



Bharat Heavy Electricals Limited
(A Govt. Of India Undertaking)
PROJECT ENGINEERING MANAGEMENT

Enq No.: PE/PG/RTC/E-5553/2017

Date: 05.04.2017

TENDER ENQUIRY THROUGH E-PROCUREMENT

DUE DATE
April, 18, 2017
02:00 P.M.

Subject: Tender Enquiry for Rate Contract of Steam Traps for two years

Dear Sir,

We are pleased to invite your tender offers for subject package. Please upload your best quotation/ offer in two (2) parts 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 is as mentioned below:

Sl. No	Description for which Rate Contract is desired	Tentative Quantity	Delivery required
1	Steam Traps - Refer Technical specification no PE-TS-020-100-M010 for detailed description.	As per BOQ cum price schedule in Annexure-I) cumulative for the Prospective Projects as per Annexure-III.	The delivery period shall be four (04) months from drawing/doc approval for respective project/requirement under the RC. Other schedules like submission of drawings, approval of drawings, inspection etc. shall be as per the Technical Specification no. PE-TS-020-100-M010. 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." Delays due to non-fulfilment of the requirements as specified in the specification shall be to the vendor's account. Vendors shall be informed that delivery period mentioned above is for contractual LD calculation purpose, however in case of exigencies BHEL may ask for early delivery.

Please reply to:
PEM -Power Sector
PPEI Building,
BHEL House
HRD & ESI Complex,
Plot-25, Sector-16-A NOIDA – 201301

Phone: 0120-4213591
Fax : 0120-4329026
e-mail: ncsharma@bhelpem.co.in

Regd. Office:

Siri Fort
New Delhi - 110049

Page 1 of 6



Bharat Heavy Electricals Limited
(A Govt. Of India Undertaking)
PROJECT ENGINEERING MANAGEMENT

Enq No.: PE/PG/RTC/E-5553/2017

Date: 05.04.2017

(i) Rate contract on firm price basis is proposed for two year from placement of Rate Contract PO.

(ii) Rate Contract will be finalized on total lump sum basis instead of item wise evaluation. There is % allocation weightage against BOQ quantity of each item which shall be used for arriving at price break up. Vendors to note 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.

(iii) 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 Ex Works price.

c) Bidders also requires to mention % of taxes/ duties (against respective column for ED, CST & Service Tax etc.) applicable for each item of the BOQ.

d) Bidder to give % of freight charges considering anywhere in India in the freight column.

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.

(iv) Refer Annex-I for tentative Qty of Steam Traps required for prospective projects (refer Annex-III), however bidders to consider delivery anywhere in India. Quantity variation shall be applicable in line with cl. no. 6 of GCC rev-06. Project list is indicative only, BHEL may ask for delivery anywhere in India for any of the project added in the prospective project list for existing projects during RC period.

(v) Rate Contract is proposed to be done with 2 vendors in ratio of 60:40 value wise at L1 FOR site price for Steam Traps (% 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 shall not be split the same shall be informed to bidders through NIT.

(vi) 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. Since the rate contract is being proposed on two vendors, vendors shall be asked to quote prices with CST against form C and same state ordering shall not be done to save VAT.

(vii) Drawings/ documents, equipment manufacture inspection & dispatch requirement will be as per Technical Specification no. PE-TS-020-100-M010.

(viii) **Pre-Qualifying Requirements (PQR):** All the bidders (registered/ non-registered) to submit documents fulfilling PQR requirements (as per enclosed annex-IV) with the bid & their further evaluation shall be done based on qualification in PQR.

Please reply to:
PEM -Power Sector
PPEI Building,
BHEL House
HRD & ESI Complex,
Plot-25, Sector-16-A NOIDA – 201301

Phone: 0120-4213591
Fax : 0120-4329026
e-mail: ncsharma@bhelpem.co.in

Regd. Office:

Siri Fort
New Delhi - 110049



Bharat Heavy Electricals Limited
(A Govt. Of India Undertaking)
PROJECT ENGINEERING MANAGEMENT

Enq No.: PE/PG/RTC/E-5553/2017

Date: 05.04.2017

(ix) 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**"

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.

(x) Bidders are required to submit offer strictly in accordance with the requirements of the above tender documents. Deviations (Technical as well as Commercial) from NIT are generally not acceptable, if any, Technical deviations and Commercial deviations shall be furnished in "**Cost of Withdrawal sheet**" (as per Annexure-II of GCC Rev. 06, copy enclosed) **only under the headings "TECHNICAL DEVIATIONS" and "COMMERCIAL DEVIATIONS"** respectively, along with reasons for taking such deviations. Deviations (Technical & Commercial) taken other than as mentioned on cost of withdrawal sheet shall not be considered.

(GCC Rev. 06 is available on <http://www.bhelpem.com/Documents/GCC/GCC-Rev-06.pdf> , you are requested to kindly download the same).

Tender Enquiry Terms and Conditions: -

1. Offers should be submitted in two parts online at <https://bheleps.buyjunction.in> as follows:
Part-I: TECHNO-COMMERCIAL BID (along with un-priced copy of Annexure-I)
Part-II: PRICE BID (along with priced copy of Annexure-I)
2. For detailed instructions, please see clause no. 2 of "Instructions to Bidders" of GCC, Rev. 06.
3. No Technical & Commercial deviations are acceptable.
4. Standard pre-printed terms & conditions of the tenderers shall not be considered valid.
5. Bidder to submit 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.
6. Unsolicited fresh/ revised price bids shall not be entertained.
7. Tender will be opened at **03.00 PM on 18/04/2017**.
8. 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.
9. 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.

Please reply to:
PEM -Power Sector
PPEI Building,
BHEL House
HRD & ESI Complex,
Plot-25, Sector-16-A NOIDA – 201301

Phone: 0120-4213591
Fax : 0120-4329026
e-mail: ncsharma@bhelpem.co.in

Regd. Office:

Siri Fort
New Delhi - 110049



Bharat Heavy Electricals Limited
(A Govt. Of India Undertaking)
PROJECT ENGINEERING MANAGEMENT

Enq No.: PE/PG/RTC/E-5553/2017

Date: 05.04.2017

10. **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).

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 e-procurement sealed bid already submitted to BHEL"

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

The Bidders has to quote the Single Price (i.e. Total Cost to BHEL) in Reverse Auction i.e. Price mentioned in Sl. no-A.8, column -10 for indigenous bidders 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.

Various Conditions, arrived after 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')

Please reply to:
PEM -Power Sector
PPEI Building,
BHEL House
HRD & ESI Complex,
Plot-25, Sector-16-A NOIDA – 201301

Phone: 0120-4213591
Fax : 0120-4329026
e-mail: ncsharma@bhhelpem.co.in

Regd. Office:

Siri Fort
New Delhi - 110049



Bharat Heavy Electricals Limited
(A Govt. Of India Undertaking)
PROJECT ENGINEERING MANAGEMENT

Enq No.: PE/PG/RTC/E-5553/2017

Date: 05.04.2017

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

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.

11. **Tenders should be submitted ONLINE via e-Procurement System only**, however, all correspondence thereof, shall be addressed to the undersigned by name & designation and sent at the following address :

Mr. N.C Sharma, Sr.ENGR/MM
e-mail : ncsharma@bhelpem.co.in
Ph. No. 0120- 4213591

Mr. I P Singh, Sr. Mgr./ CMM
e-mail: INDRA@bhelpem.co.in
Ph. No. 0120-4368749

However, for **Technical clarifications**, following persons may be contacted:

Mr. GAURAV DIXIT, Sr. ENGR./MPL
e-mail: gauravdixit@bhelpem.co.in
Ph. No.0120-4283503

Ms RASHMI PRASAD, MGR/MPL
e-mail : rashmiprasad@bhelpem.co.in
Ph. No.0120- 4368943

12. 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.
13. Any taxes and duties applicable on the date of bid but not quoted by the bidders shall be to the bidder account.
14. Delivery terms for dispatches shall be FOR Dispatch Station.
15. CIF is not available for this package.
16. Bidders to submit their offers strictly in line with the enclosed Price Format (Annexure-I).
17. This enquiry is subject to Conditions/ limits if any imposed in PMD / Vendor registration.
18. Procurement of the subject package shall be done through e-procurement.
19. All corrigenda, addenda, amendments, time extensions, clarifications etc. to the tender will be hosted on EPS website (<https://bheleps.buyjunction.in>), BHEL website (www.bhel.com), BHEL-PEM website (www.bhelpem.com) & CPP Portal. Bidders should regularly visit websites to keep themselves updated.
20. Foreign and indigenous bidders participating through open tender will necessarily have to buy class III DSCs issued by the certifying authorities in India for future tenders. Basic procedure /checklist has been uploaded on www.bhel.com for participating in tender enquires through e-procurement.

Please reply to:
PEM -Power Sector
PPEI Building,
BHEL House
HRD & ESI Complex,
Plot-25, Sector-16-A NOIDA – 201301

Phone: 0120-4213591
Fax : 0120-4329026
e-mail: ncsharma@bhelpem.co.in

Regd. Office:

Siri Fort
New Delhi - 110049



Bharat Heavy Electricals Limited
(A Govt. Of India Undertaking)
PROJECT ENGINEERING MANAGEMENT

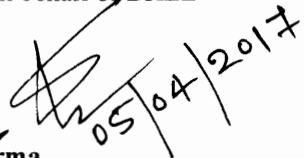
Enq No.: PE/PG/RTC/E-5553/2017

Date: 05.04.2017

21. 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.

NOTE: In case you are not making an offer against this enquiry, you are requested to send a regret letter so as to reach us on or before the due date.

Thanking you,
Yours faithfully,
For and on behalf of BHEL


N.C Sharma
Sr.ENGR/ MM

Enclosures:

- a) NIT (this letter itself)
- b) Technical Specification No. PE-TS-020-100-M010
- c) Annexure-I: Price Format
- d) Annexure-II: Special Conditions of Rate Contract (SCC).
- e) Annexure-III: List of prospective projects
- f) Annexure-IV: PQR (Pre-qualifying Requirement)
- g) Cost of Withdrawal sheet (Annexure-II of GCC Rev. 06) & PBG Format

Please reply to:
PEM -Power Sector
PPEI Building,
BHEL House
HRD & ESI Complex,
Plot-25, Sector-16-A NOIDA – 201301

Phone: 0120-4213591
Fax : 0120-4329026
e-mail: ncsharma@bhelpem.co.in

Regd. Office:

Siri Fort
New Delhi - 110049

PRICE SCHEDULE FORMAT- RATE CONTRACT FOR STEAM TRAPS										ANNEXURE-I	
S.No	Description of equipment / item	Size(NB)	Body Material	Quantity (nos.)	UNIT PRICE EX-WORKS (DULY PACKED) (Rs)	TOTAL PRICE EX-WORKS (DULY PACKED) (Rs)	ED @ % (including cess) (Rs.)	CST @ % (Rs) against form E	FREIGHT CHARGES @ % of Ex- work (Including Service Tax) (Rs.)	TOTAL F.O.R. SITE PRICE (Rs.)	% weightage of ex-works value for each item for total BOQ at col. 4
	1	2	3	4	5	6	7	8	9	10	11
A.1	THERMODYNAMIC STEAM TRAP	15	SS	290	Derived	Derived	% TO BE QUOTED	% TO BE QUOTED		Derived	20.26
A.2	THERMODYNAMIC STEAM TRAP	(_ _ _ _)	AS	17	Derived	Derived	% TO BE QUOTED	% TO BE QUOTED		Derived	13.63
A.3	INVERTED BUCKET TRAP	25	CS	14	Derived	Derived	% TO BE QUOTED	% TO BE QUOTED		Derived	5.82
A.4	BALL FLOAT STEAM TRAP	25	CS	9	Derived	Derived	% TO BE QUOTED	% TO BE QUOTED	% TO BE QUOTED	Derived	3.00
A.5	EXTERNAL Y-TYPE STRAINER	25	CS	23	Derived	Derived	% TO BE QUOTED	% TO BE QUOTED		Derived	1.80
A.6	THERMOSTATIC STEAM TRAP	(_ _ _ _)	SS	111	Derived	Derived	% TO BE QUOTED	% TO BE QUOTED		Derived	38.38
A.7	THERMOSTATIC STEAM TRAP	(_ _ _ _)	AS	17	Derived	Derived	% TO BE QUOTED	% TO BE QUOTED		Derived	17.11
A.8	Grand Total (sl. A.1 to A.7):					To be quoted	Derived	Derived	Derived	Derived	
Note:	For detailed design parameters & material of construction refer pages 1,2,3 and 4 of Datasheet-A of Technical specification										
1	For item's at S.No. 2,6 and 7, Bidder to Quote the size offered and the same shall be followed during Contract. Price quoted to be inclusive of matching pieces to match with connecting pipe size as per Datasheet-A.										
2											
3	CS:Carbon Steel, AS: Alloy Steel,SS-STAINLESS STEEL.										
4	Bidders are also required to inform full CST & VAT value in case of BHEL is not able to provide forms to avail concessional taxes (it is for future reference only).										
5	Bidder to quote individually against all the items mentioned in the Priced schedule. Offers with incomplete price schedule are liable to get rejected.										
6	Value is to be filled only where "to be quoted" is mentioned and for other columns where "derived" is mentioned same shall be derived by BHEL as per % allocation fixed against each item.										
7	Bidder to note that total price indicated above at A.8 shall be considered for evaluation and hence should be complete in all respect for the full scope defined and considering all terms and conditions agreed.										
	(Bidder's Seal & Sign)										

Annexure-II- Special Condition of Rate Contract for Steam Traps

1. BHEL/PEM intends to enter into Rate Contract for the tendered qty. of Steam Traps for a period of two year. The Rate Contract shall come into force from the date of issue of Purchase order for Rate Contract. Validity for ordering shall be two year from the 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 units 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 year.
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-TS-020-100-M010, 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 web site <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.



Annexure-III

List of prospective projects:

1. 1X800 MW VIJAYWADA APGENCO TPP
2. 1X800 MW KRISHNAPATNAM APPDCL TPP
3. 4x270 MW MANUGURU TPP
4. 1X250 MW ROURKELA THERMAL POWER STSTION
5. 1X525 MW TUTICORIN TPS
6. 2X800MW UPPUR STPP
7. 2X660MW ENNORE SEZ STPP
8. 1X800MW TANGEDCO NORTH CHENNAI TPP
9. 1X800MW WANAKBORI TPP EXT-8



Annex - IV

	PRE - QUALIFYING REQUIREMENTS	DOCUMENT NO: PE-TS-020-100-M056
		REVISION NO: 00 DATE: 30.03.2017
		SHEET: 1 of 2

Standard Document No.: PE-TS-999-000-M056

Enquiry No (To be filled by CMM):
Project: Framework Agreement
Package: Steam Traps

CRITERIA FOR EVALUATION (TECHNICAL / FINANCIAL):

1. Technical Pre-Qualifying Requirements:

1.1 The bidder should have designed, in-house manufactured, tested, inspected and supplied traps (as mentioned below) for use in a power plant or for similar application.

a. Steam traps package

Category -A: SS/CS/AS thermodynamic Steam traps with min.15NB size(with integral strainer)

Or

SS/CS/AS thermostatic steam traps with min. 15NB size (with integral strainer);

Category-B: SS/CS Inverted bucket steam traps and external 'Y' type strainer of min. 25NB size;

Or

SS/CS Ball float steam traps and external 'Y' type strainer of min. 25NB size.

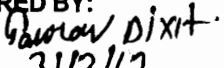
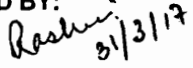
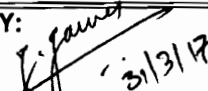
Supplier to fulfill the PQR of each category individually.

1.2 The item(s) mentioned in point 1.1 should have performed successfully for atleast one year. To establish meeting this requirement, the bidder shall conform to any one of the following clauses:

- (i) Execution of two purchase orders for different End-users with the item(s) performing successfully for one (1) year from date of commissioning. Different projects of a customer shall be considered as different End-users.
- (ii) Minimum one (1) repeat contract from two (2) different Purchasers (i.e. 2 Nos of Purchase orders from each purchaser). A contract shall be considered as repeat, when the second contract is given by the same purchaser after lapse of minimum one (1) year from supply completion of first contract.
- (iii) Execution of one (1) purchase order as per sl. no. (i) above from one End-user and one (1) repeat contract from another Purchaser as per sl. No. (ii) above.
- (iv) Three (3) repeat contracts from one (1) Purchaser. Second and third repeat contract shall be after lapse of minimum one (1) & two (2) years respectively from supply completion of first contract.

1.3 The bidder to furnish the following documents, as applicable, in support of the above:

- a) For point 1.2(i): Performance certificates from End-user (duly signed & dated) specifying that the product is performing successfully for one (1) year from date of commissioning along with correlated purchase order(s).
- b) For point 1.2 (ii) & (iv): Purchase order(s), Material dispatch clearance certificate (MDCC)/ Material receipt certificate (MRC)/Lorry receipt (LR).

PREPARED BY:  NAME: Gaurav Dixit DESIGNATION: Sr. Engr. DEPT.: PS-PEM/ MPL	REVIEWED BY:  NAME: Rashmi Prasad DESIGNATION: MGR. DEPT.: PS-PEM/ MPL	APPROVED BY:  NAME: JACOB JAMES DESIGNATION: DH(MPL & IPDS)
---	---	--



PRE - QUALIFYING REQUIREMENTS

DOCUMENT NO: PE-TS-020-100-M056

REVISION NO: 00 DATE: 30.03.2017

SHEET: 2 of 2

Note: In case vendor has executed contract (s) for BHEL-PEM, internal assessment by BHEL-PEM shall be considered for evaluation for satisfactory performance. For this, vendor to submit a request along-with relevant documents.

1.4 In addition to above, bidder should have the following facilities for different type & material of max. size as per BHEL requirement as mentioned in data sheet-A of technical specification:

- a) Capability of designing and manufacturing of the item(s).
- b) In-house testing facilities for carrying out tests as per relevant standards & Quality plan. In case, the in-house testing facilities are not available, then bidder shall furnish undertaking that test(s) will be carried out from govt. approved lab or test house recognized by reputed customers.

Bidder to submit supporting documents (Purchase order (s), Certificate indicating capacity and details/ undertaking of manufacturing & testing facilities) for point (a) & (b) above.

1.5 To establish business continuity, bidder is required to submit atleast two (2) Purchase orders for any of the item(s) as specified in data sheet-A of technical specification with minimum size of 15NB in last 3 (three) years prior to the date of bid submission defined by BHEL-PEM for each category mentioned in clause no. 1.1 above.

2. Supplier to also comply with general PQR available at internet site of BHEL-PEM.

PREPARED BY:

Gaurav Dixit
31/3/17

NAME: Gaurav Dixit
DESIGNATION: Sr. Engr.
DEPT.: PS-PEM/ MPL

REVIEWED BY:

Rashmi
31/3/17

NAME: Rashmi Prasad
DESIGNATION: MGR.
DEPT.: PS-PEM/ MPL

APPROVED BY:

J. James
31/3/17

NAME: JACOB JAMES
DESIGNATION: DH (MPL & IPDS)

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.

FRAMEWORK AGREEMENT

TECHNICAL SPECIFICATION

FOR

STEAM TRAPS

SPECIFICATION NO. PE-TS-020-100-M010



**BHARAT HEAVY ELECTRICALS LIMITED, POWER SECTOR
PROJECT ENGINEERING MANAGEMENT
NOIDA, INDIA**

Gink

	TECHNICAL SPECIFICATION STEAM TRAPS		SPECIFICATION NO. PE-TS-020-100-M010
			SECTION: -
			REV. NO.: 00 DATE: 23.03.17
			SHEET 1 OF 1

CONTENTS

S No.	SECTION	TITLE	NO. OF SHEETS
1.	SECTION-I	SPECIFIC TECHNICAL REQUIREMENTS	3
2.	SECTION-II	i) DATA SHEET-A	4
		ii) QUALITY PLAN	12
		iii) COMPLIANCE SHEET	1

	SPECIFICATION NO. PE-TS-020-100-M010	
	SECTION: -I	
	REV. NO.: 00	DATE: 23.03.17
	SHEET 1 OF 1	

SECTION-I

SPECIFIC TECHNICAL REQUIREMENTS

	SPECIFIC TECHNICAL REQUIREMENTS STEAM TRAPS	SPECIFICATION NO. PE-TS-020-100-M010	
		SECTION: I	
		REV. NO.: 00	DATE: 23/03/2017
		Sheet 1 of 3	

1. GENERAL

- 1.1 The steam traps shall meet the technical requirements and conform to the requirements of this Section-A and Data sheet A of Section B. However, in the event of contradictions between Section -A & Section -B/ Data sheet A, Section -A will prevail.
- 1.2 The technical requirements for steam traps shall, in general, be as per the attached Data sheets A of Section B.

2. SCOPE OF SUPPLY

- 2.1 The steam traps (Thermodynamic, Thermostatic, Inverted Bucket and Ball float type along with strainer) shall be supplied as per Data sheets A of Section B. For detail refer the same.
- 2.2 Commissioning spares, if any.
- 2.3 Mandatory spares as applicable depending upon the project requirement.

3. DESIGN REQUIREMENTS AND CONSTRUCTION FEATURES

- 3.1 The traps covered in the specification shall be of Thermodynamic, Thermostatic, Inverted Bucket and Ball float type with auto-drain arrangement conforming to supplier's own proven design.
- 3.2 All traps shall be with integral/external strainer designed suitably to prevent the internals of the trap from damage due to dirt etc.
- 3.3 Straining area of strainer shall be kept as minimum four times of the pipe cross-sectional area.
- 3.4 The traps should be suitable for horizontal/vertical mounting with internals easily accessible and replaceable.
- 3.5 Arrow showing inlet should be cast on the body of traps and strainers.
- 3.6 Wherever steam traps are coming under purview of IBR, the relevant stipulations of IBR shall be applicable for compliance.
- 3.7 The trap cover shall be such that it can be removed without breaking the inlet or discharge pipe.
- 3.8 On line cleaning of the strainer element shall also be possible.
- 3.9 All steam traps and strainers shall be with socket welded ends as per ANSI B16.11.
- 3.10 Ball Float type Steam Traps shall be provided with thermostatic air vent (pressure balance type).
- 3.11 Sizes of steam traps and strainers covered herein are from 15 mm Nb to 25mm NB with socket welded (SW) end connection. Seat diameter for Inverted Bucket & Ball Float trap shall be selected based on the required maximum condensate flow rate & working pressure which will be indicated at ordering stage.
- 3.12 A metallic (stainless steel plate 2mm thick) nameplate shall be fitted on each valve. Nameplate inscription required for each valve shall be indicated at the contract stage. Inscriptions shall be engraved 1 mm deep filled with enamel paint.

4. MATERIALS

- 4.1 The materials of construction of main parts of traps shall be specified in Data sheet-A.
- 4.2 The materials of construction of the remaining parts shall be suitable for the service conditions shall be subject to approval of the purchaser.
- 4.3 Materials used in manufacture of traps shall be of tested quality.

	SPECIFIC TECHNICAL REQUIREMENTS STEAM TRAPS	SPECIFICATION NO. PE-TS-020-100-M010	
		SECTION: I	
		REV. NO.: 00	DATE: 23/03/2017
		Sheet 2 of 3	

5. TESTING AND INSPECTION

- 5.1 The items covered under this contract shall be subjected to inspection, testing and quality surveillance as per the quality plans attached with this specification. The Inspection Agency shall, at all reasonable times have access to Vendor's works, Quality Control records and all facilities as reasonably required for carrying out the inspection and testing efficiently, and these shall be provided by the vendor free of cost.
- 5.2 The minimum NDT/testing and inspection requirements for traps shall be as per the attached Quality Plan. However, in case of order, final inspection and testing shall be carried out as per the final approved (By BHEL/Customer) quality plan without any price implications.
- 5.3 All inspection and testing shall be carried out by BHEL and CUSTOMER (if necessary). In case inspection is by both BHEL and CUSTOMER, then the inspection can be carried out jointly or separately, which will be informed later.

6. EXCLUSIONS

Erection & Commissioning of equipment at site

7. SURFACE PREPARATION & PAINTING

- 7.1 The surface preparation of all exterior and interior surfaces of valves shall include the following:
 - a) Removal of oil, grease and dirt.
 - b) Removal of rust and scale etc.
 - c) Sand blasting/ shot blasting.
- 7.2 Surface preparation shall be as per SSPC-SP-3/ Power Tool Cleaning followed by 2 coat of Heat Resistance Aluminium paint conforming to IS 13183 Gr. I or equivalent, paint shade Aluminium and total DFT of paint will be equal to 80 microns minimum.

8. PACKING INSTRUCTIONS:

- a) Each trap shall be drained, cleaned, prepared and suitably protected in such a way so as to minimize the possibility of damage and deterioration during transit and storage.
- b) The trap shall be dispatched in total assembled form.
- c) Body ends shall be suitably sealed to protect them against damage during transit and storage.
- d) Trap Tag Nos. shall be incorporated in all the dispatch documents.
- e) Proper care shall be taken to avoid damage to the finished surface during transit.
- f) All the traps shall be packed suitably in wooden cases in order to avoid damage during transit and also during storage at site in tropical climate conditions for a period of 15-18 months.

9. SPARES

- a) **Mandatory Spares:** These shall be as per Data Sheet-A.
- c) Order for the spares may be placed simultaneously or otherwise at the option of purchaser.

	SPECIFIC TECHNICAL REQUIREMENTS STEAM TRAPS	SPECIFICATION NO. PE-TS-020-100-M010	
		SECTION: I	
		REV. NO.: 00	DATE: 23/03/2017
		Sheet 3 of 3	

10. DOCUMENTS TO BE SUBMITTED ALONG WITH OFFER

Bidder shall submit the following documents duly filled, signed and stamped along with the bid:

- a) Compliance sheet
- b) Documents as per the list indicated in the NIT.

The above are the only documents which will be used for technical evaluation unless other documents are asked for during technical clarifications. Any other technical document enclosed with the bid shall be ignored for the purpose of technical evaluation. All other documents attached with the specification are for information of the vendor and no comments shall be marked on these.

11. DOCUMENTS TO BE SUBMITTED AFTER AWARD OF FRAMEWORK AGREEMENT:

- 11.1 Complete cross sectional arrangement of the valve.
- 11.2 Binding dimensions, dismantling clearances & weights.
- 11.3 Bill of material incorporating all the materials of construction of various parts and also specifying the IS/BS/ASTM standards to which the materials conform to.
- 11.4 Standard Quality Plan duly signed with bidder's company seal as a token of acceptance by the bidder.

The above drawings/ documents will be considered as reference documents for different projects PO which will be placed later.

Gdixit.

	TECHNICAL SPECIFICATION STEAM TRAPS		SPECIFICATION NO. PE-TS-020-100-M010
			SECTION: -II
	REV. NO.: 00		DATE: 23.03.17
	SHEET 1 OF 1		

SECTION-II

- DATA SHEET – A
- QUALITY PLAN
- COMPLIANCE SHEET

Gixi~

DATASHEET - A																		
REQUIREMENT OF STEAM TRAPS																		
FOR FRAMEWORK AGREEMENT																		
SPECIFICATION NO.: PE-TS-020-100-M010																		
VOL: IIB																		
SECTION: II																		
REV:00 DATE: 23-03-17																		
SHEET 1 OF 4																		
SL. NO.	TYPE	SIZE (NB)	SERVICE DESCRIPTION	SERVICE	DESIGN PRESSURE (KG/CM2G)	DESIGN TEMP(deg C)	OPERATING PRESSURE AT INLET (KG/CM2) (A)	OPERATING PRESSURE AT D/S OF TRAP (KG/CM2) (A)	MAX. CONDENSATE RATE (KG/HR)	FACTOR OF SAFETY	BODY	MATERIAL BODY INTERNALS	PIPE OD (MM)	PIPE THICKNESS (MM)	END CONN	BLOW OFF CONNECTION	IBR REQUIRED	TOTAL QUANTITY (MAIN)
1	2				6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	THERMODYNAMIC STEAM TRAP	15	POWER CYCLE	INTERMITTENT	20	395	12.5	0.1 (VAC)	10		SS	SS	33.4	4.55	SW	YES-PLUGGED	YES	290
2	THERMODYNAMIC STEAM TRAP	\$	POWER CYCLE	INTERMITTENT	73.5	380	66	0.1 (VAC)	10		AS	SS	33.4	4.55	SW	YES-PLUGGED	YES	17
3	INVERTED BUCKET TRAP	25	DRAIN LINE	CONTINUOUS	7/VAC	110	0.95 (VAC)	0.1 (VAC)	700		CS	SS	88	5.49	SW	YES-PLUGGED	NO	14
4	BALL FLOAT STEAM TRAP	25	DRAIN LINE	CONTINUOUS	7/VAC	110	0.95 (VAC)	0.1 (VAC)	700		CS	SS	88	5.49	SW	YES-PLUGGED	NO	9
5	EXTERNAL Y-TYPE STRAINER	25	DRAIN LINE	CONTINUOUS	7/VAC	110	0.95 (VAC)	0.1 (VAC)	700		CS	CS	33.4	4.55	SW	YES-PLUGGED	NO	23
6	THERMOSTATIC STEAM TRAP	\$	POWER CYCLE	INTERMITTENT	20	350	12.5	0.1 (VAC)	10		SS	SS	33.4	4.55	SW	YES-PLUGGED	YES	111
7	THERMOSTATIC STEAM TRAP	\$	POWER CYCLE	INTERMITTENT	73.1	415	12.5	0.1 (VAC)	10		AS	SS	33.4	4.55	SW	YES-PLUGGED	YES	17
TOTAL																		481
NOTES:																		

NOTES:

- For detailed material of construction refer pages 2 and 3 of this DataSheet-A.
- \$ - Bidders to offer minimum size of thermodynamic or thermostatic steam trap meeting the parameters mentioned in the above DataSheet-A. Bidder to offer Suitable matching pieces to match with connecting pipe size.
- Painting: Heat resistant aluminium paint to IS-13183 Gr.I. TOTAL DFT-80 MICRONS.
- Socket Welding (SW) will be as per ASME-B16.11.
- CS: Carbon Steel, AS: Alloy Steel, SS-STAINLESS STEEL, VAC: Vacuum, ATM: Atmospheric
- Mandatory spare consists of complete valve without commissioning spares. Mandatory spare mentioned as complete valve without commissioning spares shall be considered as identical to main valve excluding commissioning spares

PREPARED BY

SR. ENGR. MPL

CHECKED BY

SR ENGR (MPL)

APPROVED BY

MGR(MPL)

Colan

	DATA SHEET-A STEAM TRAPS		SPECIFICATION NO. PE-TS-020-100-M010
			SECTION : II
			REV. NO.: 00
			Sheet 2 of 4 DATE: 23.03.17

1. Thermodynamic type steam trap with integral strainer (Variant-I)

Maximum Working Pressure: 55 kg/cm² and Vacuum

Maximum Working Temperature: 427°C

Hydraulic Test Pressure: 110 kg/cm²

Whether Governed by IBR: Yes

MATERIAL OF CONSTRUCTION (SS THERMODYNAMIC STEAM TRAP)

S.NO.	PART NAME	MATERIAL REQUIRED
1	Body	Stainless Steel ASTM A 743 Gr CA 40(hardened)
2	Cap and Plug	ASTM A 743 Gr CA 40
3	Trap Disc	AISI420 (Equi. CA 40) (Hardened to 40 RC differential hardness shall be maintained for disc and body seats).
4	Body seat	Stainless Steel ASTM A 743 Gr. CA 40
5	Gasket	Non asbestos fiber
6	Strainer	SS 304 (20 mesh screen)
7	Name plate	SS 316 (2 mm thick)

2. Thermodynamic type steam trap with integral strainer (Variant-II)

Maximum Working Pressure: 250 kg/cm²

Maximum Working Temperature: 510°C

Hydraulic Test Pressure: 500 kg/cm²

Whether Governed by IBR: Yes

MATERIAL OF CONSTRUCTION (AS THERMODYNAMIC STEAM TRAP)

S.NO.	PART NAME	MATERIAL REQUIRED
1	Body, Seat/Disc Cover and Strainer cover	ASTM A 182 Gr. F22 CL.3
2	Disc seat and Disc	ASTM A 681 Gr.D2+Stellited
3	Gasket	SWG SS304 with Graphite
4	Strainer	SS 304 (20 mesh screen)
5	Bolts/Nuts	ASTM A193 Gr.B7/ASTM A194 Gr.2H
6	Name plate	SS 316 (2 mm thick)

3. Inverted bucket steam trap with external Y-type strainer

Maximum Working Pressure: 22 kg/cm² (maximum) and Vacuum

Maximum Working Temperature: 427°C

Hydraulic Test Pressure: 44 kg/cm²

Whether Governed by IBR: No

	DATA SHEET-A STEAM TRAPS	SPECIFICATION NO. PE-TS-020-100-M010	
		SECTION : II	
		REV. NO.: 00	
		Sheet 3 of 4	DATE: 23.03.17

MATERIAL OF CONSTRUCTION (INVERTED BUCKET STEAM TRAP)

S.NO.	PART NAME	MATERIAL REQUIRED
1	Body and cover	Cast Carbon Steel as per ASTM A216 Gr.WCB
2	Valve, Valve seat	AISI 420(furnace hardened to 50 RC). Differential hardness Shall be maintained between seats
3	Valve lever, Bucket, Bucket clip	AISI 304
4	Bolts/Nuts	ASTM A193 Gr.B7/ASTM A194 Gr.2H
5	Gasket	Non asbestos fiber
6	Name plate	SS 316 (2 mm thick)

4. Ball float steam trap with external Y-type strainer

Design Pressure: 22 kg/cm² (maximum) and Vacuum

Design Temperature: 427°C

Hydraulic Test Pressure: 44 kg/cm²

Whether Governed by IBR: No

MATERIAL OF CONSTRUCTION (BALL FLOAT STEAM TRAP)

S.NO.	PART NAME	MATERIAL REQUIRED
1	Body and cover	Cast Carbon Steel as per ASTM A216 Gr.WCB
2	Valve, Valve seat	AISI 420(furnace hardened to 50 RC). Differential hardness Shall be maintained between seats
3	Float	AISI 304
4		AISI 304
5	Bolts/Nuts	ASTM A193 Gr.B7/ASTM A194 Gr.2H
6	Gasket	Non asbestos type
7	Name plate	SS 316 (2 mm thick)

MATERIAL OF CONSTRUCTION (EXTERNAL Y-TYPE STRAINER)

S.NO.	PART NAME	MATERIAL REQUIRED
1	Body and Strainer cap	ASTM A216 Gr.WCB
2	Strainer	SS 304 (0.8 mm perforated with 20 mesh screen)
3	Gasket	Non asbestos type
4	Name plate	SS 316 (2 mm thick)

Grixu

	DATA SHEET-A STEAM TRAPS	SPECIFICATION NO. PE-TS-020-100-M010	
		SECTION : II	
		REV. NO.: 00	
		Sheet 4 of 4	DATE: 23.03.17

5. Thermostatic type steam trap with integral strainer

Design Pressure: Refer page 1 of Data Sheet-A.

Design Temperature: Refer page 1 of Data Sheet-A.

Hydraulic Test Pressure: 1.5 Times the pressure at which Steam trap is designed.

Whether Governed by IBR: Yes

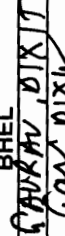
MATERIAL OF CONSTRUCTION (CARBON STEEL THERMOSTATIC STEAM TRAP)

S.NO.	PART NAME	MATERIAL REQUIRED
1	Body and Cover	ASTM A 105
2	Thermostatic Element	Stainless Steel (AISI 304)
3	Valve seat	Stainless Steel (hardness min. 250BHN)
4	Gasket	Spiral wound SS and Graphite (Asbestos Free)
5	Strainer	Stainless Steel (Perforated)
6	Bolts/Nuts	ASTM A193 Gr.B7/ASTM A194 Gr.2H
7	Internals	Stainless Steel
8	Name plate	SS 316 (2 mm thick)

Gina

		QUALITY PLAN				CUSTOMER: BIDDER/VENDOR		PROJECT: FRAMEWORK AGREEMENT QP NO. PE-QP-999-142-M002		REV. 01 DT25-01-2008		SPEC. NO.: PE-TS-020-100-M010 SPEC. TITLE: STEAM TRAPS	
						SYSTEM		POWER CYCLE		ITEM: THERMODYNAMIC STEAM TRAPS		SECTION	
S.NO.	COMPONENT/ OPERATION	SHEET 1 OF 2	CHARACTERISTICS CHECKED	CATE- GORY	TYPE/METHOD OF CHECK	EXTENT OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	P	W	V	REMARKS

1.0	RAW- MATERIAL												
1.1	BODY,CAP,DISC AND PLUG	1. PHYSICAL CHEMICAL PROPERTIES	MA	PHYS. CHEM. ANALYSIS	ONE/HEAT /BATCH	APPD. DRG./ TECH. SPEC.	APPD. DRG./ TECH. SPEC.	TEST CERT.	3/2	2	1		CORRELATION REQD (except disc & plug)
		2. SURFACE DEFECTS	MA	VISUAL	100%	MSS-SP-55	MSS-SP-55	INSPN. REPORT	3/2	-	2,1		
		3. DIMENSIONS	MA	MEASUREMENT	100%	APPD. DRG./ TECH. SPEC.	APPD. DRG./ TECH. SPEC.	-DO-	3/2	-	-		
1.2	SCREEN	1.CHEMICAL PROPERTIES AND MESH SIZE	MA	CHEMICAL TEST & MEASUREMENT	ONE PER LOT	APPD. DRGS./ DATA SHEET	APPD. DRGS./ DATA SHEET	LAB REPORT/ INSP. REPORT	3/2	2	2,1		MESH SIZE AND MESH PERFORMANCE DIA. SHALL ALSO BE CHECKED.
2.0	MACHINING												
2.1	ALL COMPONENTS	1. DIMENSIONS	MA	MEASUREMENT	100%	-DO-	-DO-	INSP. REPORT	3/2	-	-		
		2. SURFACE DEFECTS	MA	VISUAL EXAM.	100%	MSS-SP-55	MSS-SP-55	-DO-	3/2	-	-		
		3. HARDNESS OF DISC	CR	HARDNESS TEST	100%	APPD. DRGS./ DATA SHEET	APPD. DRGS./ DATA SHEET	-DO-	3/2	2	2,1		
		4. DISC SEAT & BODY SEAT	CR	SURFACE DEFECT	100%	ASTM E165	NO DEFECTS	-DO-	3/2	2	2,1		
		5. CONTACT SURFACE BETWEEN BODY SEAT AND DISC	CR	BLUE MATCHING	100%	-DO-	UNIFORM METAL TO METAL CONTACT	INSP REPORT	3/2	2	1		BATCH WISE
3.0	ASSEMBLY INSPECTION	1. CLEANING & DEBURRING	MA	VISUAL	100%	TECH SPEC.	TECH SPEC	LOG BOOK	3/2	-	-		
		2. DIMENSIONS	CR	MEASUREMENT	100%	-DO-	APPD. DRGS./ DATA SHEET	INSP. REPORT	3/2	2,1	1		
		3. LEAK TIGHTNESS OF BODY	CR	HYDRAULIC TEST	100%	APPD. DRG./ TECH. SPEC./ DATA SHEET	NO LEAKAGE	TC/IBR FORMAT	3/2	2,1	1		

BHEL  22/3/17		PARTICULARS NAME SIGNATURE DATE		BIDDER/VENDOR BIDDER'S/VENDOR'S COMPANY SEAL	
---	--	---	--	--	--

		QUALITY PLAN		CUSTOMER: BIDDER/VENDOR		PROJECT: FRAMEWORK AGREEMENT		SPEC. NO : PE-TS-020-100-M010							
						QP NO. PE-QP-999-142-M002	REV: 01 DT25-01-2008	SPEC. TITLE : STEAM TRAPS							
S.NO.	COMPONENT/ OPERATION	SHEET 2 OF 2	CHARACTERISTICS CHECKED	SYSTEM	CATE- GORY	TYPE/METHOD OF CHECK	POWER CYCLE	EXTENT OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	SECTION	AGENCY	VOLUME	REMARKS

3.0	ASSEMBLY INSPECTION CONTD. (-----)	4. FUNCTION OF TRAP	CR	PERFORMANCE TESTING IN SIMULATED CONDITIONS (REF. ATTACHED TEST PROCEDURE)	10% (RANDOM) MIN. 2 NO.	APPD. DRG./ TECH. SPEC./ DATA SHEET	TECH. SPEC./ DATA SHEET/ APPD. DRG	TC/IBR FORMAT	2	1	1	TEST PROCEDURE TO BE SUBMITTED FOR REVIEW
4.0	SOCKET WELD ENDS	1.DIMENSIONS	CR	TEMPLATE	100%	APPD. DRG./ TECH. SPEC.	APPD. DRG./TECH. SPEC.	INSP. REPORT	2	1	1	
5.0	PAINTING	2. SURFACE DEFECTS	CR	PT	100%	ASTME 165	NO SURFACE DEFECTS	-DO-	2	1	1	
		SURFACE PREPARATION AND PAINTING	MA	VISUAL	100%	APPD DRG	APPROD DRG	-DO-	2	2	1	
6.0	PROVISION OF NAME PLATE & PACKING IN WOODEN CASE	AS PER TECH. SPEC.	MA	VISUAL	100%	APPD DRG./ TECH. SPEC.	APPD DRG./ TECH. SPEC.	(Soft copy of photographs)	3/2	-	1	

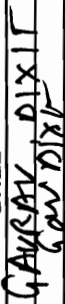
ABBREVIATIONS

CR= CRITICAL CHARACTERISTIC P= PERFORMED BY, W = WITNESSED BY V = VERIFIED BY

MA=MAJOR CHARACTERISTIC, 1= PURCHASER (BHEL) 2 = VENDOR, 3 = SUB VENDOR OF THE VENDOR

NOTE: SUCCESSFUL VENDOR SHALL SUBMIT FUNCTIONAL TEST PROCEDURE OF TRAP ALONG WITH QP IMMEDIATELY AFTER ORDER IS PLACED FOR APPROVAL.

*The Quantum of check to be witnessed is 10% or Min. 2 Nos. at random by BHEL/Customer & 100 % by Vendor for each type, Size & Rating.

BHEL  23/2/17	PARTICULARS		BIDDER/VENDOR
	NAME		
	SIGNATURE		
DATE			
			BIDDER'S/VENDOR'S COMPANY SEAL

QUALITY PLAN		CUSTOMER:		PROJECT:		FRAMEWORK AGREEMENT		SPEC. NO. : PE-TS-020-100-M010	
SHEET 1 OF 2		BIDDER/VENDOR		QP NO. PE-QP-999-142-M003		REV.01 DTD. 25-01-2008		SPEC. TITLE STEAM TRAP	
COMPONENT/ OPERATION		CHARACTERISTICS CHECKED		SYSTEM		ITEM Y-TYPE STEAM STRAINERS		SECTION VOLUME	
S.NO.	COMPONENT/ OPERATION	CATE- GORY	TYPE/METHOD OF CHECK	EXTENT OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY	REMARKS
								P W * V	

1.0	MATERIAL CONTROL	MA	PHYS TESTS	ONE/HEAT/ BATCH	APPD. DATA SHEET/ TECH. SPEC.	APPD. DATA SHEET/ TECH. SPEC.	TEST CERT.	3/2	2	1	CORRELATION REQD FOR BODY CAP ONLY
1.1	1. PHYS & CHEM PROPERTIES	MA	VISUAL	100%	MSS-SP-55	MSS-SP-55	INSPN. REPORT	3/2	2	1	
1.2	2. SURFACE DEFECTS	MA	CHEM. TESTS	1/SHEET	APPD. DATA SHEET/ TECH. SPEC.	APPD. DATA SHEET/ TECH. SPEC.	TEST CERT	3/2	2	1	
2.0	1. CHEM PROPERTIES	MA	MEASUREMENT	SAMPLE PIECE	--DO--	--DO--	INSPN REPORT	3/2	2	1	
2.1	2. MESH SIZE/ PERFORATION DIA.	MA									
3.0	1. WORKMANSHIP & FINISH	MA	VISUAL	100%	MFG DRG	MFG DRG	INSP REPORT	3/2	-	-	BATCH WISE
3.1	2. DIMENSIONS	MA	MEASUREMENT	100%	MFG DRG	MFG DRG	INSP REPORT	3/2	-	-	
3.2	1. WORKMANSHIP AND FINISH	MA	VISUAL	100%	APPD. DRG	APPD. DRG	INSPN. REPORT	2	2	-	
3.3	2. OVERALL DIMENSIONS	MA	MEASUREMENT	100%	--DO--	DO--	--DO--	2	2,1	1	
3.4	3. LEAK TIGHTNESS	CR	HYDROTEST AT 2 TIMES THE DESIGN PRESSURE	100%	APPD. DRG/ ECH. SPEC	NO LEAKAGE	I.B.R / T.C.	2	2,1	1	

BHEL		PARTICULARS		BIDDER/VENDOR	
Gaurav Dixit		NAME			
Gaurav Dixit		SIGNATURE			
23/3/17		DATE		BIDDER'S/VENDOR'S COMPANY SEAL	

-------------	--

1.	MATERIALS	1. PHYSICAL & CHEM. PROPERTIES	MA	PHYS. & CHEM. TEST	ONE /HEAT /HEAT BATCH 100%	APPD. DRG. / TECH. SPEC.	APPD. DRG. / TECH. SPEC.	TEST CERT.	3/2	2	1	CO-RELATED TCs SHALL BE FURNISHED.
1.1	BODY, COVER	2. HEAT TREATMENT	MA	REVIEW OF HT CHART	100%	APPD DRG. / TECH SPEC	RELEVANT STANDARD	H.T INTERNAL INSPN RECORDS	3/2	2	1	
		3. SURFACE DEFECTS	MA	VISUAL	100%	MSS-SP-55	MSS-SP-55	INSPN REPORT	3/2	2	1	
		4. DIMENSIONS	MA	MEASUREMENT	100%	MFG. DRG	MFG. DRG	INSPN REPORT	3/2	2	1	
1.2	BALL FLOAT WITH LEVER, VALVE, VALVE SEAT, PIVOT FRAME, SUPPORT FRAME, PIVOT PIN, VALVE SEAT GASKET	1. CHEM. PROPERTIES	MA	CHEM. TEST	ONE /HEAT /BATCH	APPD. DRG	APPD. DRG	TEST CERT	3/2	2	1	
		2. SURFACE DEFECTS	MA	VISUAL	100%	MSS-SP-55	MSS-SP-55	INSPN. REPORT	3/2	2	1	
1.3	THERMOSTATIC AIR VENT	1. MATERIALS	MA	REVIEW OF ALL TEST CERT. / MATL TCs	100%	MFG. DRG MANUFACTURER'S SPEC.	MFG. DRG MANUFACTURER'S SPEC.	INSPN REPORT	3/2	2	1	
1.4	FASTENERS	1. PHYS., CHEM. PROPERTIES	MA	PHYS., CHEM. TEST	ONE PER TYPE	APPD. DRG	APPD. DRG	TEST CERT	3/2	2	1	
2.0	IN-PROCESS											
2.1	ALL COMPONENTS	1. DIMENSIONS	MA	MEASUREMENT	100%	MFG. DRAWING	MFG. DRAWING	INT. INSPN. REPORT	3/2	-	-	
		2. SURFACE DEFECTS	MA	VISUAL	100%	-DO-	-DO-	INSPN. REPORT	3/2	-	-	

BHEL		PARTICULARS		BIDDER/VENDOR	
GAYLAX DIXIT		NAME			
GAYLAX DIXIT		SIGNATURE			
22/2/19		DATE			
				BIDDER'S/ VENDOR'S COMPANY SEAL	

QUALITY PLAN		CUSTOMER:		PROJECT:		FRAMEWORK AGREEMENT		SPEC. NO : PE-TS-020-100-M010	
SHEET 2 OF 3		BIDDER/VENDOR :-		Q.P. NO : PE-QP-999-142-M022		REV. 01 DTD 25-01-2008		SPEC. TITLE STEAM TRAPS	
CHARACTERISTICS CHECKED		SYSTEM :- GSC DRAINS, EJECTOR DRAINS TO CONDENSER SURGE PIPE		ITEM: BALL FLOAT STEAM TRAP WITH THERMOSTATIC AIR VENT (balance pressure type)		SECTION		VOLUME	
S.NO.	COMPONENT/ OPERATION	CATE- GORY	TYPE/METHOD OF CHECK	EXTENT OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY P W * V	REMARKS
3.0	VALVE, VALVE SEAT	CR	PENTRANT TEST	100%	ASTME-165	NO DEFECTS	INPN. REPORT LOG BOOK	2 2 1	
		MA	BLUE MATCHING	100%	SEATING SURFACE SHALL HAVE UNIFORM METAL TO METAL CONTACT			2 2 1	
3.1	VALVE & VALVE SEAT	CR	AIR/HYD.	100%	APPD. DRG	APPD. DRG.	INT. INSPN. REPORT	2 2 1	
3.2	COVER	MA	VISUAL	100%	--DO--	PROPER FITTING	INT. INSPN. REPORT	2 - -	
4.0	ASSEMBLY								
4.1	COMPLETE ASSEMBLY	MA	VISUAL & MEASUREMENT	100%	APPROVED DRAWING	APPROVED DRAWING	INSPN. REPORT	2 2.1 1	BATCH WISE
		CR	HYDRO. TEST AT 2 TIMES OF THE DESIGN PRESSURE	100%	APPD. DRG./TECH. SHEET	NO LEAKAGE	TEST CERT	3/2 1 1	
		CR	PERFORMANCE UNDER SIMULATED CONDITIONS	ONE PER LOT / SIZE	SMOOTH AND EFFECTIVE OPERATION OF TRAP	DRAINS OUT CONDENSATE ONLY AND NO STEAM	TEST CERT.	2 1 1	TEST PROCEDURE TO BE SUBMITTED FOR REVIEW
4.2	Flow capacity test (type test)	CR	Discharge flow	1 per pressure rating & orifice size trap	Appd. Flow capacity	Appd. Flow capacity	Type test certificate	3/2 2 1	TYPE TEST CERT FOR VERIFICATION, IF CARRIED OUT EARLIER FOR SAME SIZE, RATING OF TRAP & ORIFICE SIZE
5.0	END CONN.	CR	MEASUREMENT	100%	APPD. DRG./ TECH. SPEC	APPD. DRG./ TECH. SPEC	INSPN. REPORT	3/2 2 1	
BHEL		PARTICULARS		BIDDER/VENDOR					
GAYATHRI PIXIT		NAME							
GAYATHRI		SIGNATURE							
23/3/17		DATE		BIDDER'S/ VENDOR'S COMPANY SEAL					

		QUALITY PLAN		CUSTOMER:		PROJECT:		FRAMEWORK AGREEMENT		SPEC. NO : PE-TS-020-100-M010		
				BIDDER/VENDOR :-		Q.P. NO : PE-QP-999-142-M022		REV. 01 DTD 25-01-2008		SPEC. TITLE STEAM TRAPS		
SHEET 3 OF 3		SYSTEM :- GSC DRAINS, EJECTOR DRAINS TO CONDENSER SURGE PIPE		ITEM: BALL FLOAT STEAM TRAP WITH THERMOSTATIC AIR VENT (balance pressure type)		SECTION		VOLUME				
S.NO.	COMPONENT/ OPERATION	CHARACTERISTICS CHECKED	CATE- GORY	TYPE/METHOD OF CHECK	EXTENT OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	P	W	V	REMARKS

		2. SURFACE DEFECTS	CR	PENITRANT TEST	100%	ASTM E165	NO DEFECTS	INSPN REPORT	2	2	1	
6.0	PAINTING	1. SURFACE PREPARATION & UNIFORMITY OF PAINT	MI	VISUAL	100%	APPD. DRG./ TECH. SPEC.	APPD. DRG./ TECH SPEC.	INSPN REPORT	3/2	2	1	
7.0	VERIFICATION OF ALL PREVIOUS TEST CERTIFICATES	REVIEW OF ALL TEST CERTIFICATES/INSP. REPORTS AS PER TECH. SPEC.	MA	VISUAL	100%	TECH. SPEC.	TECH. SPEC.	INSPN REPORT	2	2	1	
8.0	PROVISION OF NAME PLATE & PACKING IN WOODEN CASES	AS PER TECHNICAL SPECIFICATION	MA	VISUAL	100%	--DO--	--DO--	(Soft copy of photographs)	2	2	1	

ABBREVIATIONS:- CR - CRITICAL MA - MAJOR MI - MINOR
1 = PURCHASER (BHEL) 2 = VENDOR 3 = SUB VENDOR OF THE VENDOR
P = PERFORMED BY W = WITNESSED BY V = VERIFIED BY

*The Quantum of check to be witnessed is 10% or Min. 2 Nos. at random by BHEL/Customer & 100 % by Vendor for each type, Size & Rating.

BHEL		PARTICULARS		BIDDER/VENDOR	
<i>Gufran Dixit</i> <i>Gas Division</i> <i>23/2/17</i>		NAME			
		SIGNATURE			
		DATE			
BIDDER'S/ VENDOR'S COMPANY SEAL					

		QUALITY PLAN		CUSTOMER:		PROJECT		FRAMEWORK AGREEMENT		SPEC. NO. : PE-TS-020-100-M010	
		SHEET 1 OF 3		BIDDER/VENDOR		Q.P. NO. PE-QP-999-142-M015		REV. 01 DTD. 25-01-2008		SPEC. TITLE : STEAM TRAP	
S. NO.	COMPONENT/ OPERATION	CHARACTERISTICS CHECKED	CATE- GORY	TYPE / METHOD OF CHECK	EXTENT OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY	REMARKS	
									P W * V		

1.	MATERIALS	MA	PHYS., CHEM. PROPS	ONE /HEAT / HT BATCH	APPROVED DRAWING/ TECH. SPECIFICATION SHEET	APPROVED DRAWING/ RELEVANT MATERIAL SPECIFICATION SHEET	TEST CERT. /INSP. REPORT	3/2	2	1	
1.1	BODY, COVER, VALVE, VALVE SEAT, BUCKET, VALVE LEVER, BUCKET CLIP & WEIGHT	MA	VISUAL	100%	MSS-SP-55	MSS-SP-55	INSPN. REPORT	3	2	1	
1.2	INTEGRAL STRAINER (IF APPLICABLE)	MA	CHEM. TESTS & MEASUREMENT	1/SHEET SAMPLE PIECE	APPD. DATA SHT. & TECH SPEC.	APPD. DATA SHT. & TECH SPEC.	TEST CERT. /INSP. REPORT	3	2	1	
2.0	IN-PROCESS										
2.1	ALL COMPONENTS	MA	MEASUREMENT	100%	MFG. DRAWING	MFG. DRAWING	LOG BOOK	3/2	-	-	BATCH WISE
		MA	VISUAL	100%	--DO--	--DO--	-DO-	3/2	-	-	
2.2	VALVE, VALVE SEAT	CR	PENTRANT TEST	100%	ASTME-165	NO DEFECTS	INSPN. REPORT	3/2	-	2,1	
		MA	TESTING	100%	APPD. DRG.	APPD. DRG.	INSPN. REPORT	3/2	-	2,1	
		MA	BLUE MATCHING	100%	SEATING SURFACES SHALL HAVE UNIFORM METAL TO METAL CONTACT		INSPN. REPORT	3/2	--	1	
3/0	SUB- ASSEMBLY										
3.1	VALVE & VALVE SEAT	CR	HYDRO/AIR TEST	100%	APPD. DRG	APPD. DRG.	TEST. CERT.	3/2	-	2,1	
3.2	COVER	MA	VISUAL	100%	--DO--	PROPER FITTING	LOG BOOK	3/2	-	-	

BHEL		PARTICULARS		BIDDER/VENDOR	
CAJRAV DIXIT <i>CAJRAV DIXIT</i>		NAME			
		SIGNATURE			
		DATE		23/3/19	
BIDDER'S/VENDOR'S COMPANY SEAL					

		QUALITY PLAN		CUSTOMER:		PROJECT:		FRAMEWORK AGREEMENT		SPEC. NO.: PE-TS-020-100-M010	
SHEET 2 OF 3		CHARACTERISTICS CHECKED		SYSTEM:		POWER CYCLE		QP NO PE-QP-999-142-M015 REV.01 DTD. 25-01-2008		SPEC. TITLE: STEAM TRAP	
COMPONENT/ OPERATION		CATEGORY		TYPE / METHOD OF CHECK		EXTENT OF CHECK		ITEM: INVERTED BUCKET STEAM TRAPS		SECTION VOLUME	
S. NO.		CHARACTERISTICS CHECKED		CATEGORY		TYPE / METHOD OF CHECK		EXTENT OF CHECK		REMARKS	

4.0	ASSEMBLY	MA	VISUAL & MEASUREMENT	100%	APPROVED DRAWING	APPROVED DRAWING	INSPN. REPORT	3/2	2,1	-	
4.1	COMPLETE ASSEMBLY	CR	HYDRO. TEST	100%	APPD. DRG./TECH. SPEC./DATA SHEET	NO LEAKAGE	TEST CERT.	3/2	2,1	-	IBR CERTIFICATE IF REQD. TO BE FURNISHED
		CR	PERFORMANCE TEST UNDER SIMULATED CONDITION	100%	TEST CHART	SMOOTH AND EFFECTIVE OPERATION OF TRAP	TEST CERT.	3/2	2,1	1*	TEST PROCEDURE TO BE SUBMITTED FOR REVIEW
4.2	Flow capacity test (type test)	CR	Discharge flow	1 per pressure rating & orifice size trap	Appd. Flow capacity	Appd. Flow capacity	Type test certificate	3/2	2	1	
5.0	SOCKET WELD ENDS	CR	TEMPLATE	100%	APPD. DRG./TECH. SPEC.	APPD. DRG.	INSPN. REPORT	2	2,1	1	BATCH WISE
6.0	PAINTING	CR	PT	100%	ASTM E 165	NO SURFACE DEFECTS	INSN. REPORT	2	2,1	-	
		MA	VISUAL	100%	TECH. SPEC.	TECH. SPEC.	INSPN. REPORT	3/2	2	1	
7.0	VERIFICATION OF ALL PREVIOUS TEST CERTIFICATES/ INSPN REPORTS	MA	VISUAL	100%	TECH. SPEC.	TECH. SPEC.	INSPN. REPORT	3/2	-	2,1	

BHEL		PARTICULARS		BIDDER/VENDOR	
NAME		SIGNATURE		BIDDER'S/VENDOR'S COMPANY SEAL	
DATE		23/3/17			

		QUALITY PLAN		CUSTOMER:		PROJECT :		SPEC. NO : PE-TS-020-100-M010	
SHEET 3 OF 3		BIDDER/VENDOR		SYSTEM :		QIP NO PE-OP-999-142-M015		REV.01 DTD. 25-01-2008	
COMPONENT/ OPERATION		CHARACTERISTICS CHECKED		CATE- GORY		TYPE / METHOD OF CHECK		INVERTED BUCKET STEAM TRAPS	
S. NO.		EXTENT OF CHECK		REFERENCE DOCUMENT		ACCEPTANCE NORMS		FORMAT OF RECORD	
		CHECK		DOCUMENT		NORMS		AGENCY	
								SECTION	
								VOLUME	
								REMARKS	

8.0	PROVISION OF NAME PLATE & PACKING IN WOODEN BOXES	AS PER TECHNICAL SPECIFICATION	MA	VISUAL	100%	TECH. SPEC./APPD. DRG.	TECH. SPEC./APPD. DRG.	(Soft copy of photographs)	3/2	-	-
-----	---	--------------------------------	----	--------	------	------------------------	------------------------	----------------------------	-----	---	---

NOTE:-

CR- P - 3 -	MEANS CRITICAL ACTIVITY PERFORMED BY SUB-VENDOR OF THE VENDOR	MA- W - 2 -	MEANS MAJOR ACTIVITY WITNESSED BY VENDOR	V - 1-	VERIFIED BY PURCHASER(BHEL)
-------------	---	-------------	--	--------	------------------------------

*The Quantum of check to be witnessed is 10% or Min. 2 Nos. at random by BHEL/Customer & 100 % by Vendor for each type, Size & Rating.

BHEL		PARTICULARS		BIDDER/VENDOR	
CAUTION DIXIT		NAME			
Ganapathi		SIGNATURE			
23/3/17		DATE			
				BIDDER'S/VENDOR'S COMPANY SEAL	

		QUALITY PLAN		CUSTOMER:		PROJECT: FRAMEWORK AGREEMENT		SPEC. NO.: PE-TS-020-100-M010					
				BIDDER/VENDOR		QP NO. PE-QP-999-142-M003		REV: 00 DTD. 24.05.2014		SPEC. TITLE: STEAM TRAPS			
S.NO.	COMPONENT/ OPERATION	SHEET 1 OF 2	CHARACTERISTICS CHECKED	SYSTEM	CATE-GORY	TYPE/METHOD OF CHECK	POWER CYCLE	EXTENT OF CHECK	ITEM: THERMOSTATIC STEAM TRAPS		SECTION	VOLUME	REMARKS
									REFERENCE DOCUMENT	ACCEPTANCE NORMS			
									P	W	*	V	

1.0	RAW- MATERIAL												
1.1	BODY,CAP,DISC AND PLUG	1. PHYSICAL, CHEMICAL PROPERTIES	MA	PHYS. CHEM. ANALYSIS	ONE/HEAT /BATCH	APPD. DRG./ TECH. SPEC.	APPD. DRG./ TECH. SPEC.	TEST CERT.	3/2	2	1	CORRELATION REQD (except disc & plug)	
		2. SURFACE DEFECTS	MA	VISUAL	100%	MSS-SP-55	MSS-SP-55	INSPN. REPORT	3/2	-	2,1		
		3. DIMENSIONS	MA	MEASUREMENT	100%	APPD. DRG./ TECH. SPEC.	APPD. DRG./ TECH. SPEC.	-DO-	3/2	-	-		
1.2	SCREEN	1.CHEMICAL PROPERTIES AND MESH SIZE	MA	CHEMICAL TEST & MEASUREMENT	ONE PER LOT	APPD. DRGS./ DATA SHEET	APPD. DRGS./ DATA SHEET	LAB REPORT/ INSP. REPORT	3/2	2	2,1	MESH SIZE AND MESH PERFORATION DIA. SHALL ALSO BE CHECKED.	
2.0	MACHINING												
2.1	ALL COMPONENTS	1. DIMENSIONS	MA	MEASUREMENT	100%	-DO-	-DO-	INSP. REPORT	3/2	-	-		
		2. SURFACE DEFECTS	MA	VISUAL EXAM.	100%	MSS-SP-55	MSS-SP-55	-DO-	3/2	-	-		
		3. Hardness of valve Seat	CR	HARDNESS TEST	100%	APPD. DRGS./ DATA SHEET	APPD. DRGS./ DATA SHEET	-DO-	3/2	2	2,1		
		4. DISC-SEAT & BODY SEAT	CR	SURFACE DEFECT	100%	ASTM E165	NO DECECTS	-DO-	3/2	2	2,1		
		5. CONTACT SURFACE BETWEEN BODY SEAT AND DISC	CR	BLUE MATCHING	100%	-DO-	UNIFORM METAL TO METAL CONTACT	INSP. REPORT	3/2	2	1	BATCH WISE	
3.0	ASSEMBLY INSPECTION	1. CLEANING & DEBURRING	MA	VISUAL	100%	TECH SPEC.	TECH SPEC	LOG BOOK	3/2	-	-	BATCH WISE	
		2. DIMENSIONS	CR	MEASUREMENT	100%	-DO-	APPD. DRGS./ DATA SHEET	INSP. REPORT	3/2	2,1	1		
		3. LEAK TIGHTNESS OF BODY	CR	HYDRAULIC TEST	100%	APPD. DRG./ TECH. SPEC./ DATA SHEET	NO LEAKAGE	TC/IBR FORMAT	3/2	2,1	1		

BHEL  22/2/17	PARTICULARS		BIDDER/VENDOR	
	NAME			
	SIGNATURE			
DATE		BIDDER'S/ VENDOR'S COMPANY SEAL		

		QUALITY PLAN				CUSTOMER:		PROJECT: FRAMEWORK AGREEMENT		SPEC. PE-TS-020-100-M010					
						BIDDER/VENDOR		QP NO. PE-QP-999-142-M003		REV.00 DTD. 24.05.2014		SPEC. TITLE : STEAM TRAPS			
S.NO.	COMPONENT/ OPERATION	SHEET 2 OF 2	CHARACTERISTICS CHECKED	SYSTEM	CATE- GORY	TYPE/METHOD OF CHECK	POWER CYCLE	EXTENT OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	P	W	V	REMARKS

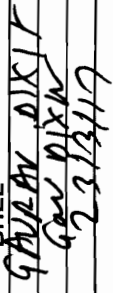
3.0	ASSEMBLY INSPECTION CONTD. (-----)	4. FUNCTION OF TRAP	CR	PERFORMANCE TESTING IN SIMULATED CONDITIONS	10% (RANDOM) MIN. 1 NO.	APPD. DRG./ TECH. SPEC./ DATA SHEET	TECH. SPEC./ DATA SHEET/APPD. DRG	TC/IBR FORMAT	2	1	1	TEST PROCEDURE TO BE SUBMITTED FOR REVIEW
4.0	SOCKET WELD ENDS	1.DIMENSIONS	CR	TEMPLATE	100%	APPD. DRG./ TECH. SPEC.	P	INSP. REPORT	2	1	1	
5.0	PAINTING	2. SURFACE DEFECTS	CR	PT	100%	ASTME 165	NO SURFACE DEFECTS	-DO-	2	1	1	
		SURFACE PREPARATION AND PAINTING	MA	VISUAL	100%	APPD DRG	APPD DRG	-DO-	2	2	1	
6.0	PROVISION OF NAME PLATE & PACKING IN WOODEN CASE	AS PER TECH. SPEC.	MA	VISUAL	100%	APPD DRG./ TECH. SPEC.	APPD DRG./ TECH. SPEC.	(Soft copy of photographs)	3/2	-	1	Photographs of valves after packing to be verified by BHEL before issuing MDCC.

ABBREVIATIONS

CR= CRITICAL CHARACTERISTIC P= PERFORMED BY, W = WITNESSED BY V = VERIFIED BY

MA=MAJOR CHARACTERISTIC, 1= PURCHASER (BHEL) 2 = VENDOR, 3 = SUB VENDOR OF THE VENDOR

NOTE: SUCCESSFUL VENDOR SHALL SUBMIT FUNCTIONAL TEST PROCEDURE OF TRAP ALONG WITH QP IMMEDIATELY AFTER ORDER IS PLACED FOR APPROVAL.

BHEL  23/12/17	PARTICULARS	BIDDER/VENDOR
	NAME	
	SIGNATURE	
	DATE	
		BIDDER'S/ VENDOR'S COMPANY SEAL

	COMPLIANCE SHEET STEAM TRAPS FRAMEWORK AGREEMENT	SPECIFICATION NO. PE-TS-020-100-M010	
		SECTION : II	
		REV. NO.: 00	DATE: 23.03.2017
		Sheet 1 of 1	

I hereby comply/not comply (*) to all the requirements of this technical specification in totality.

* In case the bidder does not comply to the technical specification, the deviations shall be explicitly listed in the technical deviation sheet of GCC. Deviations listed in technical deviation sheet shall only be considered.

Name of Bidder / Authorized Representative :- _____

Designation :- _____

Signature :- _____

Company Seal :- _____

Date :- _____

PARTICULARS OF BIDDER / AUTHORISED REPRESENTATIVE				
NAME	DESIGNATION	SIGNATURE	DATE	

Gixit

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.