	BHEL: BAP: RANIPET Water System Pre-Qualification requirement for Air Trap	Ref	WS:COM:AIR TRAP:001
		Dated	08.11.2022
		Rev	00

The Qualification requirements (QR) for Air Trap is detailed below and Bidders should meet the same. Offers of bidders who do not meet qualification requirement will not be considered.

1. Bidder should have manufacturer/ authorized dealer of Air Trap.
2. Bidder should have supplied at least one (1) PO of above Air Trap to the power / industrial/ process plant applications in the following criteria.

SL. NO.	DESCRIPTION	REQUIREMENT
01	Air Trap	Size: NB15

3. The bidder shall submit documentary evidence for manufacturing/ supply of the aforesaid requirements such as PO copy/ approved drawings / delivery challan/LR Copy, etc.


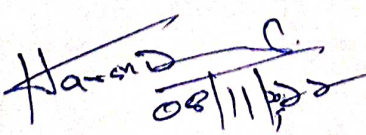
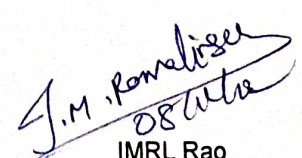
General Conditions:


1. Bidder shall furnish necessary documentary evidence in original / notarized (legible) copy as a proof of meeting the qualifying criteria for the review by BHEL. Acceptance of documentary evidence rests with BHEL.
2. Bidders who defaulted, in any of the previous tenders floated by BHEL are not permitted to respond. Such offers, if found later, will not be considered for evaluation.
3. After receipt of offers, during scrutiny, if any vendor found to have been banned by BHEL, then their offer will be summarily rejected at any stage.

Bidder Sign'n'Seal : _____

Bidder Name & Address : _____

Bidder Mobile No : _____

Prepared by  Ananta Karmakar SEWS 08.11.22	Checked by  Harsh Deep DM/WS 08/11/22	Approved by  IMRL Rao SM/WS 08/11/22
---	---	---

	TECHNICAL SPECIFICATION FOR AIR TRAP
FGD:AIR TRAP:R00	

1. **Scope:** Air Traps will be used to drain the condensate from the compressed air piping system. The air trap covered under this specification shall be of supplier-approved design and will have the temperature and pressure ratings as per this specification.
2. **Item Description:** Ball Float Type Air Trap.
3. **Type :** Ball Float
4. **Application :** Air (Non IBR)
5. **Size :** NB 25
6. **Operating pressure :** 10 Kg/cm² (g)
7. **Operating temperature :** 50 deg C
8. **Minimum Operating pressure :** 5 Kg/cm² (g)
9. **Back Pressure :** Atmospheric
10. **Minimum Differential pressure :** 5 Kg/cm² (g)
11. **Design pressure :** 12 Kg/cm² (g)
12. **Design temperature :** 60 deg C
13. **Condensate Flow (Max):** 100 Kg/hr
14. **Connecting Size / Material:** NB 25
15. **End connection:** Screwed as per IS 554 / ISO 7-1
16. **Materials:**
 - a) **Body:** Cast Iron/ Cast Steel (A 216 WCB / A105 / A395 or equivalent.)
 - b) **Plug/seat:** 304 Stainless Steel
 - c) **Float:** 304 Stainless Steel
17. **Marking :** Metallic tag carrying maker's name, item name and BHEL material code shall be permanently tied onto each air trap
18. Along with quotation, submit point-by-point reply to this specification, enclosing necessary details and brochures to evaluate technical conformity.

Department	Prepared	Checked	Approved
WATER SYSTEMS	DHEERAJ KUMAR	KONDAPA NAIDU P	SALAIMANALAM M
Revision – 00 Dated 02/12/2021		COMMENTS : FRESH ISSUE	
Revision – 01		COMMENTS :	

Quality Assurance (Mechanical)
CONTRACT QUALITY REQUIREMENT (CQR)

NABI: AIR TRAP: 687
Dt. 28-03-2023

Item Name	Indent No	Indent Dt.	PGMA	Technical Specification
Air Trap	RFW21884	09.11.2022	FW870	FGD:AIR:TRAP ,Rev:00, Dt:02.12.2021

Project: NABINAGAR (3X660 MW)

Following are Quality recommendations:

1. Inspection at Supplier/Manufacturer works applicable by BHEL/ BHEL TPI as per BHEL approved MQP.
2. Vendor to submit MQP (Manufacturing Quality Plan) as per attached format for BHEL Review, checks in line with technical specification. Already NTPC approved latest MQP for similar application if available specific to Vendor may be shared for faster approval of QP.
3. All the items shall be inspected at Manufacturer works as per BHEL approved QP/Approved Drawing/Approved datasheet and Technical Specification.
4. Packing of items shall be as per BHEL Engg Approved Packing Drawing/Packing Specifications.
5. BHEL Authorized representatives shall have the right to witness the necessary inspection and testing of goods mentioned in the PO. The supplier shall inform BHEL in advance about the readiness of the goods for inspection and testing. Inspection / Inspection wavier / approval by BHEL does not absolve Supplier's responsibility for conformity of the specification as per the terms of PO. Material Test Certificates shall be submitted to BHEL.
6. Annexure 'Q' shall be part of enquiry File and shall be filled by Supplier with their duly sign and seal.
7. Supplier should be manufacturer not a trader/Agent.
8. **Vendor Quality Plan shall contain following Inspection Notes:**
 - a. Latest version of standards & Specification shall be applied.
 - b. Materials shall be procured in compliance to Functional Technical specification.
 - c. Gauges and measuring instruments with valid calibration only shall be used.
 - d. Inspection / Inspection wavier / approval by BHEL does not absolve Supplier's responsibility for conformity of the specification as per the terms of PO.
 - e. BHEL /BHEL Authorized representatives shall have the right to witness the necessary inspection and testing of goods mentioned in the PO.
 - f. In case of Vendor Drawing & Datasheet, it needs approval by BHEL Engineering.
 - g. This QP shall be read along with relevant PO, BHEL Specification / Approved Drawing/ Datasheet.

Sd/- Rakesh Kr Madhu
Dy/Mgr-QA

Sd/- K Renjith
Mgr/QA

1384932/2023/BAP-QA

MECH

MANUFACTURER'S NAME & ADDRESS Manufacturer Logo		MANUFACTURING QUALITY PLAN Item/subsystem:				PROJECT: MAIN CONTRACTOR: M/s BHEL-RANIPET PO NO:						
Rev: Date: Page:		QUANTUM OF CHECK 6		REFERENCE DOCUMENTS 7		ACCEPTANCE NORMS 8		FORMAT OF RECORD 9 D		AGENCY 10		REMARKS 11
SL NO 1	COMPONENT & OPERATION 2	CHARACTERISTICS 3	CLASS 4	TYPE OF CHECK 5	M	B/C			M	B	C	

RAW MATERIAL INSPECTION												
1	CHEMICAL COMPOSITION	MAJOR	CHEMICAL ANALYSIS	1 SAMPLE / HEAT			MTC	√	P	V	V	NO REPAIR WELDING IS PERMITTED ON CI AS CAST / PUNCHED HEAT NO SHALL BE PROVIDED FOR CORRELATION
	MECHANICAL PROPERTIES	MAJOR	TENSILE TEST	1 SAMPLE / HEAT			MTC	√	P	V	V	
	SURFACE EXAMINATION	MAJOR	VISUAL INSPECTION	100%			IR	√	P	V	V	
2	CHEMICAL COMPOSITION	MAJOR	CHEMICAL ANALYSIS	1 SAMPLE / HEAT			MTC	√	P	V	V	
	MECHANICAL PROPERTIES	MAJOR	TENSILE TEST & HARDNESS	1 SAMPLE / HEAT			MTC	√	P	V	V	
	HEAT TREATMENT (As applicable)	CRITICAL	REVIEW OF TIME- TEMP CHART	100%			HT CAHRT	√	P	V	V	
	SURFACE EXAMINATION	MAJOR	VISUAL INSPECTION	100%			IR		P	V	V	
3	CHEMICAL COMPOSITION	MAJOR	CHEMICAL ANALYSIS	1 SAMPLE / HEAT			MTC	√	P	V	V	
	MECHANICAL PROPERTIES	MAJOR	TENSILE TEST	1 SAMPLE / HEAT			MTC	√	P	V	V	

QP FORMAT

M – Manufacturer / Subcontractor, B - MAIN CONTRACTOR/ BHEL /BHEL Authorized Inspection Agency, C- Customer / Customer Authorized Inspection Agency, P - Perform, V - Verification of reports, W - Witness, TC - Test certificate, DR – Dimensional report. * Record, identified with "tick" (√) under column 'D' shall be submitted to customer as a QA documentation package.	Prepared by	Reviewed by	Approved by

1384932/2023/BAP-QA

MECH

Manufacturer Logo		MANUFACTURER'S NAME & ADDRESS		MANUFACTURING QUALITY PLAN			PROJECT: MAIN CONTRACTOR: M/s BHEL-RANIPET PO NO:						
				Item/subsystem:	QP NO: Rev: Date: Page:								
SL NO 1	COMPONENT & OPERATION 2	CHARACTERISTICS 3	CLASS 4	TYPE OF CHECK 5	QUANTUM OF CHECK 6		REFERENCE DOCUMENTS 7	ACCEPTANCE NORMS 8	FORMAT OF RECORD 9 D	AGENCY 10			REMARKS 11
					M	B/C				M	B	C	

		SOUNDNESS	CRITICAL	VISUAL INSPECTION	100%				UT Report	√	P	V	V	FOR BAR DIA. ≥ 50 MM ONLY
4									MTC	√	P	V	V	
									MTR	√	P	V	V	

QP FORMAT

IN PROCESS INSPECTION														
5		DIMENSIONAL	MAJOR	MEASURE					IR	√	P	V	V	
		HYDROSTATIC TEST OF CASTING	CRITICAL	PRESSURE TEST	100%				IR	√	P	W	V	SEE NOTE -1
6		DIMENSIONAL	MAJOR	MEASURE					IR	√	P	V	V	
		DYNAMIC BALANCING	CRITICAL	MEASURE	100%				IR	√	P	W	V	SEE NOTE-1
7		SOUNDNESS OF CASTING	MAJOR	NDT-DPT					DPT Report	√	P	V	V	
8		DIMENSIONAL	MAJOR	VISUAL					IR	√	P	V	V	
		SOUNDNESS	CRITICAL	ULTRASONIC TEST					UT Report	√	P	W	V	FOR SHAFT DIA ≥ 50 MM ONLY (EXCEPT THREADED PORTION) SEE NOTE-1
		DP TEST ON MACHINED AREA	MAJOR	DP TEST	100%				DPT Report	√	P	V	V	
FINAL INSPECTION														

M – Manufacturer / Subcontractor, B - MAIN CONTRACTOR/ BHEL /BHEL Authorized Inspection Agency, C- Customer / Customer Authorized Inspection Agency, P - Perform, V - Verification of reports, W - Witness, TC - Test certificate, DR – Dimensional report. * Record, identified with "tick" (√) under column 'D' shall be submitted to customer as a QA documentation package.	Prepared by	Reviewed by	Approved by

1384932/2023/BAP-QA

MECH

MANUFACTURER'S NAME & ADDRESS Manufacturer Logo		MANUFACTURING QUALITY PLAN Item/subsystem:				PROJECT: MAIN CONTRACTOR: M/s BHEL-RANIPET PO NO:											
Rev: Date: Page:		CLASS		TYPE OF CHECK		QUANTUM OF CHECK 6 M B/C		REFERENCE DOCUMENTS 7		ACCEPTANCE NORMS 8		FORMAT OF RECORD 9 D		AGENCY 10 M B C		REMARKS 11	

9	PUMP ASSEMBLY									IR	√	P	V	V		
10	PERFORMANCE TEST WITH JOB									IR	√	P	W	W		
										IR		P	W	W		
											IR		P	W	W	
											IR		P	W	W	
11	NPSHR TEST									IR	√	P	W	W		
12	PAINTING PACKING AND PRESERVATIONS									IR	√	P	V	-		

QP FORMAT

INSPECTION NOTES:

a.	Latest version of standards & Specification shall be applied.
b.	Materials shall be procured in compliance to Functional Technical specification.
c.	Gauges and measuring instruments with valid calibration only shall be used.
d.	Inspection/Inspection waiver/approval by BHEL does not absolve Supplier's responsibility for conformity of the specification as per the terms of PO.
e.	BHEL /BHEL Authorized representatives shall have the right to witness the necessary inspection and testing of goods mentioned in the PO.
f.	In case of Vendor Drawing & Datasheet, it needs approval by BHEL Engineering.
g.	This QP shall be read along with relevant PO, BHEL Specification / Approved Drawing/ Datasheet.
h.	This QP is applicable for Mandatory supply also.
i.	All other minor items, which are not cover under this QP, shall be manufactured inspected as per OEM (Original equipment Manufacturer)/BHEL standard practice and relevant standard. Relevant TC/COC will be submitted for the same.

M – Manufacturer / Subcontractor, B - MAIN CONTRACTOR/ BHEL /BHEL Authorized Inspection Agency, C- Customer / Customer Authorized Inspection Agency, P - Perform, V - Verification of reports, W - Witness, TC - Test certificate, DR – Dimensional report. * Record, identified with "tick" (√) under column 'D' shall be submitted to customer as a QA documentation package.	Prepared by	Reviewed by	Approved by

Annexure Q

		Indent No:	Enquiry no:	
Sl.No	BHEL / Customer Requirements	## Specific confirmations by the manufacturer (Acceptable/Not acceptable)		
	Quality Plan Requirement: (If SQP is not given & Vendor QP applicable)			
	(i) MQP (Manufacturing Quality Plan) shall be submitted in attached format for BHEL/Customer review & approval. Our SQP/Typical MQP/ MQP Format is attached for guidance & use.			
	(ii) MQP shall invariably cover w.r.t Inward inspection including on Raw material Procurement, In process and Final inspection in elaborated way/details.			
	(iii) Bidder shall also to give specific confirmation that on need basis, their competent officials shall visit to BHEL / customer for finalization of Quality plan including test procedure/methodology during preaward / post award approval / detailed engineering in the event of an order.			
	(iv) No deviation on BHEL/Customer approved MQP/ SQP (In case BHEL SQP is provided) is acceptable.			
1	(v) Bidder shall agree to submit all cross referred documents other than codes/standards to BHEL/Customer/Consultant.			
	Important Notes shall be included in MQP : (a) Latest revision of Standards & Specification shall apply. Only International Standards are applicable. (b) Materials shall be procured in compliance to Functional Technical Specification. (c) Inspection shall be in compliance with Approved Quality Control Procedure for the Product. (d) NDT shall be carried out by Qualified Personnel with compliance to Approved NDT Procedures and Acceptance Norms, as per ASME standard. (e) Gauges and measuring Instruments, with valid calibration only shall be used. (f) Cleaning and Painting of products shall be carried out as per Approved Painting Schedule. (g) Finished Products shall be packed to comply with Approved Packing Schedule. (h) Welding shall be carried out by Qualified Personnel with compliance to Approved NDT Procedures and Acceptance Norms, as per ASME standard.			
2	Domestic / Inland Inspection will be carried out by BHEL/BHEL appointed Third Party Inspection Agency (TPIA) / Customer/Customer Appointed Inspection Agency/Consultant. This is applicable for all Stage inspection and Final Inspection identified as "W" - Witness or "CHP" - Customer Hold Point as per customer approved Quality Plan/ Technical specification / Approved Drawing/ Approved Data sheet / Scheme / PID / PFD / SLD (Process Instrumentation Diagram / Process Flow Diagram / Single Line Diagram) etc. (as applicable).			
3	Inspection Agency for Foreign Bidders and also for Indian Bidder but importing from Foreign Sources: (1) Any one of the following Third Party Inspection Agency (TPIA) shall be appointed by the bidder and same shall be furnished by the bidder in techno commercial bid itself. (2) The details of TPIA with contact details like Name of the official, Phone no, Email id shall also to be submitted during pre/post award. However cost for such inspection agency shall be borne by the bidder only. Inspection charges for such inspection agency shall be indicated separately so that if BHEL/Customer is undertaking the inspection by on their own, then these charges are non claimable by the bidder. For NTPC Project ensure TPI Approved by NTPC. Refer our QC Procurement email in this regard. List of TPIA 1.M/s Bureau Veritas 2.M/s TUV-Nord 3.M/s TUV-SUD 4.M/s TUV Rheinland 5.M/s Lloyds Register 6.M/s SGS 7.M/s Germanischer Lloyd 8.M/s QUEST 9.M/s Certification Engineers International 10.M/s Intertek 11.M/s IR Class Systems and Solutions 12.M/s DNV 13. M/s Fichtner 14. M/s ABS Inspection Services			

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Sl.No	BHEL / Customer Requirements	## Specific confirmations by the manufacturer (Acceptable/Not acceptable)
4	Stage Inspection during manufacturing Process : Stage Inspection during manufacturing shall be carried out as per approved quality plan and all necessary documents shall be provided for review, verification and clearance for further processing. This inspection call shall be given well in advance (at least 2 weeks before) to TPI/Bidder's own inspection agency to avoid delay in the manufacturing processes.	
5	Inspection before despatch for domestic supplier : Inspection before despatch at supplier's works shall be carried out by BHEL appointed Inspection agency (as in Sl no. 2). Inspection shall be done as per approved Quality plan/ Technical specification/ Approved Drawing/ Approved Data sheet .	
6	Inspection at Foreign Source/Supplier: (a) As in sl no: 3. shall be ensured without fail (b) No material / items shall be despatched without getting the written communication from BHEL / Customer inspection carried out by Bidder appointed Third Party Inspection Agency (As per Sl no.3) / Customer/Customer Appointed Inspection Agency/Consultant. This is applicable for all Stage inspection and Final Inspection identified as "W" - Witness or "CHP" - Customer Hold Point as per customer approved Quality Plan/ Technical specification / Approved Drawing/ Approved Data sheet / Scheme / PID / PFD / SLD (Process Instrumentation Diagram / Process Flow Diagram / Single Line Diagram) etc. (As applicable). Inspection before despatch for Foreign supplier : Inspection before despatch at supplier's works shall be carried out by bidder appointed inspection agencies having international presence at vendors and or vendor's sub vendor works. Inspection shall be done as per approved Quality plan/ Technical specification/ Approved Drawing/ Approved Data sheet by TPIA mentioned in Sl no: 03 at supplier's cost.	
7	Painting shall be done strictly as per BHEL/Customer approved painting schedule / scheme only. Paint Thickness / Paint shade shall be ensured as per BHEL / Customer approved painting schedule / specification / data sheet etc. No deviation is acceptable unless otherwise accepted by BHEL/Customer in writing. Any conflict if any among BHEL / Customer approved painting schedule / Spec / data sheet etc. shall be brought to the notice of BHEL well in advance before proceeding including the BOI being procured for assy / skid like motors etc.	
8	Specific conformation for document package in the event of an order (2 Hard copies & soft copy in PDF file) is to be given containing the following with proper linkages (i) Index Sheet (ii) MQP/RQP/Endorsement Sheet (As applicable) (iii) TCs identified by BHEL/ Customer for record for "CHP" / "W" and Verification portion ("V") as given in approved QP. (iv) Final inspection report + TC including Chemical + Mechanical + HT + NDT etc. (v) Third party Inspection report + TC (vi) Customer CHP/ MDCC (vii) Type test / Performance Test reports conducted (viii) Type test / Performance Test approval/ clearance obtained from BHEL/Customer (ix) BOM with As Build Drgs with actual make / rating used with BHEL/customer approved drawings.	
9	Packing / Seaworthy Packing shall be as per BHEL Packing schedule / approved drg / sketch. This shall be ensured to take care transit / handling / transshipment in Road / Sea / Air. Photographs are to be submitted for BHEL review before despatching the material as per contract conditions.	
10	Outsourcing of test facilities: Bidder shall ensure all the testing facilities in house. However If any of the test facilities are not available with successful bidder, then bidder shall ensure the same at NABL accredited third party lab / Govt / Govt Lab for major testing such as NDT, Electrical & Mechanical testing.	
11	Important Note: No deviation on the above requirement 01 to 10 is acceptable with respect to Quality Requirement and those offers not meeting these specific customer requirement is liable for rejection and hence the bidder shall submit all the required documentary evidences in the offer itself.	
12	## Necessarily to be filled up by the bidder at the time of offer itself otherwise the offer may not be considered w.r.t Quality Requirement being customer specific requirement.	

VENDOR SIGN AND STAMP:

Vendor Name & Address:

*(To be submitted In the company letter head by supplier)

Form - 1

Subject: Public Procurement (Preference to Make In india)

References:

- 1.P-45021/2/2017-B.E-II dated. 15th June-2017,
- 2.P-45021/2/2017-PP(BE-II) dated. 28th May-2018 ,
- 3.P-45021/2/2017-PP(BE-II) dated. 29th May-2019.
- 4.P-45021/2/2017-PP(BE-II) dated. 4th June-2020

We hereby declare with reference to above subject and references that M/s --
------(Tick whichever is applicable as below)

"Class-I local supplier" meeting the requirement of minimum local content equal to 50%(fifty percent) or more defined in the above government notification for the goods and services (or)

"Class-II local Supplier" meeting the requirement of local content 20% to less than 50%(fifty percent) defined in the above government notification for the goods and services

Please mention the details against the following:

Enquiry no:----- dated. -----

Type of Supplier (Class-I/Class-II)

Product:-----

Project:.....

Details of location at which local value addition will be made is as follows:

We also understand that the false declarations will be in breach of the code of Integrity under rule 175(1)(i)(h) of the General financial rules for which a bidder or its successors can be debarred for up to two years as per Rule 151(iii) of the General Financial Rules along with such other actions as may be permissible under law.

Authorized Signature M/s _____

(Signature and seal)

Place:.....

Date:.....

From.

M/s _____

Address: _____

***(To be submitted In the company letter head by supplier)**

Form – 2

I/we are bidder from _____ (Address with country). We do not belong to any of the below category mentioned.

1. Any of entity/office/workshop of your organisation/incorporation, established in a country sharing land border with India, If yes, provide the full address of all such locations.
2. Any of subsidiary of your organisation/incorporation, established in a country sharing land border with India, If yes, provide the full address of all such locations.
3. Any of entity/office/workshop of your organisation/incorporation, controlled in a country sharing land border with India, If yes, provide the full address of all such locations.
4. Any of entity whose beneficial owner is situated in a country sharing land border with India, If yes, provide the full name, address of all such locations.
5. Any Indian Agent available, If so, Provide details of address and contacts.
6. Any employee/directors who is/are citizen of country sharing land border with India, If yes, provide the full name, employee code and address of all such locations.
7. Any of consortium/joint venture of your organisation/incorporation, established in a country sharing land border with India, If yes, provide the full address of all such locations.

Meaning of beneficial owner

- 1) In case of a company or limited liability partnership, beneficial owner is the natural person, who, whether acting alone or together, or through one or more judicial person, has a controlling ownership interest or who exercises control through other means.

Explanation

- a) Controlling ownership interest means ownership of or entitlement to more than twenty-five percent of shares or capital or profits of the company.
 - b) “control” shall include the right to appoint majority of the directors or to control the management rights or shareholder’s agreement or voting agreement.
- 2) In case or a partnership firm the beneficial owner is the natural person (s) who whether acting alone or together or through one or more judicial person, has ownership of the entitlement to more than fifteen percent of capital or profits of the partnership.
 - 3) In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together or through one or more judicial person, has ownership of the entitlement to more than fifteen percent of the property or capital or [profits of such association or body of individual.
 - 4) Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official.
 - 5) In case of a trust, the identification of beneficial owner (s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust and any other

***(To be submitted In the company letter head by supplier)**

natural person exercising the ultimate effective control over the trust through a chain of control of ownership.

- 6) An agent is a person employed to do any act for another, or to represent another in dealing with third person.

We have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India, we hereby declare that we do not belongs to any such country and are eligible to be considered.

In case, any of information is found to be false, even after bid acceptance, immediate termination may happen and action will be taken as per law.

Format is being filled without altering any of the clause mentioned in the given format**

Dated: _____

Authorised Sign and stamp_____