



**BHARAT HEAVY ELECTRICALS LIMITED**  
**(A Govt. Of India Undertaking)**  
POWER SECTOR, EASTERN REGION  
BHEL BHAWAN, PLOT NO. DJ-9/1 , SECTOR II ,  
SALT LAKE CITY, KOLKATA, WEST BENGAL, INDIA  
Phone : 033-23216130-31,033-23216130 FAX : 033-23211960

Ref: PSER:SCT:NKP-M2167:9427

Date: 20-09-2022

## **NOTICE INVITING TENDER (NIT)**

OFFERS are invited from **REPUTED AND EXPERIENCED LOCAL BIDDERS** (meeting pre-qualification criteria as mentioned) **through E-PROCUREMENT PORTAL <https://eprocurebhel.co.in> ONLY** for the subject job by the undersigned on behalf of Bharat Heavy Electricals Limited as per the tender document. Issue/ forwarding intimation regarding tender to any bidder shall not construe that the bidder is considered to be qualified. Following points relevant to the tender may please be noted and complied with.

### **Salient Features of NIT**

SL NO	ISSUE	DESCRIPTION	
i	E-TENDER NUMBER	<b>PSER:SCT:NKP-M2167:22 DATE: 20/09/2022</b>	
ii	Broad Scope of job	<b>PROCUREMENT OF BALL VALVES FOR FOHS SYSTEM AT 3 X 660 MW NORTH KARANPURA STPP, JHARKHAND.</b>	
iii	<b>DETAILS OF TENDER DOCUMENT</b>		
a)	PART – B	GENERAL CONDITIONS OF CONTRACT (GCC)	<b>Applicable</b>
b)	PART- C	TECHNICAL CONDITIONS OF CONTRACT (SUPPLY)	<b>Applicable</b>
c)	PART – F	GENERAL TERMS & CONDITIONS OF REVERSE AUCTION	<b>Applicable</b>
d)	VOLUME-III	VOLUME-III, PRICE SCHEDULE and UNPRICE SCHEDULE	<b>Applicable</b>
e)	PART – H	FORMS AND PROCEDURES ETC.	<b>Applicable</b>
iv	ISSUE OF TENDER DOCUMENTS	a)Online through e-procurement platform at <a href="https://eprocurebhel.co.in/">https://eprocurebhel.co.in/</a> b)in BHEL website ( <a href="http://www.bhel.com">www.bhel.com</a> , CPP Portal): <b>For tender view purpose only.</b> <b>START DATE: 20/09/2022</b>	a) Applicable b) Applicable
v	DUE DATE & TIME OF OFFER SUBMISSION	Date: <b>27/09/2022</b> , Time: <b>14-00 Hrs.</b> (Offer to be submitted online only through e-procurement platform at <a href="https://eprocurebhel.co.in/">https://eprocurebhel.co.in/</a> )	<b>Applicable</b>
vi	TECHNO-COMMERCIAL BID OPENING OF TENDER	Date: <b>27/09/2022</b> , Time: <b>16-30 Hrs.</b> ( <b>online only through e-procurement platform at <a href="https://eprocurebhel.co.in/">https://eprocurebhel.co.in/</a>, participating bidders may witness the same online only</b> )	<b>Applicable</b>
vii	CURRENCY	<b>INDIAN RUPEES (INR)</b>	<b>Applicable</b>
viii	EMD AMOUNT	NIL	Not Applicable
ix	COST OF TENDER	-	Not Applicable
x	LAST DATE FOR SEEKING CLARIFICATION	Date: <b>26/09/2022 (UP TO 12:00 Hrs.)</b>	<b>Applicable</b>
xi	SCHEDULE OF Pre Bid Discussion (PBD)	Not Applicable (In case BHEL decides to conduct PBD, date, time & venue of PBD will be intimated suitably thru TCN).	Not Applicable
xii	INTEGRITY PACT & DETAILS OF INDEPENDENT EXTERNAL MONITOR (IEM)	-	Not Applicable.

xiii	Latest updates	Latest updates on the important dates, Amendments, Correspondences, Corrigenda, Clarifications, Changes, Errata, Modifications, Revisions, etc to Tender Specifications will be hosted in BHEL webpage ( <a href="http://www.bhel.com">www.bhel.com</a> ) →Tender Notifications →View Corrigendums & CPP portal →Tender Notice & E-PROCUREMENT PORTAL ( <a href="https://eprocurebhel.co.in">https://eprocurebhel.co.in</a> ) and not in the newspapers. Bidders to keep themselves updated with all such information.	Shall be intimated to bidder
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1. The offer shall be submitted as per the instructions of tender document. Only One set of tender document (in **original, downloaded from website**) signed by authorised company rep. of bidder and stamped on each page shall be submitted as detailed further, as given below. Bidders to note specifically that all pages of tender document, including these NIT pages etc. appearing in the website for this particular tender shall be submitted by them (after signing/stamping on each page) as a part of their offer. **Price shall not be mentioned by them anywhere in the techno-commercial portion of offer. Price shall be mentioned in the relevant price schedule only and to be submitted in e-procurement portal/platform in the form and manner mentioned in tender.**

**For E-Procurement Assistance & Training, NIC PORTAL Helpdesk Contacts as per following: -**

For any technical related queries please call at 24x7 Help Desk Number  
**0120-4001 002, 0120-4200 462, 0120-4001 006, 0120-6277 787**

Email Support

Address: A) For any Issues or Clarifications relating to the published tenders, bidders are requested to contact the respective Tender Inviting Authority

Technical - [support-eproc@nic.in](mailto:support-eproc@nic.in)

**For any difficulty in downloading the tender from internet website, they should contact this office (Dy. Manager, SCT or AGM, SCT, Phone no. 033-23398229/8226). No alteration/changes by bidders is permitted in the tender/NIT appeared in the website.**

2. Successful bidder shall have to submit additional set of tender/sign on tender document provided by BHEL, if so decided by BHEL.
3. This is an e-tender floated online through our E-Procurement Site <https://eprocurebhel.co.in>. The bidder should respond by submitting their offer online only in our e-Procurement platform at <https://eprocurebhel.co.in>. Offers are invited in two-parts only. No Hard copy bid or bids through email/ fax shall be accepted. Bids are invited in two parts & shall be submitted as described below:

OFFER DESCRIPTION	DOCUMENTS TO BE UPLOADED & MODALITY OF UPLOADING
TECHNICAL OFFER	1. Scanned copy of Covering letter of offer (To be attached in <b>Attachment</b> section) 2. Scanned copy of Entire tender documents signed & stamped in each page by authorized representative of the bidder except price bid (To be attached in <b>Attachment</b> section). 3. Scanned copy of Techno-Commercial Offer (To be attached in <b>Attachment</b> section) 4. Duly filled all annexures except price & unpriced format (To be attached in <b>Attachment</b> section). 5. Copy of records notes of Pre-Bid Conference, if applicable/ pre-bid MOM. (To be attached in <b>Attachment</b> section) 6. Copy of Tender change notice (TCN), if applicable (To be attached in <b>Attachment</b> section) 7. All supporting documents/ Annexures etc. as applicable (To be attached in <b>Attachment</b> section). 8. <b>No deviation certificate</b> in bidder's letterhead as per format given in Tender (To be attached in <b>Attachment</b> section).
PRE-QUALIFICATION PART	9. Pre-qualifying documents with all credentials as per tender. (To be attached in PQ <b>Attachment</b> section)
UNPRICED PRICE BID	10. Price schedule –Unpriced but mentioning only <b>quoted / unquoted</b> against each item as per tender.
PRICE BID	11. Duly filled in Price Schedule as per tender. Any other document uploaded in the price bid, apart from tendered Price schedule, shall not be taken into cognizance for evaluation of offer.

4. **EARNEST MONEY DEPOSIT (EMD)** – Not applicable,

**SPECIAL NOTE:**

- A) Your offer & documents submitted with the offer shall be signed and stamped in each page by your authorized representative. No overwriting/correction in tender documents by bidders shall be allowed. However if correction is unavoidable, the same may be signed by authorized signatory.

<p style="text-align: center;">पावर सेक्टर पूर्वी क्षेत्र ( मुख्यालय ) POWER SECTOR EASTERN REGION, DJ-9/1, SALT LAKE CITY, KOLKATA - 700 091 फैक्स/Fax: (033) 23211960 फ़ोन/Phone: बोर्ड/EPABX: 23398220</p>	Page - 2 of 30
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- B) All documents/annexure submitted with the offer shall be properly annexed and placed in respective places of the offer as per enclosure list mentioned in the covering letter. BHEL shall not be responsible for any missing documents.
5. No deviation with respect to tender clauses and no additional clauses/ suggestions/clarification in Techno-commercial bid/Price bid shall normally be considered by BHEL. Bidders are requested to positively comply with the same. Offers with deviation are liable for rejection.
  6. BHEL reserves the right to accept or reject any or all offer without assigning any reasons thereof. BHEL also reserve the right to cancel the offer wholly or partly without assigning any reason thereof. BHEL also reserve the right to split/part award the job. Also BHEL shall not entertain any correspondence from bidders in this matter (except for the refund of EMD).
  7. Bidders are free to visit the site and study the prevailing site condition including law & order etc. before quoting (if applicable). They may also consult this office before submitting their offers, for any clarifications regarding scope of work, facilities available at sites or on terms and conditions. No additional claim shall be entertained by BHEL in future, on account of non-acquaintance of site/machine conditions at the time of bidding.
  8. For any clarification on the tender document, you may seek the same in writing or through e-procurement portal/platform as per specified format within the last date of seeking clarification as per tender. BHEL shall not be responsible for receipt of queries after due date of seeking clarification due to postal delay, and receipt of any query after due date shall not be entertained.
  9. BHEL may decide holding Pre-bid Discussion [PBD] with all intending bidders. On such communication from BHEL, the bidder shall ensure participation for the same at the appointed time, date and place as may be decided by BHEL. Outcome of PBD (if any) shall also form part of tender.
  10. In case of absence of any queries from bidder(s), their quoted price will be PRESUMED to be final and complete with reference to the tender documents (including Tender change notes (TCNs), clarifications, corrigendum issued by BHEL, if any). Bidders are requested to study the tender documents in detail and prepare their queries/clarifications accordingly. All such queries / clarifications shall be cleared/replied by BHEL. Such clarification letters, corrigendum and/or Tender change notes (TCNs), if issued by BHEL, shall form part of tender document.
  11. In the event of any conflict between requirement of any clause of this specification/ documents /drawings /data sheets etc. or requirements of different codes/ standards specified/ contradictions between any two clauses of tender document, the same to be brought to the knowledge of BHEL by bidders in writing for clarification before due date of seeking clarification, otherwise, more stringent requirement as may be interpreted by BHEL shall prevail and shall be binding on you. Any typing error/missing pages/other clerical errors in the tender documents, noticed by you must be pointed out before submission of offer, or else, BHEL's interpretation shall prevail & binding on you.
  12. Unless specifically mentioned otherwise, bidder's quoted price shall deemed to be in compliance with tender including PBD.
  13. Tender document containing above mentioned volumes shall be signed & stamped in all pages including this covering letter. Price bid shall be furnished in the specified format enclosed with the tender. Any additional copy, if required, may be taken by photocopying from the tender document given in the web.
  14. **The Bidder has to satisfy the Pre-Qualifying Requirements stipulated for this Tender in order to be qualified. The Price Bids of only those bidders will be opened, who will qualify for the subject job on the basis of pre-qualification evaluation & Techno-Commercial bids etc. BHEL reserves the right to reject the bidders with unsatisfactory past performance in the execution of a contract. BHEL's decision in this regard shall be final & binding.**
  15. The bidder shall submit documents in support of possession of 'Pre-Qualifying Requirements" duly self-certified and stamped by the authorized signatory, indexed and properly linked in the format for PQR. In case BHEL requires any other documents/proofs, these shall be submitted immediately (if applicable).
  16. **The bidder may have to produce original document for verification if so decided by BHEL.**
  17. While BHEL reserves the right to open the price bid of the offers in camera, the date & time to open the tender opening shall be intimated to the bidders in case BHEL decides it to be 'Public opening' and in such a case, one authorized representative of the bidder shall be allowed to attend.
  18. Validity of the offer shall be for SIX (06) MONTHS from the due date of offer submission (including extension, if any).
  19. Bidders are required to submit their BEST price as per tender Price Schedule format in e-procurement portal/platform in the form & manner as mentioned in tender.
  20. Price Bids shall be evaluated in the manner as prescribed in Price Schedule. However, Unit Rates shall also be furnished if applicable in the Price Schedule.
  21. **Bid should be free from correction, overwriting, using corrective fluid, etc. Any interlineation, cutting, erasure or overwriting shall be valid only if they are attested under full signature(s) of person(s) signing the bid else bid shall be liable for rejection.**
  22. Taxes and duties shall be as per TCC of the tender. Statutory variation of taxes and duties (plus or minus) in accordance with Govt. Notifications to the account of BHEL. Any imposition of new / additional Duty / Tax at the

time of supply shall be borne by BHEL.

23. **“BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on [www.bhel.com](http://www.bhel.com)) for this tender. RA shall be conducted among the techno-commercially qualified bidders.**  
**Price bids of all techno-commercially qualified bidders shall be opened and same shall be considered for RA. In case any bidder(s) do(es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking.”**
24. Bidders are requested to note that the accepted / agreed tender terms (technical, commercial or on Reverse Auction) in their original offer cannot be altered / withdrawn by their own during the processing of tender.
25. Unsolicited discounts received after opening of techno commercial bid shall not be considered for evaluation. However, if the party who has submitted the unsolicited discount/rebate becomes the L-1 party, then the awarded price shall be after considering the discount.
26. **“The offers of the bidders who are on the banned list as also the offer of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL web site [www.bhel.com](http://www.bhel.com)”.**
- i. Integrity commitment, performance of the contract and punitive action thereof:
- a) Commitment by BHEL:  
 BHEL commits to take all measures necessary to prevent corruption in connection with the tender process and execution of the contract. BHEL will during the tender process treat all Bidder(s) in a transparent and fair manner, and with equity.
- b) Commitment by Bidder/ Supplier/ Contractor:
- b.i) The bidder/ supplier/ contractor commit to take all measures to prevent corruption and will not directly or indirectly influence any decision or benefit which he is not legally entitled to nor will act or omit in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India.
- b.ii) The bidder/ supplier/ contractor will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract and shall adhere to relevant guidelines issued from time to time by Govt. of India/ BHEL.
- b.iii) The bidder/ supplier/ contractor will perform/ execute the contract as per the contract terms & conditions and will not default without any reasonable cause, which causes loss of business/ money/ reputation, to BHEL.
- If any bidder/ supplier/ contractor during pre-tendering/ tendering/ post tendering/ award/ execution/ post-execution stage includes in mal-practices, cheating, bribery, fraud or and other misconduct or formation of cartel so as to influence the bidding process or influence the price or acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal code, 1860 or any other law in force in India, then, action may be taken against such bidder/ supplier/ contractor as per extant guidelines of the company available on [www.bhel.com](http://www.bhel.com) and/ or under applicable legal provisions.
27. **The Bidder along with its associate/collaborators/sub-contractors/sub-vendors/consultants/service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website <http://www.bhel.com> and shall immediately bring to the notice of BHEL management about any fraud or suspected fraud as soon as it comes to their notice.**
28. Suspension of Business dealings: BHEL reserves the right to take action against contractors who fail to perform or indulge in malpractices, by suspending business dealings with them as detailed in Annexure-VII.
29. "MSE suppliers can avail the intended benefits in respect of the procurements related to the Goods and Services only (Definition of Goods and Services as enumerated by Govt. of India vide Office Memorandum F. No. 21(8)/2011-MA dtd. 09/11/2016 office of AS & DC, MSME) if they submit along with the offer, attested copies of either Udyam Registration Certificate or EM II certificate having deemed validity (five years from the date of issue of acknowledgement in EM II) or valid NSIC certificate or Udyog Aadhar Memorandum (UAM) & Acknowledgement or EM II certificate along with attested copy of a CA certificate (Format enclosed at Annexure – V where deemed validity of EM II certificate of five years has expired) applicable for the relevant financial year (latest audited). Date to be reckoned for determining the deemed validity will be the date of bid opening (Part 1 in case of two part bid). Non submission of such documents will lead to consideration of their bid at par with other bidders. No benefit shall be applicable for this enquiry if any deficiency in the above required documents are not submitted before price bid opening. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal. Documents should be notarized or attested by a Gazetted officer." Any Bidder falling under MSME category, shall furnish the following details & submit documentary evidence/Govt. Certificate etc. in support of the same along with their techno-commercial offer: -

Type under MSME	SC/ST owned	Others
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पावर सेक्टर पूर्वी क्षेत्र ( मुख्यालय ) POWER SECTOR EASTERN REGION, DJ-9/1, SALT LAKE CITY, KOLKATA - 700 091 फैक्स/Fax: (033) 23211960 फोन/Phone: बोर्ड/EPABX: 23398220	Page - 4 of 30
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Micro		
Small		
Medium		

**Note:** - If the bidder does not furnish the above, offer shall be processed construing that the bidder is not falling under MSME category.

30. Indian suppliers, falling under the purview of Public procurement (preference to make in India) order 2017 by Govt. of India, vide order no. P-45021/2/2017-B.E.-II dated 15th June, 2017 & all subsequent clarifications can avail the intended benefits, as per provisions of the order subject to minimum local content shall be 50%, margin of Purchase preference shall be 20% & modality of preference to make in India shall be as per aforesaid order.
31. "For this procurement, the local content to categorize a supplier as a Class-I local supplier/ Class-II local supplier/ Non-Local supplier and purchase preference to Class-I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 04-06-2020 issued by DPIIT. In case of subsequent orders issued by the Nodal Ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part-II bids against this NIT".  
Duly filled & signed Annexure-III (Format for local content), as applicable, to be submitted by bidders along with their techno-commercial offer.
32. **GeMAR and PTS Report ID: GEM/GARPTS/06092022/7LE1K3446YON, Date – 06/09/2022**
33. The GeM Seller ID shall be mandatory before placement of order / award of contract for goods and services to the successful bidder(s).

34. **Integrity Pact (IP) – NOT APPLICABLE**

- (a) IP is a tool to ensure that activities and transactions between the Company and its Bidders/ Contractors are handled in a fair, transparent and corruption free manner. Following Independent External Monitors (IEMs) on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL.

SI	IEM	Email
1.	Shri Otem Dai, IAS (Retd.)	<a href="mailto:iem1@bhel.in">iem1@bhel.in</a>
2.	Shri Bishwamitra Pandey, IRAS (Retd.)	<a href="mailto:iem2@bhel.in">iem2@bhel.in</a>
3.	Shri Mukesh Mittal, IRS (Retd.)	<a href="mailto:iem3@bhel.in">iem3@bhel.in</a>

- (b) The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory) along with techno-commercial bid (Part-I, in case of two/three part bid). Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification.
- (c) Please refer Section-8 of IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to any of the above IEM(s). All correspondence with the IEMs shall be done through email only.

**Note:**

No routine correspondence shall be addressed to the IEM (phone/ post/ email) regarding the clarifications, time extensions or any other administrative queries, etc. on the tender issued. All such clarification/ issues shall be addressed directly to the tender issuing (procurement) department's officials whose contact details are provided below:

**Details of contact person(s):**

Name	Mr. Ujjwal Howlader	Mr. Sandipan Biswas
Dept.	SCT Dept., BHEL PSER, Kolkata	SCT Dept., BHEL PSER, Kolkata
Address	DJ-9/1, Sector – II, Salt Lake, Kolkata – 700091	DJ-9/1, Sector – II, Salt Lake, Kolkata – 700091
Phone	033-2339 8229	033-2339 8226
Email	<a href="mailto:ujjwalh@bhel.in">ujjwalh@bhel.in</a>	<a href="mailto:bsandipan@bhel.in">bsandipan@bhel.in</a>

35. In the course of evaluation, if more than one bidder happens to occupy L-1 status, effective L-1 will be decided by soliciting discounts from the respective L-1 bidders.  
In case more than one bidder happens to occupy the L-1 status even after soliciting discounts, the L-1 bidder shall be decided by a toss / draw of lots, in the presence of the respective L-1 bidder(s) or their representative(s). Ranking will be done accordingly. BHEL's decision in such situations shall be final and binding

**36. Order of Precedence**

In the event of any ambiguity or conflict between the Tender Documents, the order of precedence shall be in the order below:

- a) Amendments/Clarifications/Corrigenda/Errata etc issued in respect of the tender documents by BHEL
- b) Notice Inviting Tender (NIT)
- c) Price Bid/Schedule – Volume-III
- d) Technical Conditions of Contract (TCC) & Special Conditions of Contract (SCC)
- e) General Conditions of Contract (GCC) - PART-B
- f) Forms and Procedures – PART- H

for BHARAT HEAVY ELECTRICALS LTD.

Dy. Manager (SCT)

Agency	Contact details	
BHEL, PSER, Kolkata	Address	BHARAT HEAVY ELECTRICALS LIMITED, POWER SECTOR – EASTERN REGION 2ND FLOOR, BLOCK-DJ, PLOT- 9/1, SECTOR, SALT LAKE CITY, KOLKATA – 700 091
	Phone no.	033-23398229, 23398226, 23211690
	FAX no.	033-23211960
	E-mail ID	<a href="mailto:ujjwalh@bhel.in">ujjwalh@bhel.in</a> , <a href="mailto:bsandipan@bhel.in">bsandipan@bhel.in</a>
NIC E- PROCUREMENT PORTAL	<p><b>For E-Procurement Assistance &amp; Training, NIC PORTAL Helpdesk Contacts as per following: -</b>            For any technical related queries please call at 24 x 7 Help Desk Number            0120-4001 002, 0120-4200 462, 0120-4001 005, 0120-6277 787</p> <p>Email Support            Address: A) For any Issues or Clarifications relating to the published tenders, bidders are requested to contact the respective Tender Inviting Authority            Technical - <a href="mailto:support-eproc@nic.in">support-eproc@nic.in</a></p>	

**Enclosure:**

01. ANNEXURE-I: Pre Qualifying Criteria.
02. ANNEXURE-II : No Deviation Certificate
03. ANNEXURE-III: Format for Self Certification regarding Local content (LC) for Product/ Services/ Works
04. ANNEXURE-IV: CERTIFICATE (regarding bidder from a country which shares a land border with India)
05. ANNEXURE-V: Certificate by Chartered Accountant
06. ANNEXURE-VI: Format for seeking clarification
07. ANNEXURE-VII: Suspension of business dealing with Suppliers/Contractors
08. ANNEXURE-VIII: Declaration for Relation in BHEL
09. ANNEXURE-IX: Declaration of the Bidders
10. ANNEXURE-X: Declaration regarding related firms and their area of activities
11. ANNEXURE-A: Check List
12. ANNEXURE-B: General Terms & conditions for Reverse Auction.
13. ANNEXURE-C: Bankruptcy/ Liquidation Undertaking
14. Other Tender documents as per this NIT.

**PRE QUALIFICATION CRITERIA**

JOB	PROCUREMENT OF BALL VALVES FOR FOHS SYSTEM AT 3 X 660 MW NORTH KARANPURA STPP, JHARKHAND.
TENDER NO	PSER:SCT:NKP-M2167:22 DATE: 20/09/2022

<b>A.</b>	<b><u>FINANCIAL CRITERIA</u></b>
1.0 (a)	BIDDER SHOULD HAVE AVERAGE MINIMUM ANNUAL FINANCIAL TURNOVER INR 6 LAKH DURING THE LAST 3 (THREE) YEARS, ENDING ON 31-03-2021.
(b)	BIDDER MUST HAVE SUBMITTED AUDITED BALANCE SHEET AND PROFIT & LOSS ACCOUNT OF THE COMPANY FOR LAST THREE FINANCIAL YEARS ENDING ON 31-03-2021 NEED TO BE SUBMITTED IN SUPPORT OF ABOVE.
(c)	IN CASE AUDITED BALANCE SHEET AND PROFIT AND LOSS ACCOUNT HAS NOT BEEN SUBMITTED FOR ALL THREE YEARS INDICATED ABOVE THEN THE APPLICABLE FINANCIAL AUDITED STATEMENTS SUBMITTED BY THE BIDDERS AGAINST THE REQUISITE THREE YEARS WILL BE AVERAGED FOR THREE YEARS.
(d)	IF FINANCIAL STATEMENTS ARE NOT REQUIRED TO BE AUDITED STATUTORILY, THEN INSTEAD OF AUDITED FINANCIAL STATEMENTS, FINANCIAL STATEMENTS ARE REQUIRED TO BE CERTIFIED BY CHARTERED ACCOUNTANT.
<b>B.</b>	<b><u>TECHNICAL CRITERIA</u></b>
1.0	BIDDER SHOULD HAVE EXPERIENCE OF SUPPLYING BALL VALVES (SIZE- 15 NB TO 250 NB, CL-150) OF QUANTITY 05 NOS. (04 NOS. MANUAL BALL VALVE & 01 NO. MOTORIZED BALL VALVE) TO ANY GOVT. / PSU/ REPUTED ORGANISATION IN LAST THREE YEARS ENDING ON LATEST DUE DATE OF SUBMISSION OF OFFER.  RELEVANT DOCUMENTS IN SUPPORT OF ABOVE SHALL BE SUBMITTED BY BIDDER.
2.0	BIDDER SHOULD HAVE VALID PAN.  RELEVANT DOCUMENT IN SUPPORT OF ABOVE SHALL BE SUBMITTED.
3.0	CONSORTIUM / JV BIDDING IS NOT ALLOWED.
<b>C.</b>	<b><u>GENERAL CLAUSE:</u></b>
1.0	THE BIDDER WHO MEETS THE ABOVE PRE-QUALIFICATION CRITERIAN CAN ONLY PARTICIPATE IN THE TENDER.
2.0	BIDDERS QUOTING IN INDIAN CURRENCY (INR) ONLY SHALL BE QUALIFIED.
3.0	BIDDER MUST NOT BE UNDER BANKRUPTCY CODE PROCEEDINGS (IBC) BY NCLT OR UNDER LIQUIDATION / BIFR, WHICH WILL RENDER HIM INELIGIBLE FOR PARTICIPATION IN THIS TENDER, AND SHALL SUBMIT UNDERTAKING TO THIS EFFECT.
4.0	<b>CONSIDERATION OF OFFER WILL BE SUBJECT TO CUSTOMER'S APPROVAL OF BIDDER.</b>
5.0	EXISTING VENDOR /CONTRACTOR DEPLOYED BY BHEL AS PER PURCHASE ORDER NO.- PSER:SCT:NKP-M1627:15:PO:4663 dated 26-08-2015 FOR "DESIGN, ENGINEERING, MANUFACTURING, SUPPLY/DELIVERY ETC. OF FUEL OIL HANDLING AND STORAGE SYSTEM PACKAGE FOR NTPC, 3X660 MW NORTH KARANPURA SUPER THERMAL POWER PROJECT, JHARKHAND.", SHALL NOT BE ALLOWED TO PARTICIPATE IN THE SUBJECT TENDER. EXISTING CONTRACTOR WILL INCLUDE: a) IN CASE EXISTING CONTRACTOR IS THE SOLE PROPRIETORSHIP FIRM, ANY SOLE PROPRIETORSHIP FIRM OWNED BY SAME SOLE PROPRIETOR b) IN CASE EXISTING CONTRACTOR IS THE PARTNERSHIP FIRM, ANY FIRM COMPRISING OF SAME PARTNERS / SOME OF THE SAME PARTNERS (BUT NOT INCLUDING ANY NEW PARTNER) OR SOLE PROPRIETORSHIP FIRM OWNED BY ANY PARTNER(S) AS A SOLE PROPRIETOR.

**FORMAT FOR NO DEVIATION CERTIFICATE**(To be submitted in the bidder's letter head)

To,  
 BHARAT HEAVY ELECTRICALS LIMITED,  
 Power Sector - Eastern Region,  
 Plot no 9/1, DJ Block, Sector – II, Salt Lake City,  
 Kolkata – 700 091

SUB	NO DEVIATION CERTIFICATE.	
JOB	PROCUREMENT OF BALL VALVES FOR FOHS SYSTEM AT 3 X 660 MW NORTH KARANPURA STPP, JHARKHAND.	
REF	1.0	TENDER NO. PSER:SCT:NKP-M2167:22 DATE: 20/09/2022
	2.0	ALL OTHER PERTINENT ISSUES TILL DATE.

Dear Sir/Madam,

With reference to above, this is to confirm that as per tender conditions, we have visited site before submission of our offer and noted the job content & site conditions etc. We also confirm that we have not changed/ modified the tender documents as appeared in the website/ issued by you and in case of such observance at any stage, it shall be treated as null and void.

We hereby confirm that we have not taken any deviation from tender clauses together with other references as enumerated in the above referred NIT. We hereby confirm our unqualified acceptance to all terms & conditions, unqualified compliance to technical specification, integrity pact (if applicable) and acceptance to reverse auctioning process.

In the event of observance of any deviation in any part of our offer at a later date whether implicit or explicit, the deviations shall stand null & void.

We confirm to have submitted/uploaded offer/documents in accordance with tender instructions with acceptance of the terms & conditions of the tender by us and as per aforesaid references.

Thanking you,

Yours faithfully,

(Signature, date & seal of authorized  
representative of the bidder)



**DECLARATION REGARDING MINIMUM LOCAL CONTENT IN LINE WITH  
REVISED PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA), ORDER 2017 DATED 04<sup>TH</sup> JUNE, 2020 AND  
SUBSEQUENT ORDER(S)**

*(To be typed and submitted in the Letter Head of the Entity/Firm providing certificate as applicable)*

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

**Sub:** Declaration reg. minimum local content in line with Public Procurement (Preference to Make in India), Order 2017-Revision, dated 04<sup>th</sup> June, 2020 and subsequent order(s).

**Ref :** 1) NIT/Tender Specification No: PSER:SCT:NKP-M2167:22 DATE: 20/09/2022,  
2) All other pertinent issues till date

We hereby certify that the items/works/services offered by..... *(specify the name of the organization here)* has a local content of \_\_\_\_\_ % and this meets the local content requirement for '**Class-I local supplier**' / '**Class II local supplier**' \*\* as defined in Public Procurement (Preference to Make in India), Order 2017-Revision dated 04.06.2020 issued by DPIIT and subsequent order(s).

The details of the location(s) at which the local value addition is made are as follows:

1. \_\_\_\_\_ 2. \_\_\_\_\_

3. \_\_\_\_\_ 4. \_\_\_\_\_

...

...

...

Thanking you,

Yours faithfully,

**(Signature, Date & Seal of Authorized Signatory of the Bidder)**

\*\* - Strike out whichever is not applicable.

**Note:**

1. Bidders to note that above format Duly filled & signed by authorized signatory, shall be submitted along with the techno-commercial offer.
2. In case the bidder's quoted value is in excess of Rs.10 crores, the authorised signatory for this declaration shall necessarily be the statutory auditor or cost auditor of the company (in case of companies) or a practising cost accountant or practicing chartered accountant (in respect of suppliers other than companies)
3. In the event of false declaration, actions as per the above order and as per BHEL Guidelines shall be initiated against the bidder.

**DECLARATION REGARDING COMPLIANCE TO RESTRICTIONS UNDER RULE 144 (xi) OF GFR 2017**  
(To be submitted in the bidder's letter head)

-----  
To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

**Sub:** Declaration regarding compliance to Restrictions under Rule 144 (xi) of GFR 2017

**Ref:** 1) NIT/Tender Specification No: PSER:SCT:NKP-M2167:22 DATE: 20/09/2022,  
2) All other pertinent issues till date

"I have read the tender clauses pertaining to Department of Expenditure's (DoE) Public Procurement Division Order (Public procurement no 1, 2 & 3 vide ref. F.No.6/18/2019-PPD dated 23.07.2020 & 24.7.2020) regarding restrictions on procurement from a bidder of a country which shares a land border with India. I hereby certify that \_\_\_\_\_ (specify the name of the organization here) is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that we fulfill all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached]"

Thanking you,  
Yours faithfully,

**(Signature, Date & Seal of Authorized Signatory of the Bidder)**

**Note:** Bidders to note that in case above certification given by a bidder, whose bid is accepted, is found to be false, then this would be a ground for immediate termination and for taking further action in accordance with law and as per BHEL guidelines.

**Certificate by Chartered Accountant on letter head**

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

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

1. **For Manufacturing Enterprises:** Investment in plant and machinery (i.e. original cost excluding land and building and the items specified by the Ministry of Small Scale Industries vide its notification No.S.O.1722(E) dated October 5, 2006:  
Rs ..... Lacs
2. **For Service Enterprises:** Investment in equipment (original cost excluding land and building and furniture, fittings and other items not directly related to the service rendered or as may be notified under the MSMED Act, 2006:  
Rs ..... Lacs
3. **For Enterprises (having EM-Part-II / UAM):** Investment in plant and machinery or equipment is Rs..... Lacs and turnover is Rs. ....Lacs {as notified in MSME notification no. S.O. 2119 (E) dated 26-06-2020}.
4. **For Enterprises (Udyam, registered under Udyam Registration Portal):** Investment in plant and machinery or equipment is Rs.....Lacs and turnover is Rs.....Lacs {as notified in MSME notification no. S.O. 2119 (E) dated 26-06-2020}.

**(Strike off whichever is not applicable)**

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

Or

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

Date:

(Signature)

Name-

Membership number –

Seal of Chartered Accountant

**FORMAT FOR SEEKING CLARIFICATION**

<b>Job</b>	<b>PROCUREMENT OF BALL VALVES FOR FOHS SYSTEM AT 3 X 660 MW NORTH KARANPURA STPP, JHARKHAND.</b>			
<b>Tender No</b>	<b>PSER:SCT:NKP-M2167:22 DATE: 20/09/2022</b>			
<b>Sl. no</b>	<b>Reference clause of tender document</b>	<b>Existing provision</b>	<b>Bidder's query</b>	<b>BHEL's clarification</b>

**SUSPENSION OF BUSINESS DEALINGS WITH SUPPLIERS/ CONTRACTORS**

1.0	<b><u>Suspension of Business dealings with Suppliers/ Contractors</u></b>
1.1	BHEL reserves the right to take action against Suppliers/ Contractors who fail to perform or indulge in malpractices, by suspending business dealings with them.
1.2	Suspension of business dealings with Suppliers/ Contractors could be in the form of following: -- <b>a) Hold within the unit for specific item(s)/ material category(ies)/ type of work(s) for one year.</b> <b>b) Hold within the unit for all item(s)/ material category(ies)/ type of work(s) for two years</b> <b>c) Banning across BHEL for all items/ material category(ies)/ type of work(s) for three years.</b> The Supplier may be either put on hold or banned, as detailed hereinafter on the basis of one or more of the category wise reasons as enumerated hereunder.
1.3	<b>Hold within the unit for a specific item(s)/ material category(ies)/ type of work(s) shall be imposed in the following cases, if</b> i) In the last three consecutive supplies of a specific material category, average quality rating, as provided in the supplier performance rating (SPR) as per SEARP, falls below 80% of the quality weightage. This is irrespective of supplies against PO(s) having single/ multiple delivery schedules. Note: Not applicable in cases for erection works of Power Sector Regions, where separate guidelines for evaluation of capacity of bidders is being followed. ii) Two consecutive delays, for reasons of delay attributed to the Supplier, in execution of the contracts where delay occurred is such that a) prescribed maximum LD time limits of the contracts is exceeded or b) delay period has equaled/ exceeded half the original delivery period specified in the contracts whichever among the above is earlier. iii) a) Overall SPR (Supplier Performance Rating) in that particular Unit in line with SEARP falls below 60% of the specific material category. b) Bids of contractors (in PS-MSX portal) shall not be considered (if average score of last six months falls 60% or below as per guidelines for evaluation of capacity of bidders formula). Note: – for (b), No specific period of hold shall be applicable. iv) Supplier works are under strike/ lockout for a period of more than three months. <b>Hold within the unit for all item(s)/material category(ies)/ type of work(s) shall be put in the following cases, if</b> i) Supplier tampers with tendering procedure affecting ordering process. ii) Supplier has misused BHEL documents/ drawings/ technical information or has breached the confidentiality agreement with BHEL. iii) after placement of order, Supplier fails to execute the contract. iv) within warranty period as per contract, Supplier continues to supply low/ less/ non-performing equipment/ services, repetitive failures, remains non-responsive. v) Wherever risk purchase clause (amounting to more than 5% of contract value) has been invoked. vi) After price bid opening but before placement of order, Supplier withdraws his offer or varies it in any manner within the validity period.
1.4	<b>Banning across BHEL shall be imposed in following cases, if</b>
1.4.1	i) Supplier is found to be responsible for submitting fake/ false/ forged documents, certificates, or information or misrepresentation/ wilful suppression of facts, or has resorted to unethical, illegal means or has forged BHEL documents, certificates etc. for securing business, meeting PQR or for enlistment in BHEL or with customers other than BHEL. ii) In spite of warnings, the Supplier persistently violates or circumvents the provisions of labour laws/ regulations/ rules or other statutory requirements. iii) Supplier is found to be involved in cartel formation or in any other act so as to influence the bidding process or influence the price. iv) The Supplier has indulged in malpractices or misconduct such as bribery, corruption and fraud, pilferage, coercion etc. v) The Supplier is found guilty by any court of law for criminal activity/ offences involving moral turpitude in relation to business dealings. vi) Supplier is found to have obtained any internal information/ documentation of BHEL by unauthorized means. vii) The foreign Principals along with the representing Agent shall be banned together if information submitted by them about their precise relationship, commission/ remuneration etc. payable/ receivable and other particulars as asked by BHEL, as per the extant guidelines regarding dealing with Agents of Foreign Suppliers is found false/ incorrect, at any stage. viii) Supplier has substituted, damaged, failed to return, or unauthorizedly disposed off free issue materials/ tools etc. of BHEL.
1.4.2	A Supplier can also be banned with the approval of Director (E, R&D) provided a direction to this effect has been received from the administrative ministry of the Government.

**Note: Above shall be applicable along with Guidelines for “Suspension of Business dealings with Suppliers/ Contractors” available in BHEL website <http://www.bhel.com>. These shall form part of tender documents.**

**DECLARATION FOR RELATION IN BHEL**

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder failing which the offer of Bidder is liable to be summarily rejected)

---

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: **Declaration for relation in BHEL**

Ref: 1) NIT/Tender Specification No: **PSER:SCT:NKP-M2167:22** DATE: **20/09/2022**,

I/We hereby submit the following information pertaining to relation/relatives of Proprietor/Partner(s)/Director(s) employed in BHEL.

**Tick (✓) any one as applicable:**

1. The Proprietor, Partner(s), Director(s) of our Company/Firm DO NOT have any relation or relatives employed in BHEL

OR

2. The Proprietor, Partner(s), or Director(s) of our Company/Firm HAVE relation/relatives employed in BHEL and their particulars are as below:

(i)

(ii)

Signature of the Authorized Signatory

Note:

1. Attach separate sheet, if necessary.
2. If BHEL Management comes to know at a later date that the information furnished by the Bidder is false, BHEL reserves the right to take suitable against the Bidder/Contractor.

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**DECLARATION OF THE BIDDERS**

Job: PROCUREMENT OF BALL VALVES FOR FOHS SYSTEM AT 3 X 660 MW NORTH KARANPURA STPP, JHARKHAND.

01. I, .....hereby certify that all the information and date furnished by me with regard to this Tender No. **PSER:SCT:NKP-M2167:22** **DATE: 20/09/2022** are true and complete to the best of my knowledge.
02. I have gone through the tender specifications, scope of work, terms and conditions mentioned in Annexure as well as General and Special conditions of contract and various stipulations in detail and agree to abide by them and comply with the requirements and intent of specifications.
03. I also certify that there have been no deviations from the tender requirements in the bid submitted against this tender.
04. I further certify that I am duly authorized representative of the under mentioned tenderer and hold a valid power of attorney to this effect, a copy of which is enclosed.

Signature:

Name :

Date :

Designation:

Seal:

Tenderers Name and address

Enclosed: Power of Attorney

**DECLARATION**

Date: -----

Job: PROCUREMENT OF BALL VALVES FOR FOHS SYSTEM AT 3 X 660 MW NORTH KARANPURA STPP, JHARKHAND.

**E-Tender No.: PSER:SCT:NKP-M2167:22 DATE: 20/09/2022**

To: -----  
 Address: ----- BHEL, -----  
 -----  
 -----  
 Email: -----

Sub: **Details of related firms and their area of activities**

Dear Sir/Madam,

Please find below details of firms owned by our family members that are doing business/registered for same item with BHEL, -----(NA, if not applicable)

1	Material Category/ Work Description	
	Name of Firm	
	Address of Firm	
	Nature of Business	
	Name of Family Member	
	Relationship	
2	Material Category/ Work Description	
	Name of Firm	
	Address of Firm	
	Nature of Business	
	Name of Family Member	
	Relationship	
...		

**Note: I certify that the above information is true and I agree for penal action from BHEL in case any of the above information furnished is found to be false.**

Regards,

(-----)

From: M/s-----  
 Supplier Code: -----  
 Address: -----  
 -----  
 -----



**CHECK LIST****NOTE:- Tenderers are required to fill in the following details and no column should be left blank**

1	Name and Address of the Tenderer		
2	Details about type of the Firm/Company		
3.a	Details of Contact person for this Tender	Name : Mr/Ms Designation: Telephone No: Mobile No: Email ID: Fax No:	
3.b	Details of alternate Contact person for this Tender	Name : Mr/Ms Designation: Telephone No: Mobile No: Email ID: Fax No:	
4	EMD DETAILS	DD No:                      Date : Bank :                      Amount: Please tick ( ✓ ) whichever applicable:- ONE TIME EMD / ONLY FOR THIS TENDER	
5	Validity of Offer	TO BE VALID FOR 180 DAYS FROM DUE DATE	
		APPLICABILITY(BY BHEL)	ENCLOSED BY BIDDER
6	Whether the format for compliance with <b>PRE QUALIFICATION CRITERIA</b> (ANNEXURE-I) is understood and filled with proper supporting documents referenced in the specified format	Applicable	YES / NO
7	Audited profit and Loss Account for the last three years	Applicable/Not Applicable	YES/NO
8	Copy of PAN Card	Applicable	YES/NO
9	Whether all pages of the Tender documents including annexures, appendices etc are read understood and signed	Applicable	YES/NO
10	Integrity Pact	Not Applicable	YES/NO
11	Declaration of the Bidders	Applicable	YES/NO
12	No Deviation Certificate	Applicable	YES/NO
13	Declaration for relation in BHEL	Applicable	YES/NO
14	Declaration regarding Minimum Local Content	Applicable	YES/NO
15	Declaration regarding compliance to restrictions under Rule 144 (xi) of GFR 2017 (regarding bidder from a country which shares a land border with India)	Applicable	YES/NO
16	Declaration regarding MSE	Applicable/Not Applicable	YES/NO
17	Non-Disclosure Certificate	Applicable/Not Applicable	YES/NO
18	Declaration regarding related firms and their area of activities	Applicable	YES/NO
19	Bank Account Details for E-Payment	Applicable/Not Applicable	YES/NO
20	Capacity Evaluation of Bidder for current Tender	Applicable/Not Applicable	YES/NO
21	Power of Attorney for Submission of Tender/Signing Contract Agreement	Applicable/Not Applicable	YES/NO

NOTE: STRIKE OFF 'YES' OR 'NO', AS APPLICABLE. TENDER NOT ACCOMPANIED BY THE PRESCRIBED **ABOVE APPLICABLE DOCUMENTS** ARE LIABLE TO BE SUMMARILY REJECTED.

DATE :

**AUTHORISED SIGNATORY**  
(With Name, Designation and Company seal)

पावर सेक्टर पूर्वी क्षेत्र ( मुख्यालय ) POWER SECTOR EASTERN REGION, DJ-9/1, SALT LAKE CITY, KOLKATA - 700 091 फैक्स/Fax: (033) 23211960 फ़ोन/Phone: बोर्ड/EPABX: 23398220	Page - 17 of 30
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**PART - F****ANNEXURE – A: GENERAL TERMS & CONDITIONS OF REVERSE AUCTION**

Against this enquiry for the subject item/ system with detailed scope of supply/service as per tender specifications, BHEL shall be resorting to “REVERSE AUCTION PROCEDURE” i.e. ON LINE BIDDING (THROUGH A SERVICE PROVIDER). The philosophy followed for reverse auction shall be English Reverse (No ties).

1. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
2. *Price bids of all techno-commercially qualified bidders shall be opened and same shall be considered for RA.*
3. BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.
4. In case of reverse auction, BHEL will inform the bidders the details of Service Provider to enable them to contact & get trained for participation in the reverse auction.
5. Business rules like event date, time, bid decrement, extension etc. also will be communicated through service provider for compliance.
6. Bidders have to fax /e-mail the Compliance form (annexure III) before start of Reverse auction. Without this, the bidder will not be eligible to participate in the event.
7. In line with the NIT terms, BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at “Total Cost to BHEL” which is inclusive of all cost elements in line with terms & conditions of the tender for each of the bidder to enable them to fill-in the price and keep it ready for keying in during the Auction.
8. Reverse auction will be conducted on scheduled date & time.
9. At the end of Reverse Auction event, the lowest bidder value will be known on auction portal.
10. The lowest bidder has to fax/e-mail the duly signed and filled-in prescribed format for price breakup including that of line items, if required, (Annexure VI) as provided on case-to-case basis to Service provider within two working days of Auction without fail.
11. *Bidders shall be required to read the “Terms and Conditions” section of the auctions site of Service provider, using the Login IDs and passwords given to them by the service provider before reverse auction event. Bidders should acquaint themselves of the “Business Rules of Reverse Auction”, which will be communicated before the Reverse Auction.*
12. The Bidder shall not divulge either his Bids or any other exclusive details of BHEL to any other party. If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, action as per extant BHEL guidelines for suspension of business dealings (as available on www.bhel.com), shall be initiated by BHEL and the results of the RA scrapped/ aborted.
13. *Reverse Auction will be conducted if two or more bidders are techno-commercially qualified. In case of two or three qualified bidders, there shall be no elimination of H1 bidder (whose quote is highest in sealed envelope price bid). In case of four qualified bidders, the H1 bidder shall be eliminated whereas in case of five qualified bidders, H1 & H2 bidders shall be eliminated. However, in case of six or more qualified bidders are available, RA would be conducted amongst first 50% of the bidders arranged in the order of prices from lowest to highest. Number of bidders eligible for participating in RA would be rounded off to next higher integer value if number of qualified bidders is odd (e.g. if 7 bids are qualified, then RA will be conducted amongst lowest four bidders). However, there will be no elimination of qualified bidders who are MSE or qualifying under PPP-MII, Order 2017, irrespective of the number of bidders qualifying techno-commercially.*

*In case of multiple H1 bidders, all H1 bidders (excluding MSEs and bidders qualifying under PPP-MII, Order 2017) shall be removed provided minimum two bidders remain in fray, else no H1 removal.*

पावर सेक्टर पूर्वी क्षेत्र ( मुख्यालय ) POWER SECTOR EASTERN REGION, DJ-9/1, SALT LAKE CITY, KOLKATA - 700 091 फ़ैक्स/Fax: (033) 23211960 फ़ोन/Phone: बोर्ड/EPABX: 23398220	Page - 18 of 30
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## UNDERTAKING

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir/Madam,

**Sub: DECLARATION REGARDING INSOLVENCY/ LIQUIDATION/ BANKRUPTCY PROCEEDINGS**

**Ref: NIT/Tender Specification No: PSER:SCT:NKP-M2167:22 DATE: 20/09/2022**

I/We, \_\_\_\_\_ declare that,

I/We am/are not under insolvency resolution process or liquidation or Bankruptcy Code Proceedings (IBC) as on date, by NCLT or any adjudicating authority/authorities, which will render us ineligible for participation in this tender.

**Sign. of the AUTHORISED SIGNATORY  
(With Name, Designation and Company seal)**

Place:

Date:

**PART – B: GENERAL CONDITIONS OF CONTRACT (GCC)**

SL. NO.	BHEL STANDARD TERMS	Bidder's confirmation	Remarks
1.	<p>Our requirement will be used at <b>BHEL-PSER's 3 X 660 MW NORTH KARANPURA STPP, JHARKHAND</b></p> <p>Techno-commercial &amp; Pre-Q bids shall be opened first &amp; afterwards price bid shall be opened for qualified bidder(s), who have qualified in Techno-commercial &amp; Pre-Q bids.</p> <p>Tenders will be received up to <b>14.00 Hours</b> on the said due date.</p> <p><b><u>If the vendor submits offer i.e. Technical &amp; Price bid together in single attachment, the offer shall be liable for rejection.</u></b></p> <p><b><u>Price should be submitted as per tender format only &amp; uploaded in the price section.</u></b></p> <p>Note: In order to maintain sanctity of the tender system, it is advised that one Agent cannot represent two suppliers or quote on their behalf in a particular tender.</p> <p>In the tender, either one agent on behalf of the principal/OEM or Principal/OEM itself can bid but both cannot bid simultaneously for same item/product.</p>		
2.	If any vendor sought to quote through their agents "They have to inform to BHEL in advance, before opening date. Otherwise the offer will be treated as Unsolicited Offer and same will not be opened".		
3.	BHEL keeps its right to <b>reject / load</b> any offer which is having deviations to BHEL Specifications, Standard Terms & Conditions. All the bidders shall submit their offers only by filling the original BHEL tender documents. No other offer will be entertained. In case of Technical-Cum-Commercial bid, copy of the price bid has to be used to indicate commercial terms without price.		
4.	The equipment offered shall be strictly conforming to the specification and for complete unit.		
5.	No offer for individual accessories or part machinery will be accepted.		
6.	<b><u>PAYMENT TERMS:</u></b> <b>Shall be as per SCC/ TCC of tender. No advance shall be paid. Payment shall be paid in INR only.</b>		
7.	<b><u>WARRANTY/GUARANTEE:</u> As specified in SCC/ TCC OF TENDER.</b>		
8.	<b><u>DELIVERY TERMS:</u> As specified in SCC/ TCC OF TENDER.</b>		
9.	<b><u>DISCOUNTS:</u></b> Discounts offered by the vendor in price shall not be entertained by BHEL. The vendor should factor in his discount in the price offer only. In spite of the same, if a discount is offered by the bidder, the same shall not be considered for evaluation of the offer, but purchase order shall be issued on bidder's final discounted price.		
10.	<b><u>LIQUIDATED DAMAGE/PENALTY CLAUSE:</u></b> As specified in <b>SCC/ TCC OF TENDER.</b>		
11.	<b>a. <u>SECURITY DEPOSIT BANK GUARANTEE(SDBG): Not Applicable</u></b> <b>b. <u>PERFORMANCE BANK GUARANTEE (PBG): Not Applicable</u></b>		
12.	The sealed tenders super scribing tender number and due date should be addressed to: Dy. Manager/SCT, Bharat Heavy Electricals Limited, PSER, BHEL BHAWAN, DJ-9/1, SALT LAKE, SECTOR-II, KOLKATA - 700 091, India.	Not Applicable	
13.	<b><u>INSPECTION:</u></b> <b>As specified in SCC/ TCC OF TENDER.</b>		
14.	<b><u>CONSIGNEE DETAILS OF THE EQUIPMENT :-</u></b> <b>As specified in SCC/ TCC OF TENDER.</b> All documents / correspondences must bear the Tender no. / Purchase Order No. & Date.		
15.	The manufacturing <b>progress</b> will have to be furnished to us periodically in the form and manner required by us.		

16.	Supplier must submit with their offer list of customers (with their full address and their purchase reference number) to whom they have supplied similar machine in the past five years. The year of supply should also be indicated.		
17.	The quotation should be valid at least for a period of <b>SIX (06) MONTHS</b> from the tender due date of submission (extended, if any). Price Variation Clause – Not applicable.		
18.	<b>FORCE MAJEURE :</b> The vendor shall be subject to force majeure clause defined as under : This force majeure is herein defined as any cause which is beyond the control of the tenderer which they would not have foreseen or with a reasonable amount of diligence could not have foreseen and which subsequently affect the performance of the contract such as SRCC (strike riot and civil commotion), earthquake, flood, acts of god, acts of any government, domestic or foreign including but not limited to war. The tenderer shall not be liable for delay in performing his obligation resulting from any force majeure clause as referred to and/or defined above. The date of completion will be subject to hereinafter provided be extended by a reasonable time even though such cause may occur after tenderer's performance of his obligation has been delayed for other causes.		
19.	<b>ARBITRATION &amp; CONCILIATION</b>		
19.1	<b>ARBITRATION :</b>		
19.1.1	Except as provided elsewhere in this Contract, in case Parties are unable to reach amicable settlement (whether by Conciliation to be conducted as provided in Clause 19.2 herein below or otherwise) in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract (hereinafter referred to as the 'Dispute'), then, either Party may, commence arbitration in respect of such Dispute by issuance of a notice in terms of section 21 of the Arbitration & Conciliation Act, 1996 (hereinafter referred to as the 'Notice'). The Notice shall contain the particulars of all claims to be referred to arbitration in sufficient detail and shall also indicate the monetary amount of such claim. The arbitration shall be conducted by a sole arbitrator to be appointed by the Head of the BHEL Power Sector Region issuing the Contract within 60 days of receipt of the complete Notice. The language of arbitration shall be English.  The Arbitrator shall pass a reasoned award.  Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or statutory modifications or re-enactments thereof and the rules made thereunder as in force from time to time shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be Kolkata (the place from where the contract is Issued). The Contract shall be governed by and be construed as per provisions of the laws of India. Subject to this provision 19.1.1 regarding ARBITRATION, the principal civil court exercising ordinary civil jurisdiction over the area where the seat of arbitration is located shall have exclusive jurisdiction over any DISPUTE to the exclusion of any other court.		
19.1.2	In case of Contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable: In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/ Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD (Administrative Mechanism for Resolution of CPSEs Disputes) as mentioned in DPE OM No. 4(1)/2013-DPE(GM)/FTS-1835 dated 22-05-2018 as amended from time to time.		
19.1.3	The cost of arbitration shall initially be borne equally by the Parties subject to the final allocation thereof as per the award/order passed by the		
पावर सेक्टर पूर्वी क्षेत्र ( मुख्यालय ) POWER SECTOR EASTERN REGION, DJ-9/1, SALT LAKE CITY, KOLKATA - 700 091 फैक्स/Fax: (033) 23211960 फ़ोन/Phone: बोर्ड/EPABX: 23398220			Page - 21 of 30

	Arbitrator.		
19.1.4	Notwithstanding the existence of any dispute or differences and/or reference for the arbitration, the Contractor shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and expedition in a professional manner unless the dispute inter-alia relates to cancellation, termination or short-closure of the Contract by BHEL.		
19.2	<p><b><u>CONCILIATION:</u></b> If at any time (whether before, during or after the arbitral or judicial proceedings), any Disputes (which term shall mean and include any dispute, difference, question or disagreement arising in connection with construction, meaning, operation effect, interpretation or breach of the agreement, contract), which the Parties are unable to settle mutually, arise inter-se the Parties, the same may, be referred by either party to Conciliation to be conducted through Independent Experts Committee (IEC) to be appointed by competent authority of BHEL from the BHEL Panel of Conciliators.</p> <p>Notes:</p> <ol style="list-style-type: none"> <li>1. No serving or a retired employee of BHEL/Administrative Ministry of BHEL shall be included in the BHEL Panel of Conciliators.</li> <li>2. Any other person(s) can be appointed as Conciliator(s) who is/are mutually agreeable to both the parties from outside the BHEL Panel of Conciliators.</li> </ol> <p>The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided in Procedure 2.3 to this GCC (as available in <a href="http://www.bhel.com">www.bhel.com</a>). The Procedure 2.3 together with its Formats (as available in <a href="http://www.bhel.com">www.bhel.com</a>) will be treated as if the same is part and parcel hereof and shall be as effectual as if set out herein in this GCC.</p> <p>The Contractor hereby agrees that BHEL may make any amendments or modifications to the provisions stipulated in the Procedure 2.3 (as available in <a href="http://www.bhel.com">www.bhel.com</a>) to this GCC from time to time and confirms that it shall be bound by such amended or modified provisions of the Procedure 2.3 (as available in <a href="http://www.bhel.com">www.bhel.com</a>) with effect from the date as intimated by BHEL to it.</p>		
19.3	<p><b><u>No Interest payable to Contractor</u></b> Notwithstanding anything to the contrary contained in any other document comprising in the Contract, no interest shall be payable by BHEL to Contractor on any moneys or balances including but not limited to the Security Deposit, EMD, Retention Money, RA Bills or the Final Bill, or any amount withheld and/or appropriated by BHEL etc., which becomes or as the case may be, is adjudged to be due from BHEL to Contractor whether under the Contract or otherwise.</p>		
20.	<p><b><u>JURISDICTION :</u></b> All disputes or differences arising out of or in connection with the Purchase Order shall be subject to the exclusive jurisdiction of Courts (pecuniary or territorial) viz Commercial Court Rajarhat/ District Court Barasat ( 24 PGN North) as the case may be and Calcutta High Court at Kolkata</p>		
21.	<p><b><u>RIGHTS OF BHEL:</u></b></p> <p>(A) To withdraw any portion of work/supply and/or to restrict / alter the quantum of work/supply as indicated in the contract during the progress of work/supply and get it done through other agency and/or to suit BHEL's commitment to its customer or in case BHEL decides to advance the date of completion due to other emergency reasons / BHEL's obligation to its customer.</p> <p>(B) To terminate the contract or withdraw portion of work/supply and get it done through other agency, at the risk and cost of the contractor after due notice of a period of 14 days' by BHEL in any of the following cases:</p> <ol style="list-style-type: none"> <li>i) Contractor/Supplier's poor progress of the work vis-à-vis execution timeline as stipulated in the Contract, backlog attributable to contractor/supplier including unexecuted portion of work/supply does not appear to be executable within balance available (#) period considering its performance of execution.</li> <li>ii) Withdrawal from or abandonment of the work by contractor before completion of the work as per contract.</li> </ol>		
पावर सेक्टर पूर्वी क्षेत्र ( मुख्यालय ) POWER SECTOR EASTERN REGION, DJ-9/1, SALT LAKE CITY, KOLKATA - 700 091 फ़ैक्स/Fax: (033) 23211960 फ़ोन/Phone: बोर्ड/EPABX: 23398220			Page - 22 of 30

<p>iii) Non-completion of work/Non-supply by the Contractor / Supplier within scheduled completion/delivery period as per Contract or as extended from time to time, for the reasons attributable to the contractor/supplier.</p> <p>iv) Termination of Contract on account of any other reason (s) attributable to Contractor/Supplier.</p> <p>v) Assignment, transfer, subletting of Contract without BHEL's written permission resulting in termination of contract or part thereof by BHEL.</p> <p>vi) Non-compliance to any contractual condition or any other default attributable to Contractor/ Supplier.</p> <p>(#) In-case inputs from BHEL/Customer are likely to be delayed or are actually delayed, this delay may also be taken into account while considering balance period available for execution of Contract.</p> <p><b>(C) Risk &amp; Cost Amount against Balance Work:</b>  Risk &amp; Cost amount against balance work shall be calculated as follows:  Risk &amp; Cost Amount= [(A-B) + (A x H/100)]  Where,  A= Value of Balance scope of Work/Supply (*) as per rates of new contract  B= Value of Balance scope of Work/Supply (*) as per rates of old contract being paid to the contractor / supplier at the time of termination of contract i.e. inclusive of PVC &amp; ORC, if any.  H = Overhead Factor to be taken as 5  In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero).  (*) Balance scope of work / supply (in case of termination of contract):  Difference of Contract Quantities and Executed Quantities as on the date of issue of Letter for 'Termination of Contract', shall be taken as balance scope of Work / Supply for calculating risk &amp; cost amount. Contract quantities are the quantities as per original contract. If, Contract has been amended, quantities as per amended Contract shall be considered as Contract Quantities.  Items for which total quantities to be executed have exceeded the Contract Quantities based on drawings issued to contractor from time to time till issue of Termination letter, then for these items total Quantities as per issued drawings would be deemed to be contract quantities.  Substitute / extra items whose rates have already been approved would form part of contract quantities for this purpose. Substitute / extra items which have been executed but rates have not been approved, would also form part of contract quantities for this purpose and rates of such items shall be determined in line with contractual provisions.  However, increase in quantities on account of additional scope in new tender shall not be considered for this purpose.  NOTE: In-case portion of work is being withdrawn, contract quantities pertaining to portion of work withdrawn shall be considered as 'Balance scope of work / supply' for calculating Risk &amp; Cost amount.</p> <p><b>(D) LD against delay in executed work/ supply in case of Termination of Contract :</b>  LD against delay in executed work / supply shall calculated in line with LD clause as per GCC/SCC/TCC/Special note/any other annexure of tender document (in compliance with order of precedence), for the delay attributable to contractor / supplier. For this purpose, contract value shall be taken as Executed Value of work / supply for the purpose of limiting the maximum LD value.  Method for calculation of "LD against delay in executed work / supply" is given below.  i) Let the time period from scheduled date of start of work till termination of contract excluding the period of Hold (if any) not attributable to contractor / supplier = T1  ii) Let the value of executed work / supply till the time of termination of contract= X  iii) Let the Total Executable Value of work / supply for which inputs/fronts were made available to contractor / supplier and were planned for execution till termination of contract = Y  iv) Delay in executed work / supply attributable to contractor/supplier i.e. T2=[1-(X/Y)] x T1  v) LD shall be calculated in line with LD clause [as per GCC/SCC/TCC/Special note/any other annexure of tender document (in compliance with order of precedence)] of the Contract for the delay attributable to contractor / supplier taking "X" as Contract Value and "T2" as period of delay attributable to contractor/ supplier.</p> <p><b>(E) Recoveries arising out of Risk &amp; Cost and LD or any other recoveries due from Contractor.</b>  Following sequence shall be applicable for recoveries from contractor / supplier on whom risk &amp; cost has been invoked, after informing the contractor / supplier of the total proposed recovery :</p>		
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	<p>a) Dues available in the form of Bills payable to contractor / supplier, SD, BGs against the same contract.</p> <p>b) Demand notice for deposit of balance recovery amount shall be sent to contractor/ supplier, if funds are insufficient to effect complete recovery against dues indicated in (a) above.</p> <p>c) If contractor / supplier fails to deposit the balance amount to be recovered within the period as prescribed in demand notice, following action shall be taken for balance recovery:</p> <p>i) Dues payable to contractor / supplier against other contracts in the same Region / Unit shall be considered for recovery.</p> <p>ii) If recovery cannot be made out of dues payable to the contractor / supplier as above, balance amount to be recovered, shall be informed to other Regions/Units for making recovery from the Unpaid Bills/Running Bills/SD/BGs/Final Bills of contractor / supplier.</p> <p>iii) In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against contractor / supplier.</p>		
22.	<b>LOADING FACTORS FOR DEVIATION TO BHEL STANDARD TERMS &amp; CONDITIONS</b>		
i)	Bank Guarantee: Non submission of 10% BG (if applicable) will attract 10% loading on the offers.		
ii)	<b>Penalty Clause:</b> Non acceptance of penalty clause will attract maximum 10% loading on the offer and accordingly proportionate percentage will be loaded for accepting less percentage of penalty clause. Ex: If the supplier has accepted for maximum 5% penalty clause, then balance 5% will be loaded.		
iii)	For all other Terms & Conditions, if the offer is not confirming to the same, BHEL at its discretion shall load the same and the loading pattern shall be intimated to the bidders before price bid opening. However BHEL reserves the right to cancel a bid in case of non-acceptance of any terms and conditions finally arrived before price bid opening.		
23	<b>Note:</b> The offers not complying the above Terms & Conditions will not be accepted.		

**Note:**

01. In case of any conflict / inconsistency in any clause of the tender or between various sections of the tender, bidder should bring the same in writing to BHEL for clarification before submission of the bid, failing which the most stringent interpretation of the clause in favour of BHEL shall be adopted and the same shall be binding to the bidder.
02. Any deviation sought by the bidder should be indicated in the techno-commercial offer.
03. **Bidder should write “accepted” in the column “Bidder’s confirmation” for each clause, if the conditions are agreeable or else should write the deviations sought in “Bidder’s Deviation(if any)” column. Offers with deviation are liable for rejection.**
04. If any clause left blank, shall be presumed that the clause is accepted by the bidder.

SIGNATURE OF THE BIDDER WITH SEAL AND DATE



## PART-C: TECHNICAL SPECIFICATIONS AND SPECIAL CONDITIONS OF CONTRACT

**TECHNICAL SPECIFICATIONS OF VALVE**

SL.NO	ITEM	SPECIFICATION	QTY (Number)
1.	Ball Valve - 80NB, Manual	As per DS & GA drg.	5
2.	Ball Valve - 200NB, Class 150, Motorized	As per DS & GA drg.	3
3.	Ball Valve - 250NB, Class 150, Manual	As per DS & GA drg	1
4.	Ball Valve - 150NB, Class 150, Manual	As per DS & GA drg	1
5.	Ball Valve - 50NB, Class 150, Manual	As per DS & GA drg	1
6.	Ball Valve - 25NB, Class 150, Manual	As per DS & GA drg	1
7.	Ball Valve - 15NB, Class 150, Manual	As per DS & GA drg	1
8.	Ball Valve - 200NB, Class 150, Manual	As per DS & GA drg	2

**SPECIAL CONDITIONS OF CONTRACT**

<p>THE TOTAL QUOTED PRICE AGAINST EACH ITEM SHALL BE ALL INCLUSIVE i.e [BASIC+PACKING+FREIGHT + TRANSIT INSURANCE] EXCLUDING GST .</p>
<p>BIDDER SHOULD SUPPLY INDENTED VALVES WHICH WOULD PREFERABLY FROM THE FOLLOWING CUSTOMER RECOMMENDED MANUFACTURER OF VALVES</p> <p>A) PES  B) L&amp;T VALVES  C) MICROFINISH  D) WEIR BDK  E) FLOW CHEM  F) HAWA ENGINEERING  G) SHALIMAR VALVES PVT LTD</p> <p>HOWEVER, VALVES OF ANY OTHER MAKE SHALL BE SUBJECT TO APPROVAL OF CUSTOMER/ OWNER. DETAILS/LITERATURE OF SUCH VALVES SHALL BE SUBMITTED WITH THE TECHNICAL BID/OFFER ALONG WITH THEIR CREDENTIALS/CERTIFICATES FROM USER (IN LAST 3 YEARS).</p>
<p><b><u>SCOPE OF WORK:</u></b></p> <p>The scope covers design, engineering, manufacturing, inspection, testing at manufacturer's / works, proper packing, transportation to site including freight, Transit Insurance, etc of Ball valves and actuators for 3x660 MW units at North Karanpura Super Thermal Power Project, Jharkhand. Indented Ball Valves and actuators should be manufactured as per NTPC/BHEL approved manufacturer quality plan, data sheet and GA drawing. NTPC inspection of the Ball valves will be conducted at manufacturer works as per approved MQP, Data Sheet &amp; GA drawing. All materials should be accompanied with guarantee certificate, manufacturers test certificate and issued MDCC from NTPC/BHEL.</p>
<p><b><u>INSPECTION, TESTING AND INSPECTION CERTIFICATES</u></b></p> <p>To facilitate advance planning of inspection in addition to giving inspection notice the vendor shall furnish inspection program indicating schedule dates of inspection in BHEL Quality System and inspection will be conducted as per customer/owner Approved MQP, DS &amp; GA. Supplier has to submit the MQP and data sheet in line with the BHEL standard relevant document (attached) with</p>

new model number as per BOQ for BHEL/customer approval.  
Before any plant/ equipment leave the place of manufacture, BHEL/Customer shall be given the option of witnessing inspections & tests for compliance with specifications & related standards

**MATERIAL DESPATCH CLEARANCE CERIFICATE (MDCC)**

MDCC shall be issued by BHEL/ owner representative prior to dispatch. Inspection of valves & actuator will be inspected by BHEL/owner. In case the tests are not witnessed by BHEL/ owner's representative, vendor should submit their internal inspection report, the test certificates to BHEL for quality review and MDCC will be issued thereafter by BHEL/owner.  
Materials should be directly dispatched by bidder from manufacturer works to NKP project site.

**COMPLETION PERIOD**

Indented Ball Valves will be delivered within 6 weeks from the date of issuance of Purchase order. Ball Valves should be dispatched within 10 days of MDCC issued by NTPC/BHEL.

**PAYMENT TERMS:**

- a) **90% of basic price shall be released within 45 days against receipt of materials at North Karanpura Site on submission of following documents:**
- Invoice / GST compliance tax invoice in original.
  - LR / RR (consignee copy).
  - Packing list.
  - BHEL / customer MDCC enclosing QS note, inspection & test certificate, wherever applicable
- b) **10% of basic price shall be released within 45 days after completion of Guarantee period.**
- c) **Applicable GST, GST portion of invoice shall be released only upon -**
- such invoice appearing in GSTR-2A/2B of BHEL on filing of valid returns by vendor as per GST law within timeline prescribed for availing ITC by BHEL, and
  - Receipt of goods / services and Tax invoice by BHEL, and
  - Confirmation of payment of GST thereon by vendor on GSTN portal.

**Payment shall be made by BHEL site office within 30 days of receipt of invoice subject to its completeness in all respects as per BHEL's procedure.**

**CONSIGNEE ADDRESS:**

CONSTRUCTION MANAGER  
BHEL SITE OFFICE  
3X660 MW NTPC NORTH KARANPURA PROJECT  
SITE OFFICE: TANDWA , P.O-TANDWA  
DIST-CHATRA, JHARKHAND  
PIN-825321

**GUARANTEE:**

Guarantee of the supplied valves for a period of 12 months from the date of commissioning or 18 months from the date of receipt at NKP site whichever period shall be earlier.

**PAYING AUTHORITY:**

Construction Manager, BHEL site office,  
3X660 MW North Karanpura Super Thermal power Project, Jharkhand.

<b><u>INSURANCE</u></b>	
Transit Insurance is in bidder scope.	
<b><u>LIQUIDATED DAMAGES (LD):</u></b>	
Subject to force majeure, If vendor fails to complete the job as per aforesaid completion/delivery period, BHEL shall have the right to recover as liquidated damages (LD) a sum equivalent to 0.5 % of the order value for delay of each week or part thereof. The liability for delay shall not in any case exceed 10 % (ten percent) of the order value. For this purpose, the period of delay shall be the delay attributable to vendor for completion of job as per contract. In case of LD recovery, the applicable GST shall also be recovered from vendor.	
<b><u>EVALUATION &amp; AWARDING CRITERIA:</u></b>	
All Inclusive Total D.A.P basis i.e. [Basic + Packing + Freight + Transit Insurance] excluding GST.	
<b><u>TAXES, DUTIES ETC:</u></b>	
1	All taxes excluding GST & BOCW Cess (as specified elsewhere in the tender) but including, Charges, Royalties, any State or Central Levy and other taxes for materials if any obtained for the work and for execution of the contract shall be borne by successful bidder and shall not be payable extra by BHEL. Any increase of above at any stage during execution of contract, including extension of the contract, shall have to be borne by successful bidder contractor. Bidder's quoted/ accepted rates/ price shall be inclusive of all such requirements.
2	GST along with Cess (as applicable) legally leviable & payable by successful bidder as per GST Law shall be paid by BHEL, extra. Hence, bidder shall not include GST along with Cess (as applicable) in their quoted rates/ price.
3	Successful bidder shall furnish proof of GST registration with GSTN Portal covering the services under this contract. Registration should also bear endorsement for the premises from where the billing shall be done by successful bidder on BHEL for this project / work.
4	Since GST on output will be paid by BHEL separately as enumerated above, bidder's your quoted rates / price should be after considering the Input Credit under GST law at bidder's end.
5	TDS under Income Tax Act shall be deducted as per prevailing IT rules from the bills.
6	TDS under GST shall be deducted as per prevailing GST rules from the bills.
7.1	You may collect TCS under section 206C(1H) of Income Tax Act, 1961 if applicable.
7.2	In case, you collect TCS under section 206C(1H) of Income Tax Act, 1961, following compliance is required.
7.2.1	TAN and PAN of vendor should appear in all invoices/claims. Copy of TAN /TCS registration is to be submitted.
7.2.2	Amount of TCS and Assessable value on which TCS has been calculated should be specified clearly in the invoice.
7.2.3	You shall be required to submit certificate of TCS in Form no. 27D within 15 days from the due date for furnishing the statement of tax collected at the source.
7.3	In case, you do not collect TCS under section 206C(1H) of Income Tax Act, 1961, following declaration is to be submitted alongwith each invoice: - "I/We hereby declare that I/We are not required to collect TCS under section 206C(1H) of Income Tax Act, 1961, on this bill.
7.4	In event of failure to comply with the provisions of the Act, or proper certificate not issued, or if tax collected but not remitted to the Government, or for any other reason and thereby causing loss to BHEL, the same shall be recoverable from the vendor with applicable interest.

7.5	You shall comply with all statutory amendment/notifications in this respect.
8	Bidder shall note that GST Tax Invoice complying with GST Invoice Rules (Section 31 of GST Act & Rules referred thereunder) wherein the 'Bill To' details shall encompass following. BHEL GSTN – 20AAACB4146P5ZP for JHARKHAND. Name - BHARAT HEAVY ELECTRICALS LIMITED Address - Construction Manager, BHEL site office, 3X660 MW North Karanpura Super Thermal power Project, Jharkhand. Specific details of BHEL GSTN, Name and Address as stated above, have been specified elsewhere in the tender.
9	Successful bidder to intimate immediately on the day of removal of goods (in case of any supply of goods) to BHEL along with all relevant details and send a scanned copy of Tax Invoice to BHEL through following communication mode for enabling BHEL to meet its GST related compliances. Portal address. and Email address – Shall be intimated later. Specific details of above shall be intimated to successful bidder by BHEL at appropriate juncture.
10	In case of delay in submission of above mentioned documents on the date of despatch, BHEL may incur penalty/ interest for not adhering to Invoicing Rules under GST Law. The same will be liable to be recovered from successful bidder, in case such delay is not attributable to BHEL.
11	In case of raising any Supplementary Tax Invoice (Debit / Credit Note), successful bidder shall issue the same containing all the details as referred to in Section 34 read with Section 31 of GST Act & Rules referred there under.
12	Successful bidder shall comply with the Time Limit prescribed under the GST Law and rules thereof for raising of the Tax Invoice. If any supply of goods is applicable, successful bidder shall also ensure prompt delivery of goods after despatch.
13	Bidder shall note that in case GST credit is delayed / denied to BHEL due to delayed / non receipt of goods and / or Tax Invoice or expiry of the timeline prescribed in GST Law for availing such ITC, or any other reasons, not attributable to BHEL, GST amount shall be recoverable from successful bidder along with interest levied/ leviable on BHEL, as the case may be.
14	Successful bidder shall upload the invoices raised on BHEL in GSTR-1 within the prescribed time as given in the GST Act, <b>and the same is available to BHEL in FORM GSTR-2A/2B electronically through the common portal.</b> Bidder shall note that in case of delay in declaring such invoice in your return and GST credit availed by BHEL is denied or reversed subsequently as per GST Law, GST amount paid by BHEL towards such ITC reversal as per GST law shall be recoverable from the successful bidder along with interest levied / leviable on BHEL.
15	Way Bill: Successful bidder to arrange for way bill / e-waybill for any transfer of goods for the execution of the contract. Successful bidder has to make their own arrangement at their cost for completing the formalities, if required, with Issuing Authorities, for bringing materials, plants & machinery at site for execution of the works under this contract, Road Permit / Way Bill, if required, shall be arranged by successful bidder and BHEL will not supply any Road Permit/ Way Bill for this purpose.
16	Any new taxes & duties, if imposed subsequent to due date of offer submission as per NIT & TCN, by statutory authority during contract period (including extension, if the same is not attributable to you), shall be reimbursed by BHEL on production of relevant supporting document to the satisfaction of BHEL. However, you shall obtain prior approval from BHEL before depositing new taxes and duties.
17	Benefits and / or abolition of all existing taxes must be passed on to BHEL against new taxes, if any, proposed to be introduced at a later date.

**DATASHEET****Auma make Actuator for Ex-Proof On-Off duty type****For Ball Valve**

<b>Vendor Name:</b> AUMA INDIA LTD. a/c Weir BDK Valves	<b>DATASHEET:</b> WBDK/03
<b>Contractor :-</b>	<b>REV.:</b> 00 (Page 1 of 2)
<b>Consultant :-</b>	
<b>Project :-</b> NORTH KARANPURA	

**ACTUATOR MODEL :- SACEx12E45/45rpm**

DESCRIPTION	UNIT	DATA
ACTUATOR MANUFACTURER		AUMA (INDIA) PVT. LTD.
MODEL		SACEx12E45-45rpm
TORQUE RANGE & RPM		40-120 Nm, 45 RPM
DUTY CYCLE(ON-OFF/ REGULATING)		On-Off
LOCAL /REMOTE SELECTOR SWITCH(LOCKABLE)		YES PROVIDED.
ENCLOSURE / DEGREE OF PROTECTION		IP 68 (IS13947 (Part 1): 1993
Flame PROOF		Flameproof suitable for gas group IIA IIB as per IS/IEC-60079
ADMISSIBLE AMBIENT TEMPERATURE	°C	-20 TO +50
AVERAGE / NOMINAL OUTPUT	KW	0.55
RATED VOLTAGE	V	415 V AC
RATED FREQUENCY	Hz	50
No. OF PHASES/NO. OF WIRES	☐	3 phase/ 3 wire
ADMISSIBLE VOLTAGE VARIATION	☐	+10
ADMISSIBLE FREQUENCY VARIATION	☐	±5
ADMISSIBLE VOLTAGE & FREQUENCY VARIATION	☐	10 (Absolute)
NOMINAL CURRENT	A	1.5
STARTING CURRENT	A	9.0
FULL LOAD SPEED	RPM	2840
INSULATION CLASS		Class F with temp rise limited to class B
POWER FACTOR(AVERAGE LOAD)		0.71
AVERAGE LOAD EFFICIENCY	☐	75
TEMPERATURE RAISE OVER AMBIENT TEMP OF 50°C	°C	70 (By resistance method)
CABLE GLAND SIZE/ NO: POWER (Double compression cable gland)		2XM32X1.5 (suitable for 3Cx2.5sqmm)
CABLE GLAND SIZE/ NO: CONTROL (Double compression cable gland)		2XM25X1.5 (suitable for 3Cx2.5sqmm)
GEAR BOX LUBRICATION		GREASE – EPO (SERVO GEM)
POSITION LIMIT SWITCHES		
a. QUANTITY	Nos.	4
b. No. OF CONTACTS	Nos.	2NO+2NC
TORQUE LIMIT SWITCHES		
a. QUANTITY	Nos.	2
b. No. OF CONTACTS	Nos.	2NO+2NC
VOLTAGE/CURRENT RATING OF SWITCHES	V/A	240 V AC – 5 A, 220 V DC – 0.5 A (Inductive)
POSITION TRANSMITTER ON-OFF DUTY	YES/NO	NOT APPLICABLE
POSITION TRANSMITTER REGULATING DUTY(IF PROVIDED)	YES/NO	NOT APPLICABLE



**DATASHEET****Auma make Actuator for On-Off duty type**

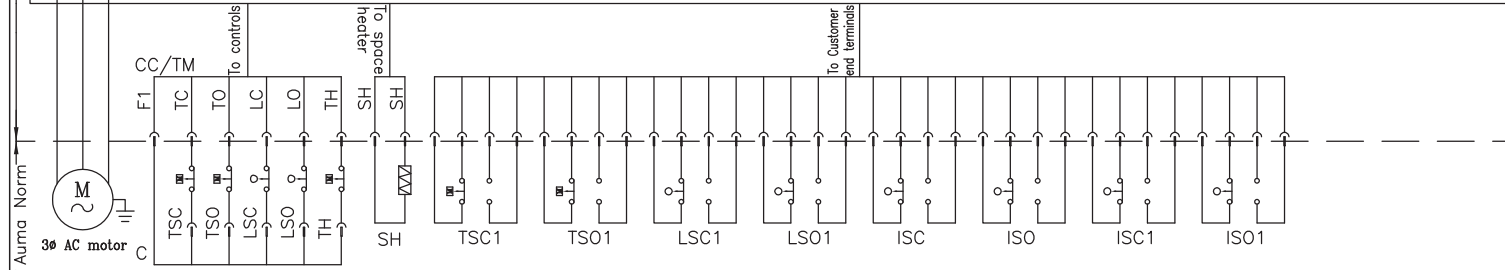
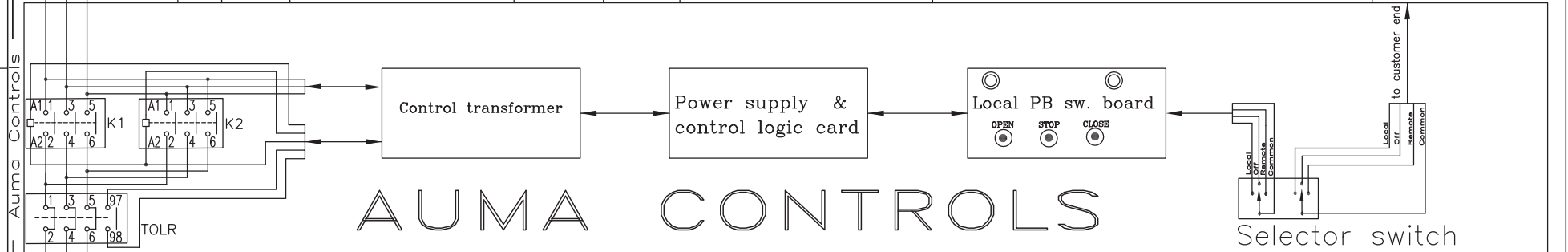
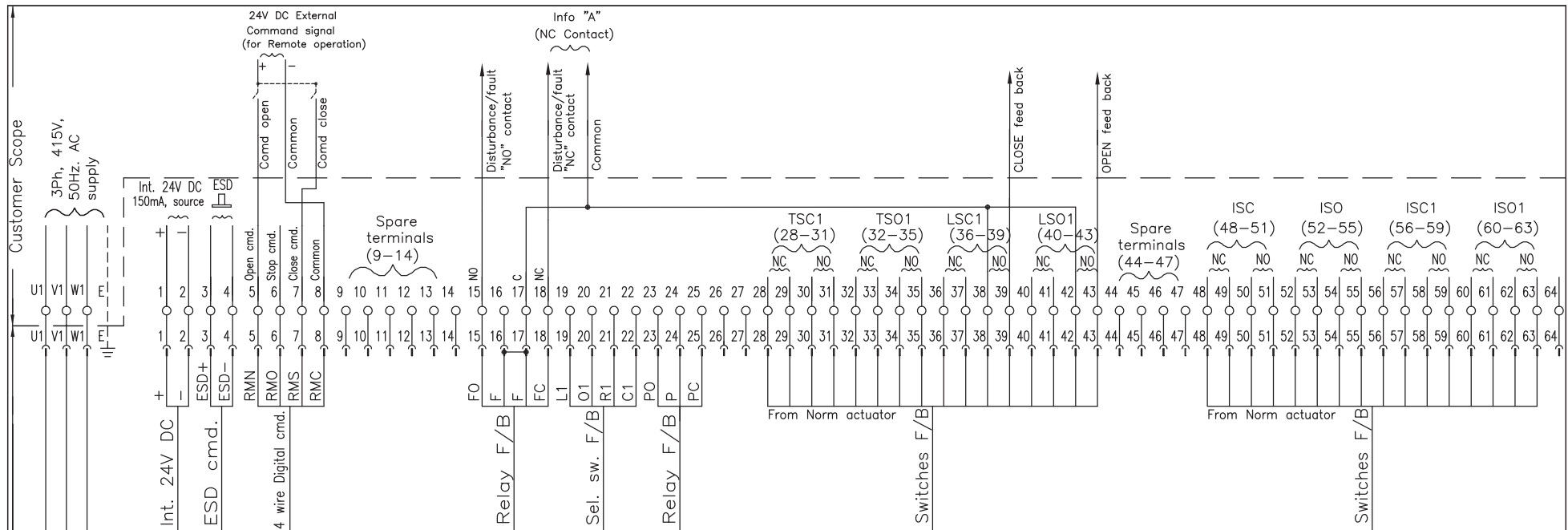
(Page 2 of 2)

DESCRIPTION	UNIT	DATA
SPACE HEATER POWER SUPPLY DETAILS		1phase, 110 V AC, 50 HZ, 10W (1 no.) Space Heater supply will be derived from main power supply available within the actuator
THERMOSTAT (ONE NO. IN EACH PHASE)	3 NOS.	3 Nos. – ONE IN EACH WINDING
INTERNAL WIRING CABLE SIZE		PVC 1.5 mm <sup>2</sup>
CONTROL CIRCUIT DIAGRAM (ENCLOSED)	YES/NO	YES/ 3-WDP-A1D
INTEGRAL STARTER PROVIDED	YES/NO	YES PROVIDED
WEIGHT-ACTUATOR	Kg	92
MOTOR SUITABLE FOR ON-OFF/INCHING		60 starts/hr for On-Off duty
MOOTOR TYPE & REFERENCE STANDARD		Squirrel Cage Induction Motor & Tolerance of Motor Data as per IS 325
OLR SET VALUE(RECOMMENDED)	A	1.5
PLUG & SOCKET(INTEGRAL MOUNTED ON THE ACTUATOR)		Not applicable
THE COLOUR CODING OF CABLES FOR 9 PIN PLUG & SOCKET SUITABLE FOR 4 PAIR, 0.5 SQ.MM COPPER CABLES.		Not applicable
SINGLE PHASE PROTECTION PROVIDED	YES/NO	YES PROVIDED
WRONG PHASE SEQUENCE PROTECTION PROVIDED	YES/NO	YES PROVIDED
PAINT SHADE		Epoxy Paint, RAL 5012
Handwheel		Yes provided
Position indication		Mechanical position indicator is provided.
Opto coupler	YES/NO	YES PROVIDED

Name &amp; Seal of vendor with Signature



Tag no. :- 30EGB40AA061 &amp; 30EGB40AA062



<b>auma india pvt ltd</b> BANGALORE-560 058			
TITLE			
WIRING DIAGRAM PLAN			
DRAWING No.			
3-WDP-A1D(S21)			
REV. No.	REVISION	SIGNATURE	DATE
DRAWN	RKP	17.02.16	SHEET 1 OF 2
CHECKED	KMC	17.02.16	
APPROVED	YMJ	17.02.16	
			B 5.1

ALL THE INFORMATION CONTAINED IN THIS DOCUMENT IS CONFIDENTIAL AND THE PROPERTY OF auma (india) ltd. REPRODUCTION OF THESE IN ANY FORM IS TO BE DONE WITH THE SPECIFIC PERMISSION OF THE COMPANY.

Information (A):-

Actuator disturbance/Collective fault details ("NC" contact during healthy indication)  
 (This "NC" contact becomes "NO" when any one of the following fault occurs)

- Thermoswitch trip
- Torque switch trip
- Thermal over load relay trip
- Power supply failure/Single phasing fault annunciation
- Actuator in Local/Off mode

Note:-

For disturbance/fault with "NC" contact, refer terminal Nos. "18 & 17".  
 For disturbance/fault with "NO" contact, refer terminal Nos. "15 & 17".

Legend for Customer end terminals for Epac modules as applicable:-

- U1,V1,W1 - Terminals for main power supply from Customer end
- +, - - Internally generated 24V DC, 150mA for Customer use
- L1,O1,R1,C1 - Local/Off/Remote selector switch feedback
- F0,F,FC - Relay information feedback
- RMO, RMS, RMC, RMN - 4 wire Remote operation terminals for OPEN/STOP/CLOSE commands
- ESD - Emergency shut down command
- TSC1/TSO1 - Torque switch, in tandem operation with TSC/TSO
- LSC1/LSO1 - Limit switch, in tandem operation with LSC/LSO
- ISC - Intermediate limit switch-CLOSE
- ISO - Intermediate limit switch-OPEN
- ISC1/ISO1 - Intermediate limit switch, in tandem operation with ISC/ISO

Legend for accessories as applicable (Norm-Epac)

- TM - Terminator board used for Explosion proof actuators controls
- TSC - Torque switch, closing, clock wise rotation
- TSO - Torque switch, opening, counter-clock wise rotation
- LSC - Limit switch, closing, counter-clock wise rotation
- LSO - Limit switch, opening, counter-clock wise rotation
- TH - Thermoswitch (3 thermoswitches connected in series, embedded in motor winding, in each coil)
- SH - Space heater
- M - 3 Ph. AC Squirrel cage induction motor
- K1 & K2 - Reversing contactors
- TOLR - Thermal over load relay

Contact development:-

CONTACT	PARTICULARS	FULL CLOSED	VALVE TRAVEL	FULL OPEN
*	TSO	██████████	██████████	██████████
L 32-35	TSO1	██████████	██████████	██████████
*	TSC	██████████	██████████	██████████
L 28-31	TSC1	██████████	██████████	██████████
*	LSO	██████████	██████████	██████████
L 40-43	LSO1	██████████	██████████	██████████
*	LSC	██████████	██████████	██████████
L 36-39	LSC1	██████████	██████████	██████████
L 52-55	ISO	██████████	██████████	██████████
L 60-63	ISO1	██████████	██████████	██████████
L 48-51	ISC	██████████	██████████	██████████
L 56-59	ISC1	██████████	██████████	██████████

██████████ indicates contact closed

\* For internal use

<b>auma india pvt ltd</b> BANGALORE-560 058			
TITLE			
INDEX			
DRAWING No.			
3-WDP-A1D(S21)			
DRAWN	RKP	17.02.16	SHEET 2 OF 2
CHECKED	KMC	17.02.16	
APPROVED	YMJ	17.02.16	
B 5.1			

REV. No.	REVISION	SIGNATURE	DATE
<small>ALL THE INFORMATION CONTAINED IN THIS DOCUMENT IS CONFIDENTIAL AND THE PROPERTY OF auma (india) ltd. REPRODUCTION OF THESE IN ANY FORM IS TO BE DONE WITH THE SPECIFIC PERMISSION OF THE COMPANY.</small>			



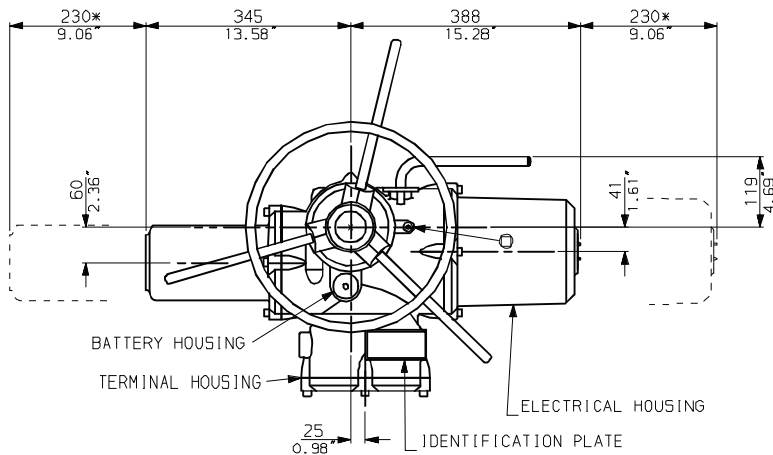
**VENDOR NAME:** ROTORK / DATA SHEET REV No. 04 / Date : 06.11.2017

For gate Valve

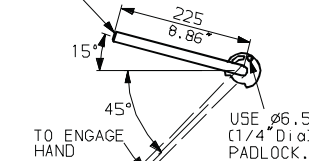
**PROJECT NAME:** 3X660 MW NORTH KARANPURA STPP (UNIT NO. 1, 2 & 3) ,NTPC**APPLICABLE TAG Nos:** 30EGB60AA281 & 30EGB60AA282**ACTUATOR MODEL:** IQ25F14B4 + IB4/3:1 144 RPM, FLP IIA/IIB

S.NO.	DESCRIPTION	UNIT	DATA
1	ACTUATOR MANUFACTURER		ROTORK CONTROLS INDIA (PVT) LTD
2	COMBINED TORQUE RANGE & RPM	KGM	15.49– 38.74 KGM, 144 RPM
3	DUTY CYCLE		S2-15 minutes
4	ENCLOSURE		
4A	TYPE		FLP to suit gas group IIA/IIB
4B	DEGREE OF PROTECTION		Watertight to IP68
4C	VENTELATION		Totally Enclosed Naturally cooled (TENV)
5	HAZARDOUS AREA CLASSIFICATION		FLP to suit gas group IIA/IIB
6	AVERAGE / NOMINAL OUTPUT	KW	1.19
7	RATED VOLTAGE	V	415
8	RATED FREQUENCY	Hz	50
9	No .OF PHASES		3
10	ADMISSIBLE VOLTAGE FLUCTUATION	%	±10
11	ADMISSIBLE FREQUENCY	%	±5
12	ADMISSIBLE VOLT.& FREQ. VARIATION	%	10
13	NOMINAL CURRENT (AVERAGE)	A	2.6
14	STARTING CURRENT	A	22
15	FULL LOAD SPEED	RPM	2880
16	INSULATION CLASS		F
17	POWER FACTOR (AVG. LOAD)		0.75
18	AVERAGE LOAD EFFICIENCY	%	85
19	ADMISSIBLE AMBIENT TEMP.	° C	-30 TO +70
20	TEMP.RAISE OVER AMBIENT TEMP 50	° C	70
21	TYPE		Actuator with integral starter
22	CABLE ENTRY /GLANDS		
22A	CABLE ENTRY		1X M40 & 3 X M25 cable entries provided
22B	CABLE GLAND		Type -Double compression , Flameproof. Size 3/4" ( Qty =4nos) or suitable for 3Cx2.5sqmm cable
23	GEAR BOX LUBRICATION		SAE80EP
24	TYPE OF BEARING		Deep grooved sealed ball bearing lubricated for life.
25	POSITION LIMIT SWITCHES	Nos	8 Nos. Programmable relay provided
26	TORQUE SWITCHES	Nos	
27	RATING OF SWITCHES	A	5mA to 5A, 120V AC, 30V DC
28	CONTROL VOLTAGE	VDC	24VDC generated internally
29	CONTROL CIRCUIT DIAGRAM		3100-000
30	POSITION TRANSMITTER - ON / OFF		Not applicable
31	POSITION TRANSMITTER - INCHING		Not applicable
32	SPACE HEATER POWER SUPPLY		Not applicable
33	SPACE HEATER TERMINAL SUITABLE		Not required due to overall non intrusive design
34	THERMOSTAT		2nos provided as per standard IQ
35	INTERNAL WIRING		PVC 1.5 mm Sq.
36	WEIGHT- ACTUATOR	Kg	51.76 kgs ( Actuator) & 16.34 kgs ( Gear Box)
37	MOTOR SUITABLE FOR ON-OFF /		On-off duty (60 Starts per hour)
38	MOTOR TYPE & REF. STANDARD		Squirrel Cage Induction motor as per IS 325
39	OLR SET VALUE (RECOMMENDED)	A	Not applicable
40	MATERIAL OF HAND WHEEL HUB		Aluminum Alloy
41	PAINTING SHADE		RAL 5012(Blue)
42	SINGLE PHASE AND WRONG PHASE		Yes provided.





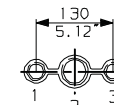
LEVER POSITION IN AUTO.  
LEVER AUTOMATICALLY RETURNS  
TO THIS POSITION WHEN RELEASED



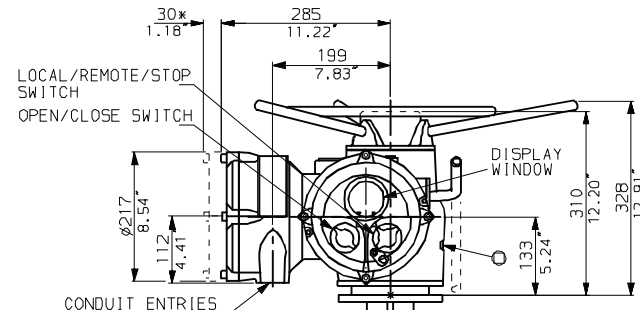
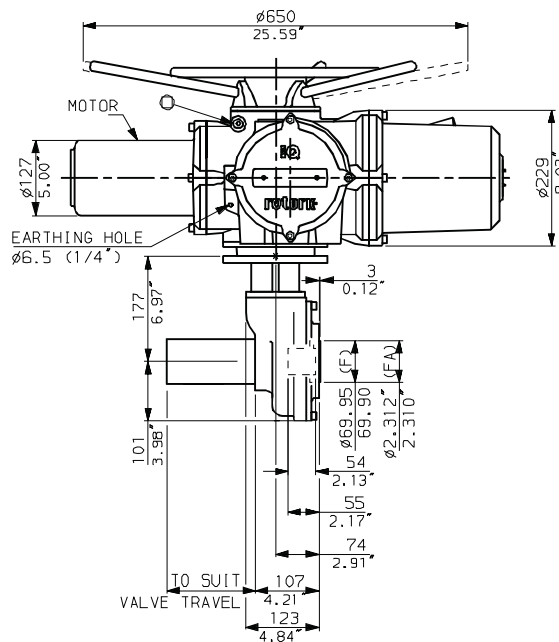
**PADLOCKABLE HAND-AUTO LEVER**

**NOTES:**  
DIMENSIONS WITH '\*' INDICATE COVER REMOVAL ALLOWANCE  
NETT WEIGHT = 68kg (150lbs)  
⊙ = OIL FILLER/DRAIN PLUG  
THE INTERFACE PROVIDED FOR MOUNTING THE ACTUATOR OR SECOND STAGE GEARBOX ONTO THE VALVE SHOULD CONFORM TO GOOD ENGINEERING PRACTICES, ENSURING ADEQUATELY TOLERANCED LIMITS FOR PARALLELISM, PERPENDICULARITY AND CONCENTRICITY.

**CONDUIT ENTRIES** (N.T.S)

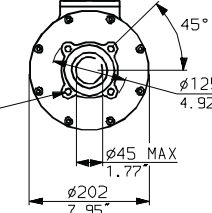


Nos.1 & 3 TAPPED 1" NPT  
No.2 TAPPED 1 1/2" NPT  
STD ALTERNATIVES IF SPECIFIED  
2 X M25, 1 X M40  
2 X PG16, 1 X PG29



"F" version  
4 HOLES TAPPED M10x15 DP  
EQUI-SPACED ON A 102 PCD  
(1505210 F10)

"FA" version  
4 HOLES TAPPED 3/8"UNC  
x0.6" dp EQUI-SPACED ON A  
4"PCD (M55 SP102-FA10)



**rotork**  
www.rotork.com

Rotork Controls Ltd.  
Bath England, BA1 3JG.  
(Phone 01225-733200)  
Rotork Controls Inc.  
Rochester, NY 14624  
(Phone 585-328-1550)

Title IQ20, 25 (+10M20, 25+10S20), THW, IB4,  
STANDARD DIMENSIONAL DATA  
Drawn CAD Checked PRE Ref Data Sheet  
Date April 04 Job No IQ2THW\_IB4

01	First Issue.
Scale	1:6 THIRD ANGLE PROJECTION
Drawing Number	IQ2THW_IB4

CIRCUIT DRAWN WITH  
POWER SUPPLY OFF

FOR TYPICAL REMOTE CONTROL  
DETAILS SEE DOCUMENT  
**RWS300**

TRANSFORMER TAPPING OPTIONS

TYPE 1

TAP	NOM 50/60HZ	50HZ	60HZ
W	220/230	176-242	198-259
X	380/400	304-418	342-446
Y	415/420	332-457	374-487
Z	440/460	352-484	396-517

FUSE FS1 - 250mA ANTI-SURGE

TYPE 2

TAP	NOM 50/60HZ	50HZ	60HZ
W	346/380	285-388	321-419
X	480/500	406-552	432-564
Y	240/240	192-261	216-282
Z	550/575	445-605	501-654

FUSE FS1 - 250mA ANTI-SURGE

TYPE 3

TAP	NOM 50/60HZ	50HZ	60HZ
X	660/660-690	534-726	600-726
Y	690/___	558-759	

FUSE FS1 - 150mA ANTI-SURGE

ALL TRANSFORMER TYPES - PS1 SELF  
RESETTING  
FUSE

NOTE

REFER TO PUBLICATION E170E FOR  
APPROVED FUSES FS1 AND FS2.

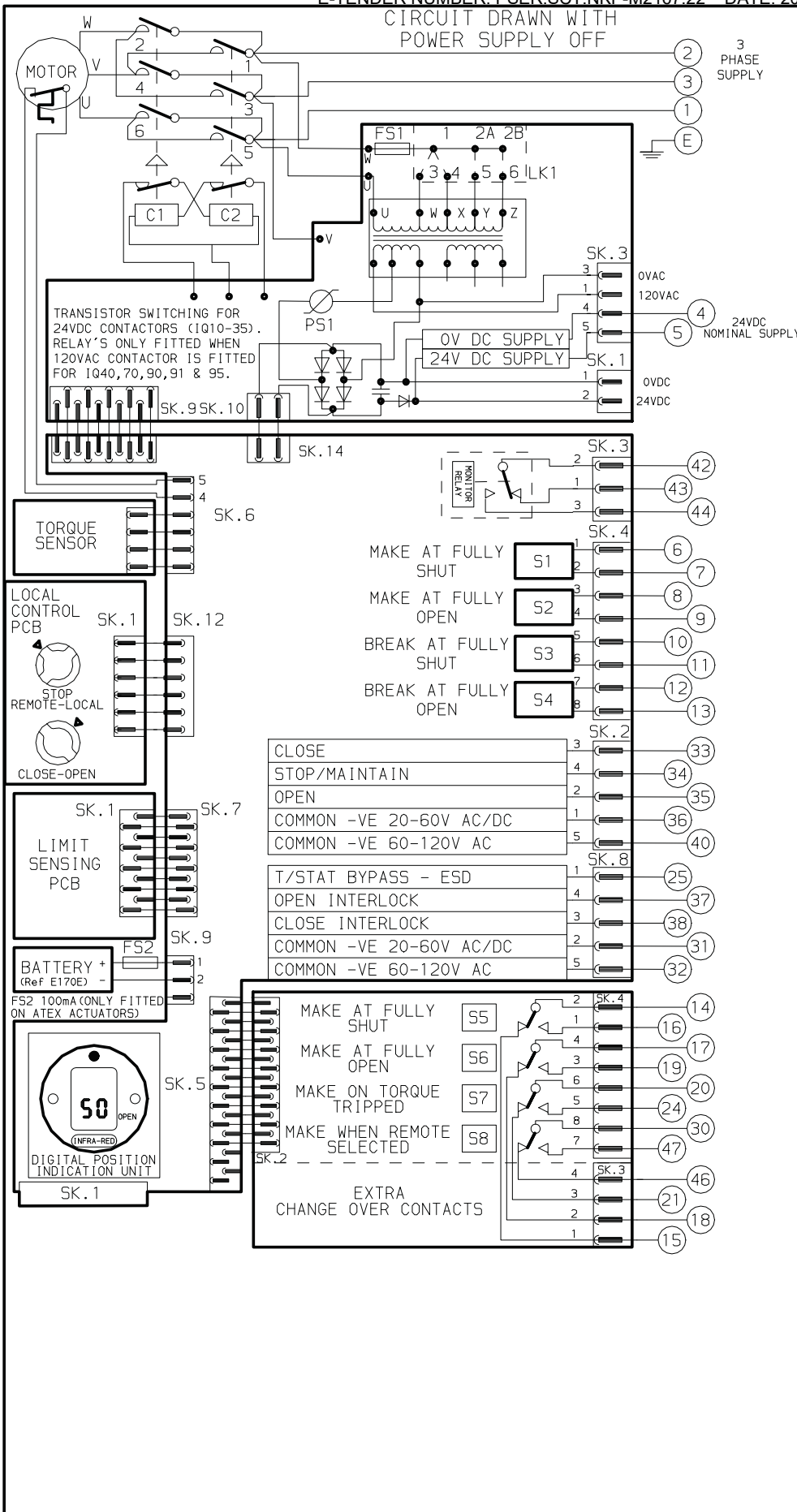
MAX EXTERNAL LOAD ON TERMINALS  
4 & 5 TO BE 5W.

CONTROL SIGNAL THRESHOLD VOLTAGES  
TO BE MINIMUM 'ON' 20V AC/DC  
MAXIMUM 'OFF' = 3V  
MINIMUM CONTROL SIGNAL DURATION  
TO BE 300ms.

CURRENT DRAWN FROM EACH REMOTE  
CONTROL SIGNAL IS 5mA ON 24V DC  
OR 12mA ON 120V AC

WIRES ARE IDENTIFIED AT EACH END  
BY TERMINAL No. OR TAG No.

INDICATION CONTACTS S1-S4 AND EXTRA  
INDICATION CONTACTS S5-S8 ARE SHOWN  
IN THEIR DEFAULT CONFIGURATION.  
CONTACTS MAY BE CONFIGURED FOR ANY  
OF THE FUNCTIONS DESCRIBED IN E170E



No	DATE	REVISION DETAILS
09	280605	TEXT OF S2 RE-INSTATED
08	301004	DIAGRAM RE-FORMATTED TO
	EC1363	SEPERATE REMOTE CONTROL
		CIRCUITRY (See 'RWS' Ref)

**www.rotork.com**

ROTORK CONTROLS LTD BATH, BA1 3JQ ENGLAND Tel: 01225-733200	ROTORK CONTROLS INC ROCHESTER NY 14624, USA Tel: 585-328-1550
--	--

CONFIG BY PRE  
DATE 081004  
CHECKED PJW  
BASE WD --  
JOB No --  
M. I. No .

IQ + INDICATION RELAYS

CIRCUIT DIAGRAM No -REV  
**3100-000-09**

B1	C1	B2	C2	B1	C1	M1	V1
----	----	----	----	----	----	----	----

**ENDORSEMENT SHEET FOR QP  
REFERENCE / STANDARD / FIELD QUALITY PLAN ( RQP /SQP / RFQP / SFQP)**

**TO BE FILLED IN BY SUPPLIER AT TIME OF SUBMISSION**



To be filled by NTPC

<b>PROJECT NAME</b>	3X660 MW NORTH KARANPURA STPP (UNIT NO. 1, 2 & 3)	<b>REVIEW &amp; ENDORSEMENT BY NTPC</b> <b>PROJECT SPECIFIC QP NUMBER ALLOTTED</b> <b>QP NO : 4410-001-131-QVE-Q-001</b> <b>REV. NO. 01 DATE: 01/08/2017</b> ** The RQP/SQP/RFQP/SFQP once endorsed for a particular contract shall remain valid even though the original QP may have expired or revised, unless / otherwise mutually agreed with the supplier.
<b>CONTRACT NO</b>	NKP-M1627:15:LOI-S-4453/54	
<b>MAIN SUPPLIER/SUB-SUPPLIER</b>	M/S BHEL/ UNITECH MACHINES LTD	
<b>MANUFACTURER WORKS &amp; ADDRESS</b>	M/S AUMA (INDIA) Pvt.Ltd. No.39-B II Phase, Peenya Industrial Area ,Bangalore-560058	
<b>ITEM / EQUIPMENT / SYSTEM / SUBSYSTEM DETAILS i.e MODEL TYPE/SIZE/RATING etc</b>	ELECTRIC ACTUATORS SA/ SAR 3,6,12,15,25,30,50,60,100	
<b>APPROVED QP NO : RQP/SQP/RFQP/SFQP</b>	0000-999-QVIP-001 REV.NO:06 DATE:**27/10/2014	

**Confirmation by Main Supplier (TICK WHICHEVER APPLICABLE)**

(TICK APPLICABLE)

*I. That the item / component is identical to that considered for QP approval. OR* ✓

~~The QP is endorsed for this project without any change~~

*II. That there are minor changes in the item/component with respect to that considered for QP approval, however the same do not affect the contents of QP. OR*

*II. That there are minor changes in the item/component with respect to that considered for QP approval, however the same affect the QP slightly as indicated below/in attached sheet.*

The QP is endorsed for this project with change as indicated

NOTE: FOR FLAME PROOF ACTUATORS, SAME RQP SHALL BE FOLLOWED. RELEVANT CMRI & CCOE (PESO) CERTIFICATES WILL BE SUBMITTED FOR REVIEW AT THE TIME OF FINAL INSPECTION. Noted

**DISTRIBUTION OF ENDORSEMENT OF**

- A) RQP /SQP:
- 1 MAIN SUPPLIER (WITH A COPY OF QP)
  2. MANUFACTURER
  3. RIO
  4. CQA-SPL
  5. CQA-O/C
- B) RFQP/SFQP:
1. MAIN SUPPLIER (with a copy of QP)
  2. MANUFACTURER
  - 3 NTPC FQA (with a copy of QP)
  4. NTPC Erection (with a copy of QP)
  5. CQA-SPL
  6. CQA-O/C



Veeresh M S, Senior Manager -QM  
Auma India Private Limited

SIGN: (Main Supplier)

DATE:

SIGN : (Manufacturer)

DATE:




4/14/2015

NTPC (Reviewed / Approval by / Date & Seal)

Sl. No.		Component & operation	Characteristics	REFERENCE QUALITY PLAN		Quantum of Check		Reference Documents	Acceptance Norms	Format of Records	Agency			Remarks	
				Class	Type of Check	M	C/N				M	C	N		
1		2	3	4	5	6		7	8	9	D*	10**		11	
1.1		RAW MATERIAL ACTUATOR HOUSING CASTING	MECHANICAL PROPERTIES a. TENSILE STRENGTH b. HARDNESS c. SURFACE DEFECTS	MAJOR  MAJOR	MECHANICAL TESTING  VISUAL	ONE / HEAT  100%	-  -	AIPL DRG. & IS 210  IS 210	FG – 260 IS 210 & AIPL DRG  IS 210	SUPPLIER TC & GRN  GRN	-  -	P/V  P	-  -	-  -	HEAT NUMBER ON CASTING
1.2		WORM WHEEL	CHEMICAL COMPOSITION MECHANICAL PROPERTIES a. TENSILE STRENGTH b. ELONGATION c. SURFACE DEFECTS	MAJOR MAJOR MAJOR	CHEMICAL ANALYSIS MECHANICAL PROPERTIES  VISUAL	ONE / HEAT ONE / HEAT  100%	- -  -	AIPL DRG, BS 1400 AB2/HTB1	AIPL DRG, BS 1400 AB2/HTB1	SUPPLIER TC & GRN	- -  -	P/V P/V  P	- -  -	- -  -	
1.3		BEARING FLANGE CASTING	MECHANICAL PROPERTIES a. TENSILE STRENGTH b. HARDNESS c. SURFACE DEFECTS	MAJOR  MAJOR	MECHANICAL TESTING  VISUAL	ONE / HEAT  100%	-  -	AIPL DRG. & IS 210  IS 210	FG – 260 IS 210 & AIPL DRG  IS 210	SUPPLIER TC & GRN  GRN	-  -	P/V  P	-  -	-  -	
1.4.1		CLUTCH RING (FOR SA/SAR 3,6,12,15)	a. CHEMICAL COMPOSITION b. SURFACE DEFECTS	MAJOR MAJOR	CHEMICAL ANALYSIS VISUAL	ONE / HEAT 100%	-  -	AIPL DRG. & IS 713 IS 713	ZnAl4Cu1, IS 713	SUPPLIER TC & GRN	-  -	P/V P	-  -	-  -	
1.4.2		CLUTCH RING (FOR SA/SAR 25,30,50, 60,100)	a. TENSILE STRENGTH b. HARDNESS c. ELONGATION d. SURFACE DEFECTS	MAJOR  MAJOR	MECHANICAL TESTING  VISUAL	ONE / HEAT  100%	-  -	AIPL DRG. & IS 1865  IS 1865	SG – 400/15 SG – 500/7 IS 1865  IS 1865	SUPPLIER TC & GRN  GRN	-  -	P/V  P	-  -	-  -	



LEGEND:  
 \* RECORDS, IDENTIFIED WITH "TICK (✓)" SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION  
 \*\* M-MANUFACTURER ; C- CONTRACTOR; N-NTPC; P-PERFORM; W-WITNESS; V-VERIFICATION OF DOCUMENTS;  
 ALL 'W' INDICATED IN COLUMN "N" SHALL BE "CHP" OF NTPC, AIPL - AUMA INDIA PVT LTD.  
 NOTE: GRN'S / Supplier TC'S are maintained for every batch but cannot be linked to any particular order

NOTE: NTPC Inspection Engineer to check approval date of reference document vis-a- vis approval date of RQP at the time of inspection.

Sl. No.		Component & operation		Characteristics		REFERENCE QUALITY PLAN				TO BE FILLED BY NTPC											
						ITEM :	Q.P No. 06			SIGN OF MFR AUMA	Q.P NO. : 0000-999-QVIP-001	REVIEWED BY	APPROVED BY								
		NAME & ADDRESS :		ELECTRIC ACTUATORS		REV No. 07	 Veeresh MS Quality Management	DATE : 22.10.2014	REV No. : 06	P P Patil	 Approved by M M Jaiswal										
		No.39-B, II Phase		SUB SYSTEM: SA/SAR		DATE : 27.10.2014		VALID UP TO : 26.10.2017	S Samanta	Remarks											
		Peenya Industrial Area		3,6,12,15,25,30,50,60,100		Quantum of Check		Reference Documents	Acceptance Norms	Format of Records	Agency			11							
		Bangalore - 560058		Class	Type of Check	M	C/N				D*	10**									
1		2		3		4		5		6		7		8		9		10		11	
1.5	OUTPUT DRIVE STEM NUT (A-TYPE ONLY)	a. CHEMICAL COMPOSITION	MAJOR	CHEMICAL ANALYSIS	ONE / HEAT	-	AIPL DRG. & BS-1400	AB2/BS 1400 & AIPL DRG.	SUPPLIER TC & GRN	-	P/V	-	-								
		b. MECHANICAL PROPERTIES	MAJOR	MECHANICAL TESTING	ONE / HEAT	-	BS 1400	AB2/BS 1400	SUPPLIER TC & GRN	-	P/V	-	-								
		b.1 TENSILE STRENGTH																			
		b.2 ELONGATION																			
		c. SURFACE DEFECTS	MAJOR	VISUAL	100%	-	BS 1400	BS 1400	GRN	-	P	-	-								
1.6	BARSTOCK WORMSHAFT	a. CHEMICAL COMPOSITION	MAJOR	CHEMICAL ANALYSIS	ONE SAMPLE/HEAT	-	4M-3532 R2 & AIPL DRG.	4M-3532 R2 & AIPL DRG.	NABL LAB / SUPP. TC / GRN	-	P/V	-	-								
		b. MECHANICAL PROPERTIES	MAJOR	HARDNESS	ONE SAMPLE/HEAT	-	AIPL DRG.	AIPL DRG.	GRN	-	P/V	-	-								
		c. SURFACE DEFECTS	MAJOR	VISUAL	100%	-	BS 970	BS 970	GRN	-	P	-	-								
1.7	HOLLOW DRIVE SHAFT	a. CHEMICAL COMPOSITION	MAJOR	CHEMICAL ANALYSIS	ONE SAMPLE/HEAT	-	4M-3532 R2 & AIPL DRG.	4M-3532 R2 & AIPL DRG.	SUPPLIER TC & GRN	-	P/V	-	-								
		b. SURFACE DEFECTS	MAJOR	VISUAL	100%	-	BS 970	BS 970	GRN	-	P	-	-								
1.8	PINION	a. CHEMICAL COMPOSITION	MAJOR	CHEMICAL ANALYSIS	ONE SAMPLE/HEAT	-	4M-3532 R2 & AIPL DRG.	4M-3532 R2 & AIPL DRG.	NABL LAB / SUPP. TC / GRN	-	P/V	-	-								
		b. MECHANICAL PROPERTIES	MAJOR	HARDNESS	ONE SAMPLE/HEAT	-	AIPL DRG.	AIPL DRG.	GRN	-	P/V	-	-								
		c. SURFACE DEFECTS	MAJOR	VISUAL	100%	-	BS 970	BS 970	GRN	-	P	-	-								
1.9	DRIVE SHAFT	a. CHEMICAL COMPOSITION	MAJOR	CHEMICAL ANALYSIS	ONE SAMPLE/HEAT	-	4M-3532 R2 & AIPL DRG.	4M-3532 R2 & AIPL DRG.	NABL ACCREDITED LAB / SUPPLIER TC	-	P/V	-	-								
		b. MECHANICAL PROPERTIES	MAJOR	HARDNESS	ONE SAMPLE/HEAT	-	AIPL DRG.	AIPL DRG.	GRN	-	P/V	-	-								
		c. SURFACE DEFECTS	MAJOR	VISUAL	100%	-	BS 970	BS 970	GRN	-	P	-	-								
2	IN - PROCESS CONTROL (MACHINED ITEMS)																				
2.1	ACTUATOR HOUSING	a. DIMENSIONS	MAJOR	MEASUREMENT	One / batch	-	AIPL COMP. DRG./FIR	AIPL COMP. DRG./FIR	GRN/ MCN/FIR	-	P	-	-								
		b. SURFACE FINISH	MAJOR	VISUAL	100%	-	AIPL COMP. DRG.	AIPL COMP. DRG.	GRN / MCN	-	P	-	-								

LEGEND:  
 \* RECORDS, IDENTIFIED WITH "TICK (✓)" SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION  
 \*\* M-MANUFACTURER ; C- CONTRACTOR; N-NTPC; P-PERFORM; W-WITNESS; V-VERIFICATION OF DOCUMENTS;  
 ALL "W" INDICATED IN COLUMN "N" SHALL BE "CHP" OF NTPC, AIPL - AUMA INDIA PVT LTD.  
 NOTE: GRN'S / Supplier TC'S are maintained for every batch but cannot be linked to any particular order



Batch - Quantity Purchased by M/s Auma from manufacturer in single order.

		MANUFACTURER'S NAME & ADDRESS : Auma India Private Limited No.39-B, II Phase Peenya Industrial Area Bangalore - 560058	REFERENCE QUALITY PLAN			 <b>QP NO. : 0000-999-QVIP-001</b> <b>REV No. : 06</b> DATE : 27.10.2014 VALID UP TO : 26.10.2017		TO BE FILLED BY NTPC					
			ITEM : ELECTRIC ACTUATORS  SUB SYSTEM: SA/SAR 3,6,12,15,25,30,50,60,100	QP No. 06 REV No. 07 DATE : 22.10.2014	SIGN OF MFR AUMA  Veeresh MS Quality Management			REVIEWED BY P P Patil S Samanta		APPROVED BY Jai Approved Dt. 20/09/2022 P. C.		Agency M C N	
Sl. No.	Component & operation	Characteristics	Class	Type of Check	Quantum of Check		Reference Documents	Acceptance Norms	Format of Records	Agency			
1	2	3	4	5	M	C/N	7	8	9	D*	10**		11

2.2	WORM WHEEL	a. DIMENSIONS b. ROLL CHECK c. SURFACE FINISH d. MATCHING	MAJOR MAJOR MAJOR MAJOR	MEASUREMENT ROLL CHECK VISUAL VISUAL	One / batch One / batch 100% One / batch	- - - -	AIPL COMP. DRG./FIR AIPL COMP. DRG./FIR AIPL COMP. DRG. 4-M-3335	AIPL COMP. DRG./FIR AIPL COMP. DRG./FIR AIPL COMP. DRG. 4-M-3335	GRN/ MCN/FIR GRN/ MCN/FIR GRN / MCN GRN / MCN	- - - -	P P P P	- - - -	- - - -
2.3	BEARING FLANGE	a. DIMENSIONS b. SURFACE FINISH	MAJOR MAJOR	MEASUREMENT VISUAL	One / batch 100%	- -	AIPL COMP. DRG./FIR AIPL COMP. DRG.	AIPL COMP. DRG./FIR AIPL COMP. DRG.	GRN/ MCN/FIR GRN / MCN	- -	P P	- -	- -
2.4	OUTPUT DRIVE STEM NUT (A-TYPE)	a. DIMENSIONS b. SURFACE FINISH	MAJOR MAJOR	MEASUREMENT VISUAL	One / batch 100%	- -	AIPL COMP. DRG./FIR AIPL COMP. DRG.	AIPL COMP. DRG./FIR AIPL COMP. DRG.	GRN/ MCN/FIR GRN / MCN	- -	P P	- -	- -
2.5	WORMSHAFT	a. DIMENSIONS b. HARDNESS AFTER NITRIDING c. SURFACE FINISH	MAJOR MAJOR MAJOR	MEASUREMENT TESTING VISUAL	One / batch One / batch 100%	- - -	AIPL COMP. DRG./FIR AIPL COMP. DRG. AIPL COMP. DRG.	AIPL COMP. DRG./FIR AIPL COMP. DRG. AIPL COMP. DRG.	GRN/ MCN/FIR SUPPLIER TC/GRN GRN	- - -	P P/V P	- - -	- - -
2.6	HOLLOW DRIVESHAFT	a. DIMENSIONS b. SURFACE FINISH	MAJOR MAJOR	MEASUREMENT VISUAL	One / batch 100%	- -	AIPL COMP. DRG./FIR AIPL COMP. DRG.	AIPL COMP. DRG./FIR AIPL COMP. DRG.	GRN/ MCN/FIR GRN / MCN	- -	P P	- -	- -
2.7	PINION	a. DIMENSIONS b. SURFACE FINISH	MAJOR MAJOR	MEASUREMENT VISUAL	One / batch 100%	- -	AIPL COMP. DRG./FIR AIPL COMP. DRG.	AIPL COMP. DRG./FIR AIPL COMP. DRG.	GRN/ MCN/FIR GRN / MCN	- -	P P	- -	- -
2.8	DRIVE SHAFT	a. DIMENSIONS b. HARDNESS AFTER NITRIDING c. SURFACE FINISH	MAJOR MAJOR MAJOR	MEASUREMENT TESTING VISUAL	One / batch One / batch 100%	- - -	AIPL COMP. DRG./FIR AIPL COMP. DRG. AIPL COMP. DRG.	AIPL COMP. DRG./FIR AIPL COMP. DRG. AIPL COMP. DRG.	GRN/ MCN/FIR SUPPLIER TC/GRN GRN	- - -	P P/V P	- - -	- - -

LEGEND:  
 \* RECORDS, IDENTIFIED WITH "TICK (✓)" SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION  
 \*\* M-MANUFACTURER ; C- CONTRACTOR; N-NTPC; P-PERFORM; W-WITNESS; V-VERIFICATION OF DOCUMENTS;  
 ALL 'W' INDICATED IN COLUMN "N" SHALL BE "CHP" OF NTPC, AIPL - AUMA INDIA PVT LTD.  
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Batch - Quantity Purchased by M/s Auma from manufacturer in single order.

Sl. No.		Component & operation	Characteristics	REFERENCE QUALITY PLAN		SIGN OF MFR AUMA		TO BE FILLED BY NTPC		REMARKS					
				Class	Type of Check	Quantum of Check	Reference Documents	Acceptance Norms	Format of Records	Agency			Remarks		
1		2	3	4	5	6	7	8	9	D*	10**			11	
		<b>auma®</b> MANUFACTURER'S NAME & ADDRESS : Auma India Private Limited No.39-B, II Phase Peenya Industrial Area Bangalore - 560058		ITEM : ELECTRIC ACTUATORS  SUB SYSTEM: SA/SAR 3,6,12,15,25,30,50,60,100		QP No. 06 REV No. 07 DATE : 22.10.2014  Veeresh MS Quality Management		 QP NO. : 0000-999-QVIP-001 REV No. : 06 DATE : 27.10.2014 VALID UP TO : 26.10.2017		REVIEWED BY P P Patil S Samanta		 APPROVED BY Dr. ... Approved			
3	MOTORS (AUMA make)	a. RPM b. NO LOAD CURRENT c. IR / HV d. THERMO SWITCHES e. NOISE f. MOUNTING DIMENSIONS g. NAME PLATE i. TYPE TEST	MAJOR " " " " MAJOR " MAJOR	ELECTRICAL PERFORMANCE TEST " " DIMENSIONAL VISUAL TESTING	100% " " " " ONE IN LOT 100% ONE/TYPE	- - - - - - -	IS 325 " " " " AS PER DRG " IS 325	IS 325 " " " " AS PER DRG " IS 325	AIPL INS. RECORD " " " " " " Test Certificate	- - - - - - -	P " " " " " "	- - - - - - -	- - - - - - -		
4	BOUGHT OUT ITEMS														
4.1	FASTENERS	a. DIMENSIONS b. GRADE	MINOR MAJOR	MEASUREMENT VISUAL	One / batch One / batch	- -	IS 2269, IS 1364 IS 1363, IS 2500	IS 2269, IS 1364 IS 1363, IS 2500	GRN GRN	- -	P P	- -	- -		
4.2	LIMIT & TORQUE SWITCHES	a. CONTINUITY (MAKE/BREAK)	MAJOR	PERFORMANCE	One / batch	-	QC/QW.047	QC/QW.047	GRN	-	P	-	-		
4.3	POTENTIOMETER	a. RESISTANCE VALUE	MAJOR	MEASUREMENT	One / batch	-	QC/QW.031	QC/QW.031	GRN	-	P	-	-		
4.4	SPACE HEATER	a. IR b. HV	MAJOR MAJOR	MEASUREMENT MEASUREMENT	One / batch One / batch	- -	QC/QW.045	QC/QW.045	GRN	- -	P P	- -	- -	With actuator	
4.5	ELECTRONIC POSITION TRANSMITTER	a. OUTPUT MEASUREMENT	MAJOR	MEASUREMENT	One / batch	-	CATALOGUE CHECK	CATALOGUE CHECK	GRN	-	P	-	-		
4.6	BEARINGS	a. MAKE b. TYPE	MAJOR MAJOR	VISUAL VISUAL	One / batch One / batch	- -	QC/QW-023, IS-2500 AIPL COMP. DRG	QC/QW-023	GRN	- -	P P	- -	- -	SKF, INA, ABC FAG, ZKL,	
4.7	'O' RINGS AND QUADRINGS	a. MATERIAL IDENTIFICATION b. ELONGATION	MAJOR MAJOR	MEASUREMENT MEASUREMENT	One / batch One / batch	- -	AIPL COMP. DRG AIPL COMP. DRG	QC/QW .024, IS 9975 QC/QW .024, IS 9975	GRN	- -	P P	- -	- -	NBR	

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Sl. No.	Component & operation	Characteristics	REFERENCE QUALITY PLAN		Quantum of Check		Reference Documents	Acceptance Norms	Format of Records	Agency			Remarks	
			Class	Type of Check	M	C/N				M	C	N		
					6									10**
1	2	3	4	5	6		7	8	9	D*	10**		11	
4.8	SPRINGS	DIMENSIONS	MAJOR	MEASUREMENT	One / batch	-	QC/QW.019 & DIN 2093	QC/QW.019 & DIN 2093	SUPPLIER TC/GRN	-	P	-	-	
5	ASSEMBLY INSPECTION													
5.1	WORM SHAFT ASSEMBLY	a. SURFACE DEFECTS b. FREE ROTATION	MAJOR MAJOR	VISUAL VISUAL	100% 100%	-	4M - 3335 4M - 3335	4M - 3335 4M - 3335	AIPL LOG BOOK AIPL LOG BOOK	- -	P P	- -	- -	
5.2	WORM WHEEL ASSEMBLY	a. SURFACE DEFECTS b. FREE ROTATION	MAJOR MAJOR	VISUAL VISUAL	100% 100%	-	4M - 3335 4M - 3335	4M - 3335 4M - 3335	AIPL LOG BOOK AIPL LOG BOOK	- -	P P	- -	- -	
6	FINAL TESTING	a. WIRING CONTINUITY b. PHASE SEQ. CORRECTION c. OPERATION & SETTING OF LIMIT & TORQUE SWITCH d. NO LOAD CURRENT e. HANDWHEEL - MANUAL & AUTO DECLUTCH OPERATION f. OUTPUT SPEED g. POTENTIOMETER h. SPACE HEATER i. MECHANICAL POSITION INDICATOR j. VOLTAGE VARIATION TEST k. INSULATION RESISTANCE l. HV TEST l.1 NORM ACT.: 1.6 kV, 1 min l.2 EPAC ACT.: 1.1 kV, 1 min	CRITICAL	FUNCTIONAL	100%	10%	NTPC APPRD. DATA SHEET; AIPL STD.	NTPC APPRD. DATA SHEET; AIPL STD.	QM-FINAL INSP. REPORT QC/FM.006	✓	P	W	V	Document review on 100 % basis by Contractor / TPIA and NTPC / Customer.


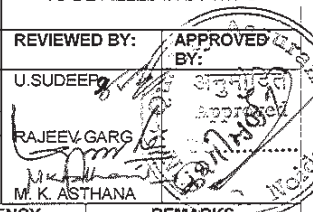
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Sl. No.		Component & operation	Characteristics	Class	Type of Check	Quantum of Check		Reference Documents	Acceptance Norms	Format of Records	Agency			Remarks	
1		2	3	4	5	M	C/N	7	8	9	D*	M	C	N	11
		FINAL TESTING (Contd.)	m. GREASE LEAKAGE n. VISUAL INSPECTION o. ELECTRONIC POSITION TRANSMITTER p. STALL TORQUE and Current q. PAINTING and Rust Prevention r. MOUNTING DIMENSION		VISUAL VISUAL OUTPUT MEASUREMENT MEASUREMENT SHADE & DRY PAINT THICKNESS PHYSICAL	100%	10%	NTPC APPRD. DATA SHEET; AIPL STD.	NTPC APPRD. DATA SHEET; AIPL STD.	QM-FINAL INSP. REPORT QC/FM.006	✓	P	W	V	Document review on 100 % basis by Contractor / TPIA and NTPC / Customer.
7	ACCESSORIES PLUG & SOCKET	a. VISUAL b. ELECTRICAL	MAJOR MAJOR	VISUAL HV	One / batch One / batch	-	-	CATALOGUE INSPECTION REPORT	CATALOGUE INSPECTION REPORT	GRN & INSP.REPORT GRN	-	P	-	-	WITH ACTUATOR
8	ELECTRICAL TEST FOR INTEGRAL STARTERS	a. HV TEST b. BURN IN TEST c. 24V DC OUTPUT d. OPERATIONAL CHECK	MAJOR	ELECTRICAL / FUNCTIONAL	100%	10%	AIPL STD.	AIPL STD.	SUPPLIER-TC	✓	P	V	V	WITH ACUTATOR	
9	SHIPPING INSPECTION	a. NAME PLATE b. PAINTING c. Rust Prevention d. ACCESSORIES e. ANCHORING						PACKING SLIP	PACKING SLIP	PACKING SLIP	-	P	-	-	

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UNEP		MANUFACTURER'S NAME AND ADDRESS		REFERENCE QUALITY PLAN					NTPC		TO BE FILLED IN BY NTPC									
<b>M/S. WEIR BDK VALVES, A UNIT OF WEIR INDIA PVT.LTD. 47/48, GOKUL ROAD, HUBLI - 580 030 KARNATAKA, INDIA.</b>		ITEM	BALL VALVES (FORGED - CS & SS and CAST - CS & SS)		QP. No.	RQP-BV-01		SIGN. OF MFGR	QP. No.	0000-999-QVM-Q-465			REVIEWED BY:	APPROVED BY:						
		REV.			REV.	01			REV. NO	0	DATE	12.12.2014		U.SUDEEP						
		DATE			DATE	02.12.2014			PAGE NO.	1 OF 2			RAJEEV GARG							
		TYPE	MANUAL / ELECTRIC / PNEUMATIC OPERATED						VALID UPTO :11.12.2017				M. K. ASTHANA							
		MATERIAL			SIZE	PR. RATING														
FORGED CS & SS			DN ≤ 50 NB	UP TO 800 #																
CAST CS & SS			50 TO 400 NB	UP TO 150 #																
SN	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORM	FORMAT OF RECORD		AGENCY			REMARKS						
					M	C/N					M	C	N							
1.	2.	3.	4.	5.	6.		7.	8.	9.	D	10.			11.						
1.0	RAW MATERIAL INSPECTION																			
1.1	FORGED / CAST BODY, END PIECE	CHEMICAL PROPERTIES	MAJOR	CHEMICAL ANALYSIS	1 SAMPLE / HEAT		RELEVANT MATERIAL SPECIFICATION AS PER APPROVED DATA SHEET & DRAWING	MTC	√	P	V	V								
		HEAT TREATMENT (WHEREVER APPLICABLE)	MAJOR	REVIEW OF HT CHART/ FOUNDRY TC	100%															
		MECHANICAL PROPERTIES	MAJOR	MECHANICAL TESTING	1 SAMPLE / HEAT / HT BATCH															
		RADIOGRAPHY FOR BODY/BONNET ( ONLY FOR PR CLASS > 600 )	MAJOR	RADIOGRAPHY	100%									ASME B16.34 ANNEXURE- B	RT FILM & REPORTS	√	P	V	V	FILM REVIEW BY NTPC CHP
		DIMENSIONS	MAJOR	MEASURE	100%									COMPONENT DRAWINGS	IR		P	-	-	
		SURFACE DEFECTS	MAJOR	VISUAL	100%									MSS SP-55	IR		P	-	-	
1.2	STEM, GLAND, BALL	CHEMICAL PROPERTIES	MAJOR	CHEMICAL ANALYSIS	1 SAMPLE / HEAT		RELEVANT MATERIAL SPECIFICATION AS PER APPROVED DATA SHEET & DRAWING	MTC / LAB TC	√	P	V	V								
		HEAT TREATMENT (WHEREVER APPLICABLE)	MAJOR	REVIEW OF HT CHART	100%															
		MECHANICAL PROPERTIES	MAJOR	MECHANICAL TESTING	1 SAMPLE / HEAT / HT BATCH															
		SUB-SURFACE DEFECTS ON BARS / FORGINGS	MAJOR	UT	100%									ASTM B 16.34	ASTM B 16.34 ANNEXURE E	IR	√	P	V	V
1.3	SEAT, SEAL	MATERIAL CHECK	MAJOR	CHEMICAL ANALYSIS	1/BATCH		RELEVANT MATERIAL SPECIFICATION AS PER APPROVED DATA SHEET & DRAWING	MTC / LAB TC	√	P	V	V								
		HARDNESS	MAJOR	HARDNESS CHECK	1/BATCH															
1.4	FASTENERS FOR PRESSURE CONTAINING PARTS	CHEMICAL PROPERTIES	MAJOR	CHEMICAL ANALYSIS	1/BATCH		RELEVANT MATERIAL SPECIFICATION AS PER APPROVED DATA SHEET & DRAWING	SUPPLIER TC	√	P	V	V								
		MECHANICAL PROPERTIES	MAJOR	MECHANICAL TESTING																
1.5	GEAR BOX	MODEL & MAKE	MAJOR	REVIEW OF MANF TC	100 %		APPRD DRG/ MANUFACTURER CATALOGUE/DRAWING	MANF TC	√	P	V	V	REFER NOTE - 1							
1.6	PNEUMATIC ACTUATOR	PORT LEAKAGE TEST & FUNCTIONAL TEST	MAJOR	REVIEW OF MANF TC	100%		APPRD DRG/ MANUFACTURER CATALOGUE/DRAWING	MANF TC	√	P	V	V	MAKE : ELOMATIC / ROTEX							
2.0	ELECTRIC ACTUATOR (IF APPLICABLE) – INSPECTION & TESTING AS PER SEPARATE QP. VERIFY CHP CLEARANCE																			
3.0	IN PROCESS INSPECTION																			
3.1	FORGED / CAST BODY, END PIECE, BALL AFTER MACHINING	DIMENSIONS & SURFACE FINISH	MAJOR	MEASUREMENT	100 %		MANUFACTURING DRAWING	IR	-	P	-	-								

**LEGEND:** \* RECORDS, IDENTIFIED WITH "TICK" (√) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION.  
 \*\* M: MANUFACTURER/SUB-SUPPLIER, C: MAIN SUPPLIER N: NTPC, P: PERFORM, W: WITNESS AND V: VERIFICATION. AS APPROPRIATE, CHP: NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"

**NOTE:** # NTPC INSPECTION ENGINEER TO CHECK, APPROVAL DATE / REVISION NO. OF REFERENCE DOCUMENTS AT THE TIME OF INSPECTION.

WHEIR		MANUFACTURER'S NAME AND ADDRESS		REFERENCE QUALITY PLAN					NTPC		TO BE FILLED IN BY NTPC			
M/S. WEIR BDK VALVES, A UNIT OF WEIR INDIA PVT.LTD. 47/48, GOKUL ROAD, HUBLI - 580 030 KARNATAKA, INDIA.		ITEM	BALL VALVES (FORGED - CS & SS and CAST - CS & SS)		QP. No.	RQP-BV-01		SIGN. OF MFGR	QP. No.	0000-999-QVM-Q-465			REVIEWED BY:	APPROVED BY:
		REV.	01		DATE	02.12.2014			REV. NO	0	DATE	12.12.2014		U.SUDEEP
		TYPE	MANUAL / ELECTRIC / PNEUMATIC OPERATED			SIZE		PR. RATING	PAGE NO.	2 OF 2			RAJEEV GARG	
		MATERIAL	FORGED CS & SS		DN ≤ 50 NB		UP TO 800 #		VALID UPTO :11.12.2017					M. K. ASTHANA
	CAST CS & SS		50 TO 400 NB		UP TO 150 #									
SN	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORM	FORMAT OF RECORD		AGENCY			REMARKS
					M	C/N					M	C	N	
1.	2.	3.	4.	5.	6.		7.	8.	9.	D	10.			11.
		SURFACE DEFECTS	MAJOR	DP ON M/C AREA OF BODY, END PIECE, BALL & STEM	100%		ASTM B 16.34	ASTM B 16.34 ANNEXURE D	IR	√	P	V	V	
		GALVANISING OF BODY & END PIECE (WHEREVER APPLICABLE)	MAJOR	MEASUREMENT	1 SAMPLE PER GALVANISING BATCH		APPROVED DATA SHEET & DRAWING / IS 2629		IR	√	P	V	V	
3.2	BALL & SEAT	GRINDING & LAPPING	MAJOR	BLUE MATCHING	100%		FULL LINE CONTACT AND MINIMUM 80% AREA CONTACT		IR	√	P	V	V	FOR METAL SEATED VALVES
4.0	FINAL INSPECTION													
4.1	ASSEMBLED VALVE	VISUAL, OVERALL DIMENSION	MAJOR	VISUAL & MEASURE	100 %		SEE NOTE 2	APPLICABLE DESIGN & TESTING STANDARD / APPROVED DRAWING / DATA SHEET	TC	√	P	W	W	CHP
		SHELL TIGHTNESS TEST	CRITICAL	HYDRO TEST	100 %				TC	√	P	W	W	CHP
		SEAT TIGHTNESS TEST	CRITICAL	HYDRO TEST	100 %				TC	√	P	W	W	CHP
		SEAT TIGHTNESS TEST	CRITICAL	AIR	100 %				TC	√	P	W	W	CHP
4.2	FUNCTIONAL TEST OF ASSEMBLE VALVE WITH JOB ACTUATOR (FOR ACTUATOR OPEARTED VALVES)	SMOOTH OPERATION, OPENING/CLOSING TIME & TORQUE SETTING(FOR ELECTRIC ACTUATOR OPEARTED VALVES)	CRITICAL	OPERATION	100 %		SEE NOTE 2	APPROVED DATA SHEET / DRAWING	TC	√	P	W	W	CHP
4.3	MARKING	SIZE, RATING, VALVE SERIAL NO, ETC.	MAJOR	VISUAL	100 %		-	APPROVED DRAWING	IR	-	P	V	-	
4.4	PAINTING	PAINTING SHADE & DFT	MAJOR	VISUAL & MEASURE	100 %		-	TECHNICAL SPECIFICATION/APPROVED DRAWING /APPROVED PAINTING SCHEDULE	IR	-	P	V	-	
4.5	FIRE SAFE TEST (TYPE TEST)	FOR FIRE SAFE VALVES AS PER TECH SPEC REQUIREMENT, FIRE SAFE TEST CLEARANCE FROM NTPC ENGG SHALL BE REVIEWED AT THE TIME OF INSPECTION, IF CONDUCTED EARLIER, ELSE SHALL BE WITNESSED BY NTPC. FOR WHICH SEPARATE PROCEDURE SHALL BE APPROVED.												
NOTES														
1	GEAR BOX SHALL BE FROM M/S AMEYA TRANSMISSION, PUNE / PAC – HUBLI / MANUFACTURERS TEST CERTIFICATE, & TORQUE TESTING REPORTS WILL BE SUBMITTED.													
2	10% OF THE OFFERED QUANTITY (EACH SIZE) OR (MINIMUM 2 NO'S OF VALVES OF EACH SIZE WHICH EVER IS HIGHER) PER VISIT SHALL BE OFFERED FOR NTPC WITNESS													
3	CASTINGS & FORGINGS FROM WEIR BDK REGULAR / APPROVED SOURCES													

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 FORMAT NO.: QS-01-QAI-P-10/F1-R1

**NOTE:** # NTPC INSPECTION ENGINEER TO CHECK, APPROVAL DATE / REVISION NO. OF REFERENCE DOCUMENTS AT THE TIME OF INSPECTION.

ENGG. DIV./QA&I

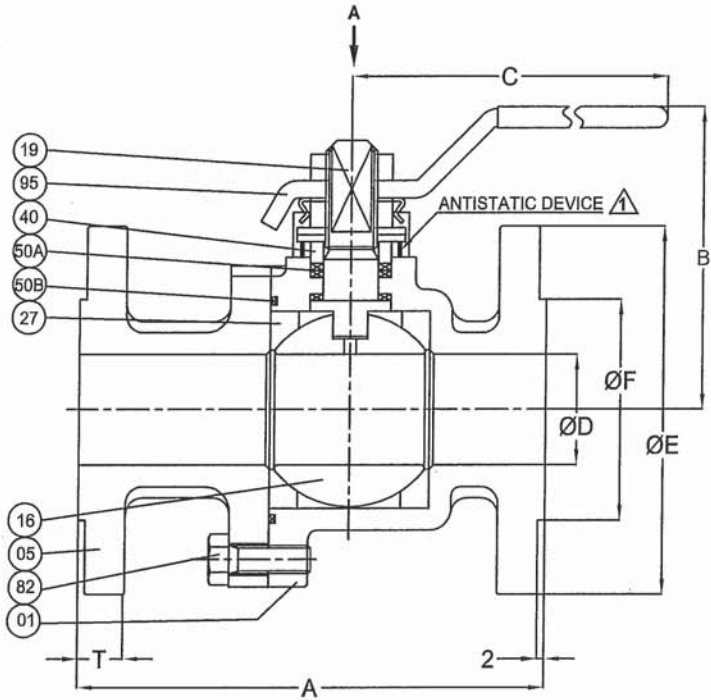
**COMPLIANCE REPORT****07/03/2016**

<b>CLIENT</b>	<b>M/S NTPC</b>	
<b>CONTRACTOR</b>	<b>M/S BHEL</b>	
<b>PROJECT</b>	<b>NORTH KARANPURA THERMAL POWER PROJECT</b>	
<b>PACKAGE</b>	<b>FUEL OIL HANDLING AND STORAGE</b>	
<b>FUEL OIL HANDLING CONTRACTOR</b>	<b>UNITECH MACHINES LIMITED, GURGAON</b>	
<b>REFERENCE DOC. NO.</b>	<b>NTPC DOC NO. 4410-131-FO-PVM-Y-005 R-01 BHEL DOC NO. PE-V0-405-166-A013 R-01 GAD AND DATASHEET OF BALL VALVE FOR FOHS</b>	
<b>S. NO.</b>	<b>NTPC COMMENTS DATED 07/03/2016</b>	<b>BHEL / UML REPLY DATED 07/03/2016</b>
1	ALL PAGES BALL MATERIAL SHALL BE : SS-AISI-316	BALL MATERIAL SPECIFIED IN DATASHEET (ASTM A 276 TYPE 316 OR ASTM A 351 GR. CF8M / ASTM A182 GR. F316) IS SS316 ONLY AS PER NTPC SPECIFICATION AND IS IN ORDER. NO CHANGE IS REQUIRED.
2	INCLUDE WORKING PRESSURE & TEMPERATURE, DESIGN PRESSURE & TEMPERATURE,	<p>MAXIMUM OPERATING PRESSURE IN THE SYSTEM IS 5.0 KG/CM<sup>2</sup> (RV SET PRESSURE OF LDO UNLOADING PUMPS). THIS IS CONSIDERED AS WORKING PRESSURE FOR ALL THE VALVES</p> <p>LDO SYSTEM DO NOT HAVE ANY HEATING FACILITY. WORKING TEMPERATURE IS AMBIENT.</p> <p>DESIGN PRESSURE IS CONSIDERED AS 1.5 TIMES THE WORKING PRESSURE I.E. 7.5 KG/CM<sup>2</sup></p> <p>DESIGN TEMPERATURE IS CONSIDERED AS 50 DEG. C</p> <p>FURTHER, VALVE RATING IS 150. AS PER CODE, SHELL AND SEAT IS TESTED FOR 30 AND 22 BAR RESPECTIVELY WHICH AND IS VERY HIGH AS COMPARED TO OPERATING PRESSURE. HENCE, VALVE SELECTED IN ORDER.</p> <p>NTPC IS REQUESTED TO KINDLY APPROVE.</p>
3	LOCATION WITH REF. DRAWING NO	<p>PLEASE REFER FOLLOWING DRAWING / DOCUMENTS FOR QUANTITY AND LOCATION OF VALVES:</p> <ol style="list-style-type: none"> <li>4410-001-131-FO-PVM-L-002, P&amp;ID FOR LDO SYSTEM</li> <li>4410-001-131-FO-PVM-P-002, PIPING LAYOUT IN &amp; AROUND PUMP HOUSE AND ROAD TANKER UNLOADING AREA</li> <li>4410-001-131-FO-PVM-P-003, PIPING LAYOUT IN &amp; AROUND STORAGE TANK FARM AREA</li> </ol>
4		CHANGES ARE REFLECTED IN THE DOC BY REV. MARK 02

**COMPLIANCE REPORT****25/02/2016**

<b>CLIENT</b>	<b>M/S NTPC</b>	
<b>CONTRACTOR</b>	<b>M/S BHEL</b>	
<b>PROJECT</b>	<b>NORTH KARANPURA THERMAL POWER PROJECT</b>	
<b>PACKAGE</b>	<b>FUEL OIL HANDLING AND STORAGE</b>	
<b>FUEL OIL HANDLING CONTRACTOR</b>	<b>UNITECH MACHINES LIMITED, GURGAON</b>	
<b>REFERENCE DOC. NO.</b>	<b>NTPC DOC NO. 4410-131-FO-PVM-Y-005 R-00 BHEL DOC NO. PE-V0-405-166-A013 R-00 GAD AND DATASHEET OF BALL VALVE FOR FOHS</b>	
<b>S. NO.</b>	<b>NTPC COMMENTS</b>	<b>BHEL / UML REPLY</b>
1	BALL VALVE SHALL CONFIRM TO BS: 5351 BALL VALVE FIRE SAFE TEST SHALL CONFIRM TO BS:6577 PART-2/API 607	NOTED AND INCORPORATED..
2	ANTI STATIC DETAIL??	ANTISTATIC DEVICE SHALL BE MADE OF SS304 AND IS INDICATED IN THE DOCUMENT.
3	FIRE SAFE TEST CERTIFICATE SHALL BE SUBMITTED	FIRE SAFE TEST CERTIFICATES FOR THE VALVES ARE ENCLSOED.
4	BALL POSITION INDICATOR??	NOTED AND INCORPORATED.
5	PLEASE WRITE " TESTING AND INSPECTION SHALL BE AS PER APPROVED "NTPC" QAP	NOTED AND INCORPORATED.
6	GEAR BOX DETAIL? FOR GEAR OPERATED VALVES	INCLUDED IN APPLICABLE DOCUMENTS.
7	ALL QUANTITIES SHALL BE AS PER APPROVED P&ID AND LAYOUT	ALL VALVES INDICATED IS AS PER APPROVED P&ID AND LAYOUT ONLY.  NTPC MAY REVIEW QUANTITY FROM SAME
8	RPM?? NO OF TURN?? OF ACTUATOR OF MOTOR OPERATED VALVE	NO. OF TURNS IS MENTIONED IN THE DOCUMENT.  RPM WILL BE COVERED IN ACTUATOR DATASHEET.

THIS IS A SYSTEM GENERATED DRAWING



PT.NO.	PART NAME	MATERIAL
01	BODY	ASTM A216 Gr. WCB
05	END PIECE	ASTM A216 Gr. WCB
16	BALL	ASTM A276 TYPE 316
19	STEM (ANTI BLOW OUT)	ASTM A276 TYPE 316
27	SEAT	PTFE
40	GLAND	SS 316
50A	STEM SEAL	GRAFOIL (FIRE SAFE)
50B	BODY SEAL	GRAFOIL (FIRE SAFE)
82	HEX.SCREW	A193 Gr. B7
95	LEVER	STEEL WITH PVC SLEEVE

**NOTES :**

- 1) FACE TO FACE DIMENSION AS PER ASME B16.10. OTHER DIMENSIONS & WEIGHTS ARE INDICATIVE.
- 2) FLANGED END RAISED FACE - FINISH 125 TO 250 AARH DRILLED TO #150 - AS PER ASME B16.5
- 3) FIRE SAFE TEST AS PER API : 607 5th EDITION, WITH ANTISTATIC DEVICE (SS304)  $\Delta$
- 4) VALVES ARE BI-DIRECTIONAL.
- 5) ALL DIMENSIONS ARE IN mm.
- 6) TESTING & INSPECTION SHALL BE AS PER APPROVED NTPC QAP.
- 7) LEAKAGE RATE - CLASS VI (TIGHT SHUTOFF) AS PER ANSI / FCI 70-2.
- 8) VALVE TORQUE : FOR SIZE DN15 - 5 N-m  
DN25 - 7 N-m

$\Delta$  NTPC Doc.No. - 4410-001-131-FO-PVM-Y-005  
 BHEL Doc.No. - PE-V0-405-166-A015  
 PACKAGE :- FUEL OIL HANDLING SYSTEM (P-332)  
 PROJECT : NORTH KARANPURA STPP

2

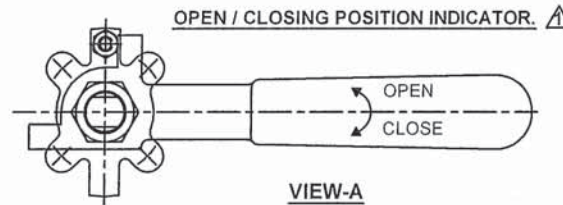
WORKING PRESSURE: 5.0 KG/CM2  
 DESIGN PRESSURE: 7.5 KG/CM2  
 WORKING TEMPERATURE: AMBIENT  
 DESIGN TEMPERATURE: 50 DEG. C

DESIGN STD. : BS EN ISO 17292 (BS 5351)  
 TESTING STD. : EN 12266 - 1(BS:6755 - 1)

RATING	150	150
SIZE	15	25
A	108	127
B	80	90
C	120	145
$\varnothing$ D	13	25
$\varnothing$ E	90	110
$\varnothing$ F	34.9	50.8
T	10	11.6
DRILLING	HOLES	4
	HOLE $\varnothing$	15.9
	PCD	60.3
Approx. Wt.-kg.	1.3	2.7

$\Delta$ \* Quantity shall be as per approved PID and Respective piping layouts.

Size x Class	Quantity	P.O Line Item No	W.O. Line No.	Service	TAG No.
15 x 150	*	8	--	-	IF-VL-VB-000333.1.h
25 x 150	*	7	--	-	IF-VL-VB-000363.1.g



TEST PRESSURE, bar		
RATING		150
HYD	SHELL	30
	SEAT	22
AIR	SEAT	6.9

**WEIR** Weir Power & Industrial India  
 (Weir BDK Valves - a unit of Weir India Pvt Ltd.)

DATE	09-02-2016	DRG. No.	F20001-90032606	REV
W.O. No	30007692	SHEET No.	01 of 06	$\Delta$
PRODUCT	FLOATING BALL VALVE			
	2 PIECE FULL BORE			
	FIRE SAFE - SOFT SEAT			
CUSTOMER	HAND LEVER OPERATED			
	UNITECH MACHINES LIMITED.			
Order No.	P-332/B/15/00322 DT : 22/09/2015			
JOB/PROJECT	(3x660MW) NORTH KARANPURA ---NTPC PROJECT			

THIS DOCUMENT CONTAINS INFORMATION WHICH IS PROTECTED BY COPYRIGHT AND IS CONFIDENTIAL TO WEIR BDK VALVES. IT SHOULD NOT BE COPIED OR DISCLOSED (IN WHOLE OR IN PART) TO PARTIES OTHER THAN THE RECIPIENT WITHOUT THE EXPRESS WRITTEN PERMISSION OF WEIR BDK AUTHORIZED PERSONNEL.

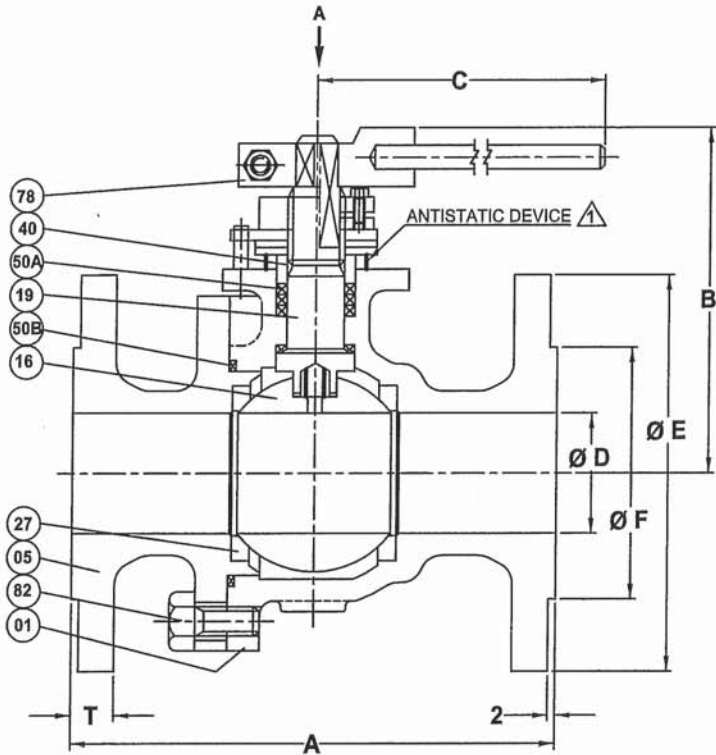
**CUSTOMER COMMENTS.**

REFERENCE DOC FOR QUANTITY AND LOCATION OF VALVES:  
 1. 4410-001-131-FO-PVM-L-002, P&ID FOR LDO SYSTEM  
 2. 4410-001-131-FO-PVM-P-002, PIPING LAYOUT IN & AROUND PUMP HOUSE AND ROAD TANKER UNLOADING AREA  
 3. 4410-001-131-FO-PVM-P-003, PIPING LAYOUT IN & AROUND STORAGE TANK FARM AREA

2

PUNJAB ENGINEERING

THIS IS A SYSTEM GENERATED DRAWING



PT.NO.	PART NAME	MATERIAL
01	BODY	ASTM A216 Gr. WCB
05	END PIECE	ASTM A216 Gr. WCB
16	BALL	ASTM A351 Gr. CF8M/ASTM A182 Gr. F316
19	STEM (ANTI BLOW OUT)	ASTM A276 TYPE 316
27	SEAT	PTFE
40	GLAND	SS 316
50A	STEM SEAL	GRAFOIL (FIRE SAFE)
50B	BODY SEAL	GRAFOIL (FIRE SAFE)
78	LEVER ADAPTER	ASTM A216 Gr. WCB
82	HEX.SCREW	A193 Gr. B7

NOTES :

- 1) FACE TO FACE DIMENSION AS PER ASME B16.10. OTHER DIMENSIONS & WEIGHTS ARE INDICATIVE.
- 2) FLANGED END RAISED FACE - FINISH 125 TO 250 AARH DRILLED TO #150 - AS PER ASME B16.5
- 3) FIRE SAFE TEST AS PER API : 607 5th EDITION, WITH ANTISTATIC DEVICE (SS304)
- 4) VALVES ARE BI-DIRECTIONAL.
- 5) ALL DIMENSIONS ARE IN mm.
- 6) TESTING & INSPECTION SHALL BE AS PER APPROVED NTPC QAP.
- 7) LEAKAGE RATE - CLASS VI (TIGHT SHUTOFF) AS PER ANSI / FCI 70-2.
- 8) VALVE TORQUE : FOR SIZE DN50 - 34 N-m  
DN80 - 88 N-m



NTPC Doc.No.- 4410-001-131-FO-PVM-Y-005  
 BHEL Doc.No.- PE-V0-405-166-A015  
 PACKAGE :- FUEL OIL HANDLING SYSTEM (P-332)  
 PROJECT : NORTH KARANPURA STPP

2

WORKING PRESSURE: 5.0 KG/CM2  
 DESIGN PRESSURE: 7.5 KG/CM2  
 WORKING TEMPERATURE: AMBIENT  
 DESIGN TEMPERATURE: 50 DEG. C

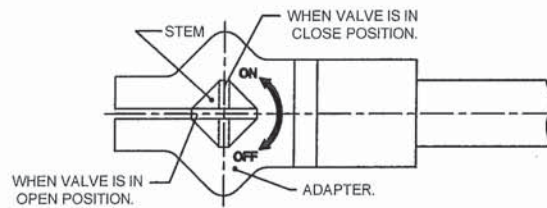
DESIGN STD. : BS EN ISO 17292 (BS 5351)  
 TESTING STD. : EN 12266 - 1(BS:6755 - 1)

RATING	150	150	
SIZE	50	80	
A	178	203	
B	135	170	
C	300	475	
Ø D	49	76	
Ø E	150	190	
Ø F	92.1	127	
T	16.3	19.5	
DRILLING	HOLES	4	4
	HOLEØ	19	19
	PCD	120.7	152.4
Approx. Wt.-kg.	8.2	18.5	

\* Quantity shall be as per approved PID and Respective piping layouts.

Size x Class	Quantity	P.O Line Item No	W.O. Line No.	Service	TAG No.
50 x 150	*	6	--	-	IF-VL-VB-000313.1.f
80 x 150	*	5	--	-	IF-VL-VB-000273.1.e

OPEN / CLOSING POSITION INDICATOR.



VIEW-A

TEST PRESSURE, bar		
RATING		150
HYD	SHELL	30
	SEAT	22
AIR	SEAT	6.9

**WEIR** Weir Power & Industrial India  
 (Weir BDK Valves - a unit of Weir India Pvt Ltd.)

DATE	09-02-2016	DRG. No.	F20003-90012864	REV
W.O. No	30007692	SHEET No.	02 of 06	
PRODUCT	FLOATING BALL VALVE			
	2 PIECE FULL BORE			
	FIRE SAFE - SOFT SEAT			
CUSTOMER	HAND LEVER OPERATED			
	UNITECH MACHINES LIMITED.			
Order No.	P-332/B/15/00322 DT : 22/09/2015			
JOB/PROJECT	(3x660MW) NORTH KARANPURA ---NTPC PROJECT			

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CUSTOMER COMMENTS.

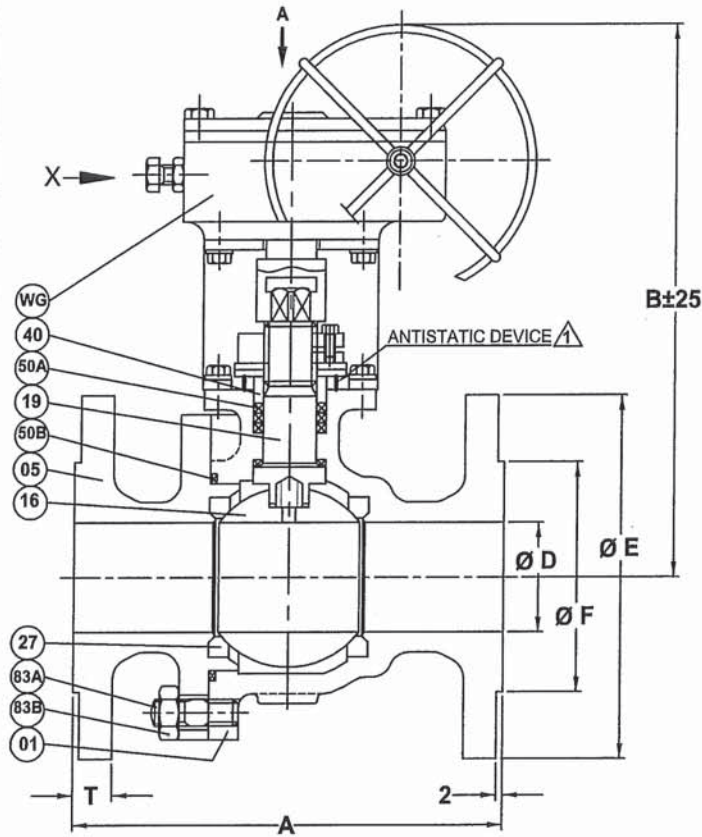
REFERENCE DOC FOR QUANTITY AND LOCATION OF VALVES:

1. 4410-001-131-FO-PVM-L-002, P&ID FOR LDO SYSTEM
2. 4410-001-131-FO-PVM-P-002, PIPING LAYOUT IN & AROUND PUMP HOUSE AND ROAD TANKER UNLOADING AREA
3. 4410-001-131-FO-PVM-P-003, PIPING LAYOUT IN & AROUND STORAGE TANK FARM AREA

2



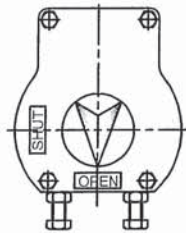
THIS IS A SYSTEM GENERATED DRAWING



**2**  
 WORKING PRESSURE: 5.0 KG/CM2  
 DESIGN PRESSURE: 7.5 KG/CM2  
 WORKING TEMPERATURE: AMBIENT  
 DESIGN TEMPERATURE: 50 DEG. C

DESIGN STD. : BS EN ISO 17292 (BS 5351)  
 TESTING STD. : EN 12286 - 1(BS:6755 - 1)

<b>RATING</b>	<b>150</b>
<b>SIZE</b>	<b>200</b>
<b>A</b>	<b>292</b>
<b>B</b>	<b>643</b>
<b>C</b>	<b>273</b>
<b>Ø D</b>	<b>203</b>
<b>Ø E</b>	<b>345</b>
<b>Ø F</b>	<b>269.9</b>
<b>Ø W</b>	<b>500</b>
<b>T</b>	<b>29</b>
<b>DRILLING</b>	<b>HOLES</b> 8
	<b>HOLEØ</b> 22.2
	<b>PCD</b> 298.5
<b>Approx. Wt.-kg.</b>	<b>95</b>

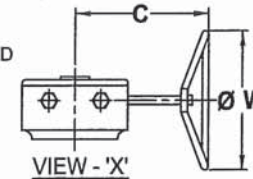


OPEN / CLOSE POSITION INDICATOR.

**VIEW 'A'**

Size x Class	Quantity	P.O Line Item No	W.O. Line No.	Service	TAG No.
200 x 150	*	3	-	-	IF-VL-VB-001313.1.c

GEAR BOX DETAILS	
MAKE	PAC
MODEL	PAC02A
VALVE TORQUE	590 N-m
GEAR RATED TORQUE	1520 N-m
GEAR RATIO	45:1
DESIGN STANDARD	AWWA C504



**VIEW - 'X'**

TEST PRESSURE, bar		
RATING		150
HYD	SHELL	30
	SEAT	22
AIR	SEAT	6.9

PT.NO.	PART NAME	MATERIAL
01	BODY	ASTM A216 Gr. WCB
05	END PIECE	ASTM A216 Gr. WCB
16	BALL	ASTM A351 Gr. CF8M
19	STEM (ANTI BLOW OUT)	ASTM A276 TYPE 316
27	SEAT	PTFE
40	GLAND	SS 316
50A	STEM SEAL	GRAFOIL (FIRE SAFE)
50B	BODY SEAL	SPW 304 + GRAPHITE (FIRE SAFE)
83A	STUD	A193 Gr. B7
83B	NUT	A194 Gr. 2H
WG	GEAR BOX HOUSING	CI-IS:210 Gr.FG220
	WORM WHEEL	DUCTILE IRON SGI 600/3
	WORM / WORM SHAFT	EN8

**NOTES :**

- 1) FACE TO FACE DIMENSION AS PER ASME B16.10. OTHER DIMENSIONS & WEIGHTS ARE INDICATIVE.
- 2) FLANGED END RAISED FACE - FINISH 125 TO 250 AARH DRILLED TO #150 - AS PER ASME B16.5
- 3) FIRE SAFE TEST AS PER API : 607 5th EDITION, WITH ANTISTATIC DEVICE (SS304)
- 4) VALVES ARE BI-DIRECTIONAL.
- 5) ALL DIMENSIONS ARE IN mm.
- 6) TESTING & INSPECTION SHALL BE AS PER APPROVED NTPC QAP.
- 7) LEAKAGE RATE - CLASS VI (TIGHT SHUTOFF) AS PER ANSI / FCI 70-2.

NTPC Doc.No.- 4410-001-131-FO-PVM-Y-005  
 BHEL Doc.No.- PE-V0-405-166-A015  
 PACKAGE :- FUEL OIL HANDLING SYSTEM (P-332)  
 PROJECT : NORTH KARANPURA STPP

\* Quantity shall be as per approved PID and Respective piping layouts.

**WEIR** Weir Power & Industrial India  
 (Weir BDK Valves - a unit of Weir India Pvt Ltd.)

DATE	09-02-2016	DRG. No.	F20005-90050778	REV
W.O. No	30007692	SHEET No.	03 of 06	
PRODUCT	FLOATING BALL VALVE			
	2 PIECE FULL BORE			
	FIRE SAFE - SOFT SEAT			
CUSTOMER	GEAR OPERATED			
	UNITECH MACHINES LIMITED.			
Order No.	P-332/B/15/00322 DT : 22/09/2015			
JOB/PROJECT	(3x660MW) NORTH KARANPURA ---NTPC PROJECT			

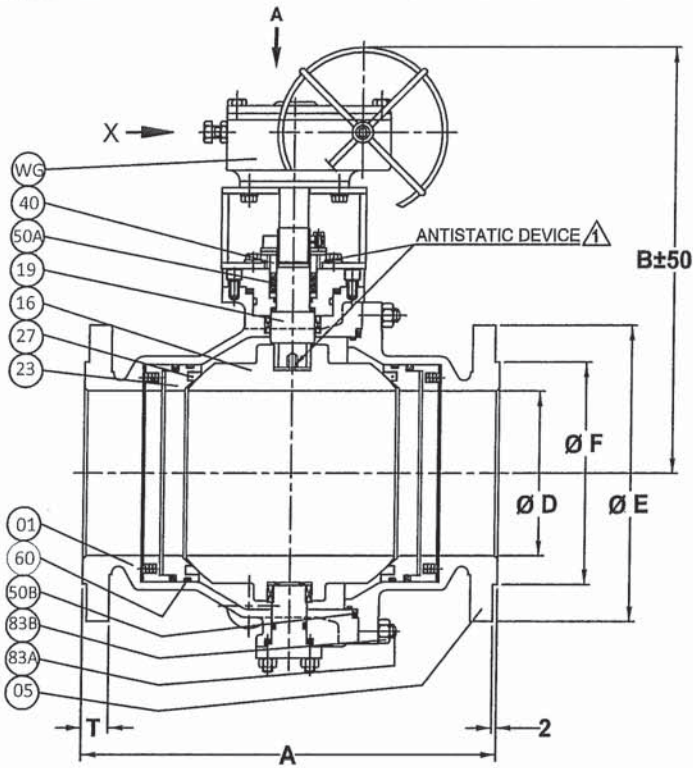
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**CUSTOMER COMMENTS.**

- REFERENCE DOC FOR QUANTITY AND LOCATION OF VALVES:
1. 4410-001-131-FO-PVM-L-002, P&ID FOR LDO SYSTEM
  2. 4410-001-131-FO-PVM-P-002, PIPING LAYOUT IN & AROUND PUMP HOUSE AND ROAD TANKER UNLOADING AREA
  3. 4410-001-131-FO-PVM-P-003, PIPING LAYOUT IN & AROUND STORAGE TANK FARM AREA

**2**

THIS IS A SYSTEM GENERATED DRAWING



PT.NO.	PART NAME	MATERIAL
01	BODY	ASTM A216 Gr. WCB
05	END PIECE	ASTM A216 Gr. WCB
16	BALL	ASTM A351 Gr. CF8M
19	STEM (ANTI BLOW OUT)	ASTM A564 TYPE 630 17-4 PH
23	SEAT RETAINER	ASTM A351 Gr. CF8M
27	SEAT	PTFE
40	GLAND	SS 316
50A	STEM SEAL	GRAFOIL (FIRE SAFE)
50B	BODY SEAL	SPW 304 + GRAPHITE (FIRE SAFE)
60	'O'-RING	VITON
83A	STUD	A193 Gr. B7
83B	NUT	A194 Gr. 2H
WG	GEAR BOX HOUSING	CI-IS:210 Gr.FG220
	WORM WHEEL	DUCTILE IRON SGI 600/3
	WORM / WORM SHAFT	EN8

NOTES :

- 1) FACE TO FACE DIMENSION AS PER ASME B16.10. OTHER DIMENSIONS & WEIGHTS ARE INDICATIVE.
- 2) FLANGED END RAISED FACE - FINISH 125 TO 250 AARH DRILLED TO #150 - AS PER ASME B16.5
- 3) FIRE SAFE TEST AS PER API : 607 5th EDITION, WITH ANTISTATIC DEVICE (SS304)
- 4) VALVES ARE PROVIDED WITH VENT WITH PLUG, & DRAIN WITH NEEDLE VALVE + PLUG CONNECTION.
- 5) VALVES ARE BI-DIRECTIONAL.
- 6) ALL DIMENSIONS ARE IN mm.
- 7) TESTING & INSPECTION SHALL BE AS PER APPROVED NTPC QAP.
- 8) LEAKAGE RATE - CLASS VI (TIGHT SHUTOFF) AS PER ANSI / FCI 70-2.

**WEIR** Weir Power & Industrial India  
(Weir BDK Valves - a unit of Weir India Pvt Ltd.)

DATE	09-02-2016	DRG. No.	TF0002-90092589	REV
W.O. No	30007692	SHEET No.	04 of 06	
PRODUCT	TRUNNION MOUNTED BALL VALVE			
	2 PIECE FULL BORE			
	FIRE SAFE - SOFT SEAT			
CUSTOMER	UNITECH MACHINES LIMITED.			
	Order No.	P-332/B/15/00322 DT : 22/09/2015		
JOB/PROJECT	(3x660MW) NORTH KARANPURA ---NTPC PROJECT			

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CUSTOMER COMMENTS.

REFERENCE DOC FOR QUANTITY AND LOCATION OF VALVES:

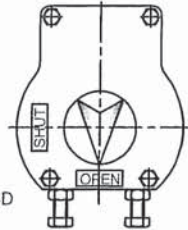
1. 4410-001-131-FO-PVM-L-002, P&ID FOR LDO SYSTEM
2. 4410-001-131-FO-PVM-P-002, PIPING LAYOUT IN & AROUND PUMP HOUSE AND ROAD TANKER UNLOADING AREA
3. 4410-001-131-FO-PVM-P-003, PIPING LAYOUT IN & AROUND STORAGE TANK FARM AREA

2

2

WORKING PRESSURE: 5.0 KG/CM2  
DESIGN PRESSURE: 7.5 KG/CM2  
WORKING TEMPERATURE: AMBIENT  
DESIGN TEMPERATURE: 50 DEG. C

DESIGN STD. : BS EN ISO 17292 (BS 5351) / API-6D  
TESTING STD. : EN 12286 - 1(BS:6755 - 1) / API-598 / API-6D

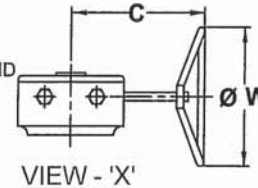


OPEN / CLOSE POSITION INDICATOR.  
VIEW 'A'

NTPC Doc.No.- 4410-001-131-FO-PVM-Y-005  
BHEL Doc.No.- PE-V0-405-166-A015  
PACKAGE :- FUEL OIL HANDLING SYSTEM (P-332)  
PROJECT : NORTH KARANPURA STPP

\* Quantity shall be as per approved PID and Respective piping layouts.

Size x Class	Quantity	P.O Line Item No	W.O. Line No.	Service	TAG No.
250 x 150	*	2	--	-	IF-VL-VB-001323.1.b



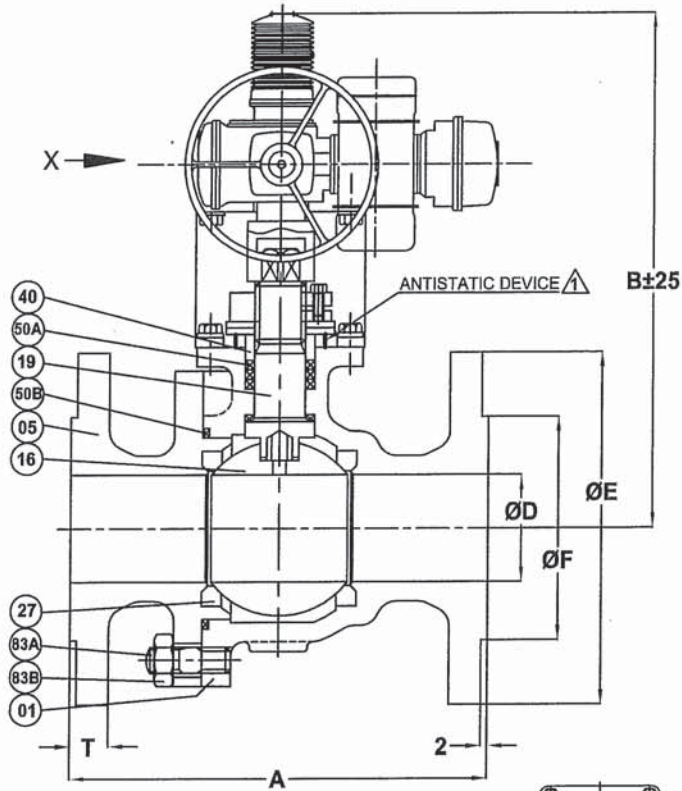
VIEW - 'X'

RATING	150	
SIZE	250	
A	533	
B	697	
C	368	
Ø D	252	
Ø E	405	
Ø F	323.8	
T	30.6	
Ø W	500	
DRILLING	HOLES	12
	HOLEØ	25.4
	PCD	362
Approx. Wt.-kg.	295	

GEAR BOX DETAILS	
MAKE	PAC
MODEL	PAC03A
VALVE TORQUE	1050 N-m
GEAR RATED TORQUE	2550 N-m
GEAR RATIO	45:1
DESIGN STANDARD	AWWA C504

TEST PRESSURE, bar		
RATING		150
HYD	SHELL	30
	SEAT	22
AIR	SEAT	6.9

THIS IS A SYSTEM GENERATED DRAWING



PT.NO.	PART NAME	MATERIAL
01	BODY	ASTM A216 Gr. WCB
05	END PIECE	ASTM A216 Gr. WCB
16	BALL	ASTM A351 Gr. CF8M
19	STEM (ANTI BLOW OUT)	ASTM A276 TYPE 316
27	SEAT	PTFE
40	GLAND	SS 316
50A	STEM SEAL	GRAFOIL (FIRE SAFE)
50B	BODY SEAL	SPW 316 + GRAPHITE (FIRE SAFE)
83A	STUD	A193 Gr. B7
83B	NUT	A194 Gr. 2H

NOTES :

- 1) FACE TO FACE DIMENSION AS PER ASME B16.10. OTHER DIMENSIONS & WEIGHTS ARE INDICATIVE.
- 2) FLANGED END RAISED FACE - FINISH 125 TO 250 AARH DRILLED TO #150 - AS PER ASME B16.5
- 3) FIRE SAFE TEST AS PER API : 607 5th EDITION, WITH ANTISTATIC DEVICE IN SS 304.
- 4) VALVES ARE BI-DIRECTIONAL.
- 5) ALL DIMENSIONS ARE IN mm.
- 6) TESTING & INSPECTION SHALL BE AS PER APPROVED NTPC QAP.
- 7) LEAKAGE RATE - CLASS VI (TIGHT SHUTOFF) AS PER ANSI / FCI 70-2.
- 8) VALVE TORQUE - 590N-m.
- 9) ACCESSORIES MOUNTING ARRANGEMENT INDICATIVE ONLY, MAY VARY DURING ASSEMBLY.

**WEIR** Weir Power & Industrial India  
(Weir BDK Valves - a unit of Weir India Pvt Ltd.)

DATE	09-02-2016	DRG. No.	F20155-90062923	REV
W.O. No	30007692	SHEET No.	05 of 06	⚠

PRODUCT	FLOATING BALL VALVE
	2 PIECE FULL BORE
	FIRE SAFE - SOFT SEAT
	GEAR + ELECTRICAL ACTUATOR OPERATED

CUSTOMER: UNITECH MACHINES LIMITED.

Order No. P-332/B/15/00322 DT : 22/09/2015

PROJECT. (3x660MW) NORTH KARANPURA --NTPC

PACKAGE. PROJECT

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CUSTOMER COMMENTS.

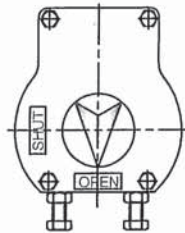
REFERENCE DOC FOR QUANTITY AND LOCATION OF VALVES:

1. 4410-001-131-FO-PVM-L-002, P&ID FOR LDO SYSTEM
2. 4410-001-131-FO-PVM-P-002, PIPING LAYOUT IN & AROUND PUMP HOUSE AND ROAD TANKER UNLOADING AREA
3. 4410-001-131-FO-PVM-P-003, PIPING LAYOUT IN & AROUND STORAGE TANK FARM AREA

**2**  
WORKING PRESSURE: 5.0 KG/CM2  
DESIGN PRESSURE: 7.5 KG/CM2  
WORKING TEMPERATURE: AMBIENT  
DESIGN TEMPERATURE: 50 DEG. C

DESIGN STD. : BS EN ISO 17292 (BS 5351)  
TESTING STD. : EN 12266 - 1(BS:6755 - 1)

RATING	150	
SIZE	200	
A	292	
B	760	
C	385	
Ø D	203	
Ø E	345	
Ø F	269.9	
T	29	
DRILLING	HOLES	8
	HOLEØ	22.2
	PCD	298.5
Approx. Wt.-kg.	135	



OPEN / CLOSE POSITION INDICATOR.

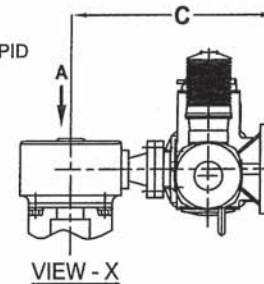
VIEW 'A'

Size x Class	Quantity	P.O Line No	Item No	W.O. Line No.	Service	TAG No.
200 x 150	*	1		--	-	IF-VL-VB-002113.1a

⚠ NTPC Doc.No.- 4410-001-131-FO-PVM-Y-005  
BHEL Doc.No.- PE-V0-405-166-A015  
PACKAGE :- FUEL OIL HANDLING SYSTEM (P-332)  
PROJECT : NORTH KARANPURA STPP

⚠ \* Quantity shall be as per approved PID and Respective piping layouts.

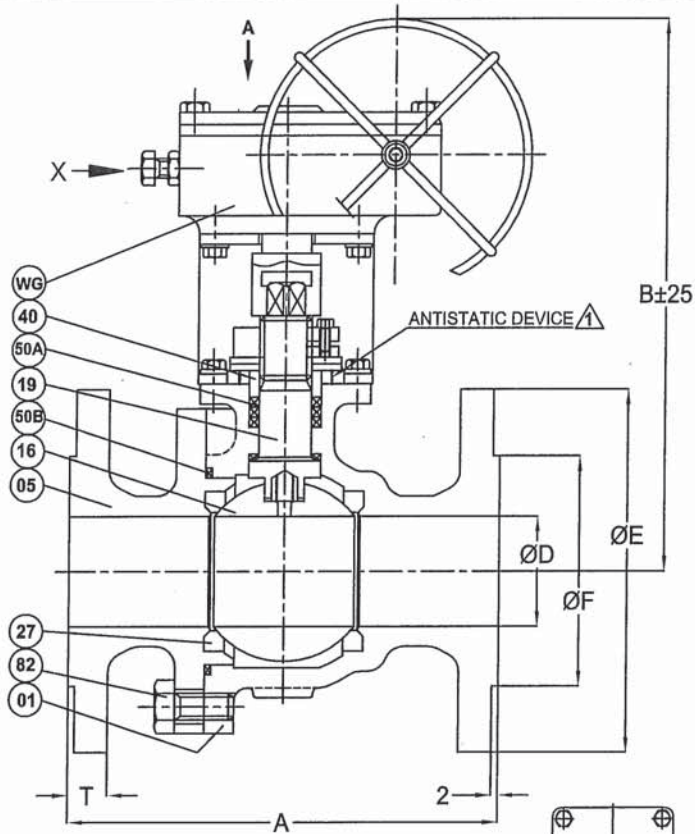
GEAR + ELECTRICAL ACTUATOR DETAILS	
GEAR ACTUATOR DETAILS	
MAKE	PAC
MODEL	PAC02E
ELECTRICAL ACTUATOR DETAILS	
MAKE	Auma
TYPE	E-PAC ( With Integral Starter ) (Flame proof)
MODEL	SACEx12F10E45
OPERATING TIME	13.5+5 Secs.
WORKING PRESSURE	20 Bar.
NUMBER OF TURNS	10



VIEW - X

TEST PRESSURE, bar		
RATING		150
HYD	SHELL	30
	SEAT	22
AIR	SEAT	6.9

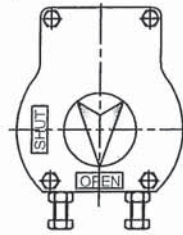
THIS IS A SYSTEM GENERATED DRAWING



PT.NO.	PART NAME	MATERIAL
01	BODY	ASTM A216 Gr. WCB
05	END PIECE	ASTM A216 Gr. WCB
16	BALL	ASTM A351 Gr. CF8M
19	STEM (ANTI BLOW OUT)	ASTM A276 TYPE 316
27	SEAT	PTFE
40	GLAND	SS 316
50A	STEM SEAL	GRAFOIL (FIRE SAFE)
50B	BODY SEAL	GRAFOIL (FIRE SAFE)
82	HEX.SCREW	A193 Gr. B7
WG	GEAR BOX HOUSING	CI-IS:210 Gr.FG220
	WORM WHEEL	DUCTILE IRON SGI 600/3
	WORM / WORM SHAFT	EN8

**NOTES :**

- 1) FACE TO FACE DIMENSION AS PER ASME B16.10. OTHER DIMENSIONS & WEIGHTS ARE INDICATIVE.
- 2) FLANGED END RAISED FACE - FINISH 125 TO 250 AARH DRILLED TO #150 - AS PER ASME B16.5
- 3) FIRE SAFE TEST AS PER API : 607 5th EDITION, WITH ANTISTATIC DEVICE (SS304)
- 4) VALVES ARE BI-DIRECTIONAL.
- 5) ALL DIMENSIONS ARE IN mm.
- 6) TESTING & INSPECTION SHALL BE AS PER APPROVED NTPC QAP.
- 7) LEAKAGE RATE - CLASS VI (TIGHT SHUTOFF) AS PER ANSI / FCI 70-2.



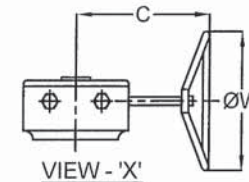
OPEN / CLOSE POSITION INDICATOR.

VIEW 'A'

\* Quantity shall be as per approved PID and Respective piping layouts.

Size x Class	Quantity	P.O Line Item No	W.O. Line No.	Service	TAG No.
150 x 150	*	04	--	--	IF-VL-VB-00025 3.1.d

GEAR BOX DETAILS	
MAKE	PAC
MODEL	PAC02
VALVE TORQUE	345 N-m
GEAR RATED TORQUE	882 N-m
GEAR RATIO	40:1
DESIGN STANDARD	AWWA C504



VIEW - 'X'

TEST PRESSURE, bar		
RATING		150
HYD	SHELL	30
	SEAT	22
AIR	SEAT	6.9

**WEIR** Weir Power & Industrial India  
(Weir BDK Valves - a unit of Weir India Pvt Ltd.)

DATE	09-02-2016	DRG. No.	F20004-90032687	REV
W.O. No	30007692	SHEET No.	6 of 6	
PRODUCT	FLOATING BALL VALVE			
	2 PIECE FULL BORE			
	FIRE SAFE - SOFT SEAT			
CUSTOMER	GEAR OPERATED			
	UNITECH MACHINES LIMITED.			
Order No.	P-332/B/15/00322 DT : 22/09/2015			
JOB/PROJECT	(3x660MW) NORTH KARANPURA ---NTPC PROJECT			

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**CUSTOMER COMMENTS.**

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 DESIGN TEMPERATURE: 50 DEG. C

DESIGN STD. : BS EN ISO 17292 (BS 5351)  
 TESTING STD. : EN 12266 - 1(BS:6755 - 1)

RATING	150	
SIZE	150	
A	267	
B	538	
C	230	
Ø D	152	
Ø E	280	
Ø F	215.9	
T	25.9	
Ø W	450	
DRILLING	HOLES	8
	HOLE Ø	22.2
	PCD	241.3
Approx. Wt.-kg.	72	

**PRICE SCHEDULE (UNPRICED) - VOLUME-III**

**PLEASE REFER**

**E-PROCUREMENT PORTAL <https://eprocurebhel.co.in>**

**PRICE SCHEDULE - VOLUME-III**

**PLEASE REFER**

**E-PROCUREMENT PORTAL <https://eprocurebhel.co.in>**

**PART-H:**  
**FORMS AND PROCEDURES**

**F-01**

**RTGS FORMAT**

**Form for getting payment through RTGS (Real Time Gross Settlement)**

01. NAME OF VENDOR:
02. ADDRESS:
03. VENDOR'S BANK A/C NAME:
04. VENDOR'S BANK A/C NO.:
05. NAME OF BANK:
06. NAME OF BRANCH:
07. BRANCH PH. NO.:
08. CITY:
09. IFSC CODE OF THE BRANCH:

THE CHARGES IF ANY FOR PAYMENT THROUGH RTGS MAY BE RECOVERED FROM THE BILL SUBMITTED BY US.

SIGNATURE OF AUTHORISED  
REPRESENTATIVE OF VENDOR WITH  
DATE & SEAL

CONFIRMATION BY BANKER WITH  
OFFICE SEAL

**Note: Incorrect information will create accounting complications and payment will be delayed.**



**F-02**

**VENDOR DETAILS**

1. **Name & address of the vendor/company:**
  
2. **PAN No. of the vendor/company (scan copy of PAN Card):**
  
3. **Contact Person for the vendor/company:**
  
4. **Mobile number & E-mail of the contact person:**
  
5. **VAT / TIN:**
  
5. **CST:**

SIGNATURE OF THE BIDDER WITH DATE & SEAL

**F-03****FORMAT FOR DETAILS OF BIDDER**

<b>NAME OF BIDDER</b>	
<b>FAX NO.</b>	
Registration Number*	
Name of Partners / Directors	
Bidder Type Indian/ Foreign*	
City*	
State*	
Country*	
Postal Code*	
PAN/TAN Number*	
Company's Establishment Year	
Company's Nature of Business*	
Company's Legal Status* {limited company/ undertaking/joint venture/partnership/other}	
Company Category* {micro unit as per MSME/small unit as per MSME/medium unit as per MSME/Ancillary unit/project affected person of this company/ssi/ other}	
Enter Company's Contact Person Details Title(Mr. / Mrs. / Ms. / Dr. / Shri)*	
Contact Name*	
Date Of Birth*	
Correspondence Email* (Correspondence Email ID can be same as your Login ID. All the mail correspondence will be sent only to the Correspondence Email ID.)	
Designation	
Phone*	
Mobile*	

SIGNATURE OF THE BIDDER WITH DATE &amp; SEAL