc welding shall be carried out with low hydrogen content electrode.
- c) All welded connection shall be allowed to cool down gradually to atmospheric temperature before putting any load on them. No artificial cooling should be adopted to cool welded joints.

	DOCUMENT TITLE STANDARD SPECIFICATION FOR FIRE SEALING SYSTEM SUPPLY & INSTALLATION	SPECIFICATION NO. PE-RC-999-507-E016	
		VOLUME II	
		SECTION II	
		REVISION 0	DATE: 31.05.2017
		SHEET 4 OF 11	

2.5 SURFACE TREATMENT

2.5.1 Supply items:

Surface treatment of all material supplied shall be done as applicable in an approved manner and as per the specific requirements given in the Data Sheet-A. Surface treatment shall include following steps:

- a) Pretreatment: Pretreatment shall conform to the requirements of IS: 6005. The clean and dry pretreated surface shall be given a coat of red oxide primer paint and shall be left for natural drying.
- b) Galvanizing: Articles shall be hot dip galvanized after pretreatment. The galvanizing shall be done in accordance with IS: 2629. The galvanizing shall be uniform, clean, smooth, continuous and free from free acid spots. The amount of zinc deposit shall not be less than the value specified in Data Sheet-A.

2.5.2 After erection:

- a) Galvanized items shall be given a surface treatment only at the welded joints and at the places where the galvanization has been damaged. Welded joints shall be applied with two coats of cold zinc paint whereas damaged portions of galvanizing shall be applied with single coat of zinc paint.
- b) In addition to the above, the vendor shall ensure after completion of fire stop system that the final finish of all surfaces of materials is in good condition and wherever needed a touch up of cold zinc paint shall be given.
- c) The final finish of all erected materials shall be uniform, clean, smooth and free from spots.

3.0 QUALITY ASSURANCE REQUIREMENTS

3.1 At contract stage, the successful bidder shall submit the Quality Plan in attached BHEL format for BHEL/ ultimate customer's approval. In case bidder has reference Quality Plan agreed with ultimate customer, same can be submitted for specific project after award of contract for BHEL/ ultimate customer's approval. There shall be no commercial implication to BHEL on account of minor changes in Quality Plan during contract stage.

3.2 Stages of quality control shall include but not be limited to the following:



DOCUMENT TITLE

**STANDARD SPECIFICATION FOR
FIRE SEALING SYSTEM
SUPPLY & INSTALLATION**

SPECIFICATION NO. PE-RC-999-507-E016

VOLUME II

SECTION II

REVISION 0

DATE: 31.05.2017

SHEET 5 OF 11

- a) Verification of test certificates for materials before dispatch.
- b) Visual inspection of materials before dispatch (as applicable).
- c) Testing of materials before dispatch.
- d) Inspection of packing before dispatch.
- e) Quality checks during erection.
- f) Inspection & testing of fire stops after erection.

- 3.3 All materials shall be procured, manufactured, inspected and tested by vendor/ sub-vendor as per approved Quality Plan.
- 3.4 The supplier shall perform all tests necessary to ensure that the material and workmanship conform to the relevant standards and comply with the requirements of the specification.
- 3.5 In addition to meeting the type test requirements, material/ batch test certificates conducted at the premises of the bidder's principals for the supplies to be made for the project shall be submitted for BHEL/ CUSTOMER review and clearance.
- 3.6 All acceptance & routine tests as per relevant standards & specification shall be carried out. Charges for these shall be deemed to be included in the bid price.
- 3.7 Installation at site shall be as per parameters (i.e. minimum cured density & minimum thickness) achieved during type testing. In case type test waiver is given based on past type test certificates, installation shall be carried out as per the type test certificates accepted.
- 3.8 The successful bidder shall submit Field Quality Plan for storage, preservation, handling and erection work at site for fire-sealing system. The same shall subject to CUSTOMER/ BHEL approval without any commercial implications. Fire sealing shall be as per approved installation drawings.

4.0 TESTING

4.1 FIRE STOP SYSTEM

- 4.1.1 The system offered shall comply with the following type tests and test reports shall be submitted along with offer:
- a) Accelerated aging test
 - b) Water absorption test
 - c) Fire rating test
 - d) Hose stream test
 - e) Vibration test followed by fire rating test

	DOCUMENT TITLE STANDARD SPECIFICATION FOR FIRE SEALING SYSTEM SUPPLY & INSTALLATION	SPECIFICATION NO. PE-RC-999-507-E016	
		VOLUME II	
		SECTION II	
		REVISION 0	DATE: 31.05.2017
		SHEET 6 OF 11	

4.1.2 System shall be subjected to structural stability test, which shall be conducted at site.

4.2 FIRE RETARDANT COATING

It shall comply with the following tests and test reports shall be submitted along with offer:

- a) Flammability test
- b) Liming oxygen test

4.3 The test details have been covered in clause no. 5.0

4.4 System offered shall be **type tested** at CBRI, Roorkee or by government approved Independent agency.

- a) The bidder shall furnish the reports of all the type tests for fire sealing system materials. These reports should be for the tests conducted on identical materials to those offered/ proposed to be supplied under the contract.
- b) In case bidder is not able to submit report of type test(s) conducted or in case type test report(s) are not found to be meeting the specification/ relevant standard requirements, then all such tests under the contract shall be conducted free of cost to the owner, and reports shall be submitted for approval. No charges shall be paid under this contract.

4.5 Type Test charges:

- a) In case type test certificates are available with vendor & acceptable to BHEL/ CUSTOMER and still vendor being asked to conduct type testing and type tests successfully conducted, the type test charges shall be payable to vendor as per 'BOQ cum Price Schedule'.
- b) In case type test certificates are not available with the vendor or available with the vendor but not acceptable to BHEL/ CUSTOMER and vendor being asked to carry out type testing, and type testing successfully conducted, the type test charges indicated by the vendor as per 'BOQ cum Price Schedule' shall not be payable.

4.6 BHEL/ CUSTOMER reserve the right to witness type testing on any one lot for the project without any commercial implications.

	DOCUMENT TITLE STANDARD SPECIFICATION FOR FIRE SEALING SYSTEM SUPPLY & INSTALLATION	SPECIFICATION NO. PE-RC-999-507-E016	
		VOLUME II	
		SECTION II	
		REVISION 0	DATE: 31.05.2017
		SHEET 7 OF 11	

5.0 TEST DETAILS

5.1 FIRE STOP SYSTEM

5.1.1 Accelerated aging test:

The fire stop system specimen shall be subjected to accelerated ageing test for 168 hours. During the test, the system/ components shall be placed in air furnace where the temperature of inside air shall be maintained at 85 deg. C. The specimen shall be taken out of the furnace after 168 hours for water absorption test.

In case the mechanical properties before and after the accelerate aging do not indicate substantial change, the system shall be deemed to have passed the accelerated aging test. Similarly the variation in the form of the system/ component at the end of the test shall not indicate permanent deformation which is likely to affect the sealing properties of the system.

5.1.2 Water absorption test:

The test specimen shall be immersed in fresh clean water at a temperature of 20 ± 2 deg. C for a period of minimum 24 hrs. At the end of 24 hour soak period, the specimen shall be removed from water and mopped with a damp cloth. The specimen shall thereafter be subjected to the live fire test as per clause 5.1.3 below.

5.1.3 Fire rating test: shall be done as per ASTM E 814/BS:476/UL:1479/IS:12458.

5.1.4 Hose stream test: Test shall be conducted on the test specimen immediately after fire resistance test as per ASTM E 119

5.1.5 Vibration test: The test specimen shall be subjected to vibration of 100Hz frequency and 0.5 mm amplitude for a minimum period of 3 hours.

5.2 FLAME RETARDANT COATING

5.2.1 Flammability test shall be conducted in accordance with IEC-60332-3-23 CAT-B.

5.2.2 Limiting oxygen index test shall be conducted in accordance with ASTM D-2863. Limiting oxygen index of the material shall not be less than 35 %.

6.0 APPLICATION OF FIRE SEALING SYSTEM & FIRE PROTECTIVE COATING ON CABLES WITH FIRE RESISTANCE COMPOUND SHALL BE AS UNDER:

6.1. FIRE SEALING SYSTEM



DOCUMENT TITLE

**STANDARD SPECIFICATION FOR
FIRE SEALING SYSTEM
SUPPLY & INSTALLATION**

SPECIFICATION NO. PE-RC-999-507-E016

VOLUME II

SECTION II

REVISION 0

DATE: 31.05.2017

SHEET 8 OF 11

- a) The various openings in the cable vault, vertical/horizontal raceways of cables penetrating walls/floors and the bottom of Electrical Switchgears and panels in Control Equipment room/MCCs/ Distribution Boards/Cabinets/Panels shall be provided with fire stop systems. Cables passing through the openings at various locations are laid on various tiers of the cable trays/racks in the bunch formation. In case, for the purpose of installation of seal system, steel frames are required to be fabricated and fixed in the openings, the fabrication of frame and fixing of the same shall have to be done by the Contractor. The necessary steel section for fabrication of frames shall be supplied by the Contractor without any extra cost. Any, civil works required to be done in the openings shall be carried out by the Contractor. Bidder shall also include one set of tools and accessories required for addition or removal of cables after the seal is made. This shall include special tools, compound injection guns, spray guns, etc.
- b) All openings in the floor and wall for cable access shall be sealed after installation of the cable system with non-inflammable materials, as follows:
- i) Fire stop/ Penetration seal shall be installed in the cable spreaders and cable raceways.
 - ii) For all H.T., L.T., relay and control panels, Control desk, instrumentation panels, battery charger, D.C. distribution boards and other miscellaneous panels, fire stops should be provided below base plate. The non-inflammable type sealing material shall be supplied by the contractor.
- c) Except for inside an enclosure wherever the cable enters or leave the conduit, the conduit end shall be sealed by suitable sealing compound, having specified fire withstand capability.

6.2. FIRE PROTECTION COATING TO BE APPLIED ON INSTALLED CABLES: -

The cables shall be coated with fire protection material at the strategic locations as follows so as to limit the spread of fire:

- a) At fire stops below electrical switchgear/ MCCs/ Panels/ cabinets etc. On one side coating for the specified rating. i.e. on the cable vault side/ cable trench side.
- b) For the specified rating on adjacent/ one side(s) of the junction/ crossings of cabling work in open cable routes/ cable trench.
- c) In fire risk areas and where specified at suitable intervals at decided upon site conditions in open cable routes.

	DOCUMENT TITLE STANDARD SPECIFICATION FOR FIRE SEALING SYSTEM SUPPLY & INSTALLATION	SPECIFICATION NO. PE-RC-999-507-E016	
		VOLUME II	
		SECTION II	
		REVISION 0	DATE: 31.05.2017
		SHEET 9 OF 11	

- d) Where necessary and specified at site at intervals along cable routes in cable trenches.
- e) The coating shall be applied evenly on the cables only.

7.0 PRICES

7.1 Unit prices listed out in this clause shall be applicable for payment to the vendor for activities covered under this specification. The Unit prices shall be inclusive of:

- a) Design, manufacture, testing at works, packing, supply, transportation to site, handling at site of the fire stop system materials.
- b) Visual inspection & transportation of materials from vendor's/owner's storage yard to work site, handling , testing including supply and installation of all associated materials and consumables, carrying out of all associated minor civil works and furnishing of all skilled/unskilled labour and supervisory staff.
- c) Provision of fasteners like nuts, bolts, washers, spring washers, rawl plugs, anchoring bolts and lugs etc.
- d) Provision of all sealing compounds for wall and floor openings.
- e) Consumables like enamels, cold zinc paint, electrodes for welding etc.
- f) Minor civil works like chipping/breaking of floors/walls and masonry work for reducing/closing of openings on floor/walls including supply of materials like cement, sand, bricks etc. as required. Any work as described above to the extent of 200 mm on all sides of openings on walls and floors for the purpose of fitting the actual fire stop assembly shall be deemed to have been included in the unit prices of fire stop assembly.
- g) Provision of all facilities/equipment for all site fabrication such as cutting, bending and drilling equipment.
- h) Provision of welding sets.
- i) Provision of special tools and tackles for erection.
- j) Provision of all testing equipment and conducting the specified test after erection at site.

	DOCUMENT TITLE STANDARD SPECIFICATION FOR FIRE SEALING SYSTEM SUPPLY & INSTALLATION	SPECIFICATION NO. PE-RC-999-507-E016	
		VOLUME II	
		SECTION II	
		REVISION 0	DATE: 31.05.2017
		SHEET 10 OF 11	

7.2 Requirement of Quality Plan and Field Quality Plan shall be considered in the quoted prices.

8.0 MEASUREMENT & WASTAGES

8.1 Quantity measurement: For all payment purpose, measurement shall be made on the basis of the execution drawings/physical measurements. Physical measurements shall be made by vendors in the presence of Engineer.

8.2 Wastage Allowance: No wastage allowance is permissible. All wastages shall be to the account of vendor.

9.0 ADDITIONAL POINTS OF CONSIDERATION

9.1 Bidder shall be deemed to have confirmed to the specification in toto.

9.2 All work shall be carried out in accordance with the agreed field quality plan and approved drawings. The field quality plan shall additionally specify the fire sealing material thickness, minimum cured density and other related parameters achieved in the approved type tests for the contract. The work shall be done to the satisfaction of purchaser and acceptance of the work shall be subject to the purchaser's approval.

9.3 The work to be carried out under this specification shall be done under the supervision of purchaser's/owner's representative.

9.4 The installation work at site shall be properly coordinated with other services.

9.5 All materials, equipment, instrument, hardware, tools, consumables, fasteners, accessories whether specifically mentioned or not in offer required for complete installation and testing in all respect and to the satisfaction of Engineers will be in the scope of vendor and no extra payment will be made for the same.

9.6 All materials being supplied or consumed during erection by the vendor in the process of erection work shall be of best quality and according to the relevant standard. All materials shall be got inspected and got approved by the Engineer before the same is used for erection. Also, purchaser reserves the right to carry out inspection of installation work at any stage during erection, testing and commissioning.

	DOCUMENT TITLE STANDARD SPECIFICATION FOR FIRE SEALING SYSTEM SUPPLY & INSTALLATION	SPECIFICATION NO. PE-RC-999-507-E016	
		VOLUME II	
		SECTION II	
		REVISION 0	DATE: 31.05.2017
		SHEET 11 OF 11	

- 9.7 Any drilling and welding on building structural steel for fixing supports etc. will not be done without the prior written approval of Engineer.
- 9.8 Any work like chipping, or breaking of existing structure like walls, floors, fabrication etc. shall be done after taking prior approval of Engineer.
- After installation of fire stops through a structure, the vendor shall repair/ refabricate the affected portion of structure.
 - Any wrong erection shall be removed and re-erected promptly to comply with requirement at no extra cost.
- 9.9 After completion of work the contractor shall remove all debris and Take back all erection implements, left - overs, surplus materials over and above the ordered quantity without any financial implications to either party.

10.0 PERFORMANCE GUARANTEE

Bidder shall guarantee that the system offered shall meet the requirements as indicated in this specification and as confirmed through various clauses of datasheets. If it is proved that the system doesn't conform to performance guarantee, the bidder should be ready to replace the faulty components/ equipment without any loss or extra cost to the purchaser.

11.0 PACKING & STORAGE

All material/ components of fire stop shall be supplied in proper packing to avoid contamination of material due to dust/ moisture. All packing shall be of durable quality. Space shall be provided by BHEL. Packing containers shall be suitable for storing on dry surface.

FORMAT FOR QUALITY PLAN

			QUALITY PLAN			CUSTOMER				PROJECT TITLE				SPECIFICATION : NUMBER :			
						BIDDER/				QUALITY PLAN				SPECIFICATION			
						VENDOR				NUMBER				TITLE			
			SHEET 1 OF 1			SYSTEM			ITEM :FIRE STOP MATERIAL			SECTION		VOLUME III			
SL. NO.	COMPONENT/OPERATION	CHARACTERISTICS CHECK	CAT.	TYPE/ METHOD OF CHECK	EXTENT OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORM	FORMAT OF RECORD	AGENCY			REMARKS					
									P	W	V						
1	2	3	4	5	6	7	8	9	10			11					
LEGEND : P : PERFORMER W: WITNESSER V: VERIFIER 1- BHEL 2-VENDOR 3- SUB VENDOR CHP: CUSTOMER HOLD POINT WHICH WILL BE DECIDED AT CONTRACT STAGE.																	
BHEL			PARTICULARS			BIDDER/VENDOR											
			NAME														
			SIGNATURE														
			DATE														
												BIDDER'S/VENDORS COMPANY SEAL					

ANNEXURE-1

INSTRUCTIONS FOR QUALITY PLAN

The Quality Plan shall include all the Quality Control Measures and Checks adopted by the Vendor to ensure that the material/component/assembly/services supplied by him meet/will meet the requirements as per specifications and good practices. They shall include all stages of operation such as materials, processes, manufacture, assembly, packing and despatch. The following guide lines may be noted:

Column 1-	Serial Number
Column 2-	Component/Operation- The component and/or operation being checked shall be given here.
Column 3-	Characteristics check- The characteristics being checked shall be given here, e.g., chemical composition, mechanical properties, leak tightness, surface defects etc..
Column 4-	Category - 'CR' stands for critical characteristic - affecting safety of equipment and personnel 'MA' stands for major Characteristic - affecting safety of equipment and personnel 'MI' stands for minor characteristic - affecting appearance etc.
Column 5-	Type/Method of check e.g. chemical analysis tensile testing, hydraulic test, visual examination radiography etc.
Column 6-	Extent of check, such as, 100, 10, 1 percent etc.
Column 7-	Reference Documents - Documents, such as technical specification, drawings, standard specifications (IS, BS ETC.) procedure, etc. according to which check is done.
Column 8-	Acceptance Norms - Standards etc. according to which acceptability or otherwise of the characteristics being checked is decided.
Column 9-	Format of Record - Formats, log shets, reports, etc. in which the observations are recorded. Standard log sheets, reports, formats etc. of the Vendors shall be numbered and such reference numbers shall be included here.
Column 10-	Agency - The agency which performs the test/instruction shall be written in sub-column 'W' The agency which verifies test certificates/inspection records and carries out audit check of the components/operation shall be written in sub-column 'V' The agencies are codified as 1,2 & 3 '1' stands for (BHEL) '1' * means the operation shall be cleared by BHEL before the start of the next operation. '2' Stands for Vendor '3' stands for sub-Vendor of the Vendor and so on.
Example :	
Entry	'3' in column 'P' means test./inspection to be performed by sub-Vendor's QC
Entry	'2' in column 'W' means test./inspection to be witnessed by Vendor's QC
Entry	'1' in column 'V' means verification shall be done by BHEL and next stage to be started only after the hold point is cleared by BHEL
Column11-	Remarks - Any special remarks shall be given here.

NOTES :

1. In absence of correlation with the test certificate(s) (e.g. material identification) samples shall be drawn bgy BHEL and all tests as per relevent specifications shall be carried out in their presence or in recognized Government Laboratory.
2. When materials and components are initially identified and stamped by BHEL QS engineer, the identification marks shall be presserved till despatch. Wherever this is not possible, the identification mark shall be transferred to the components in the presence of BHEL QS Engineer unless other wise agreed.
3. For castings and forgings integral test specimens shall be provided, When this is not possible for casting, they shall be poured in the presence of BHEL QS Engineer unless otherwise, if witnessing of test by BHEL is called for.
4. When welders qualified by reputed inspection agencies or statutory bodies are not available, qualification tests shall be conducted in the presence of BHEL QS Engineer.
5. This Quality Plan is liable to be modified as per the requirements of approved drawings and changes in technical specifications/drawings. If there are contradictions in respect of column 7 & 8 between this Quality Plan and the approved drawings specifications, the latter shall prevail.
6. Wherever inspection by BHELs Purchaser/Third Party/Statutory authorities are mandatory, this shall be compiled with.
7. Inspection reports, log sheets, test reports/certificate. etc. shall be furnished to BHEL at the appropoate stages or at the time of final inspection, as required.
8. This Quality Plan is also applicable to spares, if any, under scope of supply of Vendor.
9. The quality plan shall be submitted in minimum 4 copies with a soft copy of the same or in line with contract requirements.

ANNEXURE-II: DEVIATION SHEET (COST OF WITHDRAWAL)**PROJECT:-****PACKAGE:-****TENDER ENQUIRY REFERENCE:-****NAME OF VENDOR:-**

SL NO	VOULME/ SECTION	PAGE NO.	CLAUSE NO.	TECHNICAL SPECIFICATION/ TENDER DOCUMENT	COMPLETE DESCRIPTION OF DEVIATION	COST OF WITHDRAWAL OF DEVIATION	REFERENCE OF PRICE SCHEDULE ON WHICH COST OF WITHDRAWAL OF DEVIATION IS APPLICABLE	NATURE OF COST OF WITHDRAWAL OF DEVIATION (POSITIVE/ NEGATIVE)	REASON FOR QUOTING DEVIATION
-------	-----------------	----------	------------	--	-----------------------------------	---------------------------------	--	--	------------------------------

TECHNICAL DEVIATIONS

COMMERCIAL DEVIATIONS

PARTICULARS OF BIDDERS/ AUTHORISED REPRESENTATIVE

NAME	DESIGNATIONS	SIGN & DATE	
------	--------------	-------------	--

NOTES:

- For self manufactured items of bidder, cost of withdrawal of deviation will be applicable on the basic price (i.e. excluding taxes, duties & freight) only.
- For directly dispatchable items, cost of withdrawal of deviation will be applicable on the basic price including taxes, duties & freight.
- All the bidders have to list out all their Technical & Commercial Deviations (if any) in detail in the above format.
- Any deviation not mentioned above and shown separately or found hidden in offer, will not be taken cognizance of.
- Bidder shall submit duly filled unpriced copy of above format indicating "quoted" in "cost of withdrawal of deviation" column of the schedule above along with their Techno-commercial offer, wherever applicable.
- Bidder shall furnish price copy of above format along with price bid.
- The final decision of acceptance/ rejection of the deviations quoted by the bidder shall be at discretion of the Purchaser.
- Bidders to note that any deviation (technical/commercial) not listed in above and asked after Part-I opening shall not be considered.
- For deviations w.r.t. Payment terms, Liquidated damages, Firm prices and submission of E1/ E2 forms before claiming 10% payment, if a bidder chooses not to give any cost of withdrawal of deviation loading as per Annexure-VIII of GCC, Rev-06 will apply. For any other deviation mentioned in un-priced copy of this format submitted with Part-I bid but not mentioned in priced copy of this format submitted with Priced bid, the cost of withdrawal of deviation shall be taken as NIL.
- Any deviation mentioned in priced copy of this format, but not mentioned in the un-priced copy, shall not be accepted.
- All techno-commercial terms and conditions of NIT shall be deemed to have been accepted by the bidder, other than those listed in unpriced copy of this format.
- Cost of withdrawal is to be given separately for each deviation. In no event bidder should club cost of withdrawal of more than one deviation else cost of withdrawal of such deviations which have been clubbed together shall be considered as NIL.
- In case nature of cost of withdrawal (positive/negative) is not specified it shall be assumed as positive.
- In case of discrepancy in the nature of impact (positive/ negative), positive will be considered for evaluation and negative for ordering.

BANK GUARANTEE FOR PERFORMANCE SECURITY

Bank Guarantee No:

Date:

To

NAME

& ADDRESSES OF THE BENEFICIARY

Dear Sirs,

In consideration of the Bharat Heavy Electricals Limited ¹ (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at _____ through its Unit at.....(name of the Unit) having awarded to (Name of the Vendor / Contractor / Supplier) having its registered office at _____ ² hereinafter referred to as the 'Contractor/Supplier', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No.....dated³ valued at Rs.....⁴ (Rupees -----)/FC.....(in words.....) for⁵ (hereinafter called the 'Contract') and the Contractor having agreed to provide a Contract Performance Guarantee, equivalent to% (.... Percent) of the said value of the Contract to the Employer for the faithful performance of the Contract,

we,, (hereinafter referred to as the Bank), having registered/Head office at and inter alia a branch at being the Guarantor under this Guarantee, hereby, irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer a maximum amount Rs ----- (Rupees -----) without any demur, immediately on a demand from the Employer, .

Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____.

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Contractor/ Supplier in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment thereunder and the contractors/supplier shall have no claim against us for making such payment.

We thebank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged.

We BANK further agree with the Employer that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Contractor/Supplier from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Contractor/Supplier and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor/Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Contractor/Supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee that the Employer may have in relation to the Contractor's liabilities.

This Guarantee shall remain in force upto and including.....⁶ and shall be extended from time to time for such period as may be desired by Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Contractor/Supplier but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof.

Unless a demand or claim under this guarantee is made on us in writing on or before the⁷we shall be discharged from all liabilities under this guarantee thereafter.

We, BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....⁸
- b) This Guarantee shall be valid up to⁹
- c) Unless the Bank is served a written claim or demand on or before¹⁰ all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

We, _____ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of
(Name of the Bank)

Dated.....

Place of Issue.....

¹ NAME AND ADDRESS OF EMPLOYER I.e Bharat Heavy Electricals Limited

² NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER.

³ DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

⁴ PROJECT/SUPPLY DETAILS

⁵ BG AMOUNT IN FIGURES AND WORDS

⁶ VALIDITY DATE

⁷ DATE OF EXPIRY OF CLAIM PERIOD

⁸ BG AMOUNT IN FIGURES AND WORDS.

⁹ VALIDITY DATE

¹⁰ DATE OF EXPIRY OF CLAIM PERIOD

Note:

1. Units are advised that expiry of claim period may be kept 2/3 months after validity date.
2. In Case of Bank Guarantees submitted by Foreign Vendors-
 - a. **From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India)** can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.
 - b. **From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)**
 - b.1 In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter- Guarantee by Foreign Bank in favour of the Indian Bank (BHEL's Consortium Bank). It is advisable that all charges for issuance of Bank Guarantee/ counter- Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.
 - b.2 **In case, Foreign Vendors intend to provide BG from Overseas Branch of our Consortium Bank** (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at **sl.no. b.1** will required to be followed.
 - b.3 The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). In case, of Foreign Vendors, the BG Format provided to them should clearly specify the same.
 - b.4 The BG should clearly specify that the demand or other document can be presented in electronic form.