



Engineering **Data** **Management** **System**



INDEX

I. Section-1 Terms & Condition	4
01. Instructions	5
02. Scope of Tender	6
03. Pre-Bid Clarifications	7
04. Validity of Offer and Evaluation	7
05. Earnest Money Deposit(EMD)	8
06. Security Deposit (SD)	8
07. Intellectual Property Rights	9
08. Completion of Contract	10
09. Warrantee Period & Annual Maintenance Charges	11
10. Terms of Payment	11
11. Penalty Clause	12
12. Reverse Auction (RA)	12
13. Acceptance Criteria of complete solution	13
14. Settlement of Disputes and Arbitration	14
15. Applicable Laws and Jurisdiction of Courts	14
16. Qualifying Requirements	15
II. Section-2 Technical Specification	16
01. Intent of Specification	17
02. Objectives Of The Proposed	17
03. Flexibility And User Friendliness Of The System	17
04. Scope	17
05. Estimated Work Schedule	18
06. Suggested Software Programs/Package to be used	18
07. Computer Software & Hardware	19
08. Deliverables	19
09. Requirement	20
09.01. Electronic Vault	20
09.02. Project Information Capture	20
09.03. Drawing and Document Management	21
09.04. Project and task Monitoring (WBS)	23
09.05. Security and Licensing	23
09.06. Workflow & Release Process	24
09.07. Change Management	25
09.08. Integration with Oracle based system	26
09.09. Transmittal and Submittals management	26
09.10. Search	27
09.12. Knowledge Management	27
09.12. Reports	27
09.13. System Architecture	28
10. General System Requirement	29
11. Training	29
12. Documentation	30
13. Software AMC & Onsite Support	30
14. Other Technical Terms & Conditions	31
15. Documents to be Submitted along with the Offer	32
ANNEXURE-A Declaration	33
ANNEXURE-B Schedule of Price	34
ANNEXURE-C Third Party Non Disclosure Agreement	35
ANNEXURE-D Assumptions/Deviations	36
ANNEXURE-E Software Details	37
ANNEXURE-F Training Schedule	38
ANNEXURE-G Executed Major Order Details	39
ANNEXURE-H Executed Major Order Details on Integration	40
ANNEXURE-I Annual Turnover	41
ANNEXURE-J CV of Probable Project Team Members	42
ANNEXURE-K Acceptance Test Procedure (ATP) Sign off Document	43
ANNEXURE-L Solution Area's	44
ANNEXURE-M Case studies of similar EDMS application	45

[Handwritten signature]

[Handwritten signature]

[Handwritten signature]

[Handwritten mark]



BHARAT HEAVY ELECTRICALS LIMITED
BHEL JHANSI
Notice Inviting Tender (NIT)

Tender Notification No. : _____

Tender Due Date : _____

1. This is Notice Inviting Tender for tender notification No. _____ for the development and supply of required software for "Engineering Data Management System"
2. Bidders shall read carefully the enclosed documents that comprise this Tender:
 - Section I-: Terms and Conditions
 - Section II: Technical Specifications.
3. The offers shall be in accordance with Terms and Conditions and Technical Specifications enclosed. Deviations, if any, shall be clearly indicated. Bids not in conformity with the Terms and Conditions and Technical Specifications and/or are not in the prescribed format will not be considered and are liable to be rejected. Bids with deviations may be rejected.
4. The fact of submission of tender implies that the Bidder has actually inspected the site and examined all the requirements relating to execution of the contract.
5. The Bidders shall bear all costs associated with the preparation and submission of the bid. BHEL shall in no case be liable for these costs regardless of the conduct or outcome of the process.
6. The offers should be in two-part bid (i.e., Part-I: Techno-Commercial bid and Part-II: Price bid).
7. Sealed Tenders shall be addressed to the "Material Management Department, BHEL Khailar, Jhansi (UP), Pin:284120" and the envelope shall be super scribed with Tender Notification Number & stamp of the Bidder and the Tender due date.
8. The sealed tenders will be received by us at his office at _____ up to 13:15 hrs on the tender due date. The technical bid (i.e., Part-I of the offer) will be opened on _____ at 14:00 hrs in presence of the Bidders or their authorized representatives who choose to be present.
9. During the course of finalization of Tender and Award of Contract, the Bidder shall promptly and completely respond to all clarifications sought by the undersigned and attend any meeting on the date and time called by us with written intimation to the Bidder.
10. BHEL reserves the right to cancel this tender before finalization of contract without assigning any reason thereof.
11. It is preferred that offers are sent in sealed envelope. However, if the bidder choses to send the offer through e-mail, offers received through e-mail shall be considered only when such offers are complete in all respects. In cases of offers through e-mail, the offers shall be sent to "tenderbox.jhs@bhel.in", wherein the subject of the email should mention the enquiry number. Email offers sent to any other email id shall not be entertained. BHEL shall not take any responsibility if the offers are incomplete or if the enquiry number is not mentioned in the subject of the e-mail.



BHARAT HEAVY ELECTRICALS LIMITED

UNIT NAME: BHEL JHANSI

Tender Notification No.:

SECTION-I

TERMS & CONDITIONS



1. Instructions

1.1 TWO-PART BID:

1.1.1 The offer shall be submitted in a sealed envelope which would contain two separate sealed envelopes as (i) Technical Bid and (ii) Price Bid.

1.1.2 The Technical bid, in English, shall contain (i) separate sealed envelope; (ii) confirmation of compliance to all terms & conditions; (iii) technical offer in detail for the entire scope of work as given in the Technical Specification; (iv) Assumptions / Deviations in format as per Annexure-D and (v) Price schedule (without prices).

The technical proposal shall cover, but not be limited to, the following:

- a) Clear understanding of complete scope of work and deliverables with respect to product information and automation requirements given.
- b) Development methodology and all software programs / packages required to be used for the development of the software module.
- c) Proposed work schedule with duration so that total duration of the project does not exceed specified delivery period.
- d) Clear understanding of the working modalities. Bidder should indicate manpower proposed to be deployed at BHEL for this project.
- e) Assumptions / deviations with respect to the technical specs, if any, and expected technical inputs from BHEL team during the project execution.

1.1.3 The price bid shall consist of the Price Schedule format with prices filled in (see ANNEXURE-B). Bidder shall indicate prices for all the items indicated in the Price Schedule. In addition, the total price of the contract shall also be clearly indicated. All prices should be firm for the duration of the contract. All applicable duties and taxes shall be clearly indicated in the offer. The tariff rates as applicable on the date of bid shall be specified. Wording like "Extra as applicable", etc., will not be acceptable.

1.2 Each sealed envelope shall be super scribed with the type of bid (Technical or Price), Tender Notification number and Bidder's name, stamp & signature. Both these envelopes should be submitted through one covering letter in a sealed envelope super scribing the Tender Notification number and bidder's name, stamp & signature.

1.3 The sealed Bids shall be submitted on or before the time & date specified and shall be addressed to the official as mentioned in the Notice Inviting Tender. Tenders received after the due date and time of opening are liable to be rejected.

1.4 Bidder shall fill up all the schedules and furnish all the required information as per the instructions given in various sections of the tender specification. Each and every page of the Tender Specification shall be SIGNED, STAMPED AND SUBMITTED ALONGWITH THE OFFER by the Bidder in token of complete acceptance thereof. The information furnished shall be complete in itself.

1.5 The Bidder shall quote the PRICES in English Language and international numerals. These rates shall be entered in figures as well as in words. In case of difference in rates between words and figures, the prices entered in words will be treated as valid for the purpose of the tender. In case of difference in (i) sum of the items and (ii) total indicated, the former will be considered. The metric system of units shall be used.



- 1.6 All entries in the tender shall either be typed or be written in ink. Erasures and overwriting are not permitted and may render such tenders liable to rejection. The Bidder shall duly attest all cancellations and insertions.
- 1.7 Conditional and unsigned tenders, tenders containing absurd or unworkable rates and amounts, tenders which are incomplete or otherwise considered defective and tenders not in accordance with the tender conditions, specifications, etc., are liable to be rejected.
- 1.8 Tenders shall be signed by persons duly authorized / empowered to do so. Certified copies of such authority and relevant documents shall be submitted along with the tenders. The Declaration (see ANNEXURE-A) shall be signed by the duly authorized person.
- 1.9 In the event of the Bidder merging with or getting acquired by another company, all obligations under the contract shall automatically get transferred to the acquiring company till the end of the period, including the warranty period and AMC, if opted for.
- 1.10 Bidder shall intimate BHEL if there is any change in their legal status, within fifteen days of such change. BHEL shall review the implications and take necessary action.
- 1.11 Bidders are required to comply with the provisions of all existing Acts, Statutes, Rules, Notifications and Regulations of both Central and State governments as the case may be. If necessary, Bidders shall get themselves duly registered in compliance with such Acts, Statutes, Rules, etc., before Price Bid opening.
- 1.12 Should a Bidder or, in the case of a Firm or Company, its Partner(s) / major Shareholder(s)/ Director(s) have relation(s) employed in BHEL, the authority inviting tender shall be informed of the fact along with the offer. Otherwise, BHEL may, at its sole discretion, reject the tender or cancel the contract at any stage of the contract.
- 1.13 Any attempt by a Bidder to exert influence on BHEL during the process of bid evaluation or award of the contract, would make their bid liable for rejection.

2. Scope of Tender

- 2.1. This tender is for design, development, supply, installation, testing and demonstration of the software modules as per the requirements identified by BHEL in the enclosed Technical Specification (Section-II).
- 2.2. The bidder shall identify areas in which their solutions conform to open standards and areas that are proprietary in nature. Justification about proprietary components in terms of functionality, up-gradability and performance shall be given.
- 2.3. All the necessary software (including licenses for development packages) required to carry out the work shall be arranged by the Bidder.
- 2.4. All expenses towards logistics and incidentals, including lodging, boarding, travel, etc., incurred in connection with the execution of this contract shall be borne by the Bidder and shall not be reimbursed by BHEL. However, accommodation at BHEL Jhansi Guesthouse can be provided based on availability on chargeable basis. In case of availability in BHEL guesthouse, it is recommended to stay in BHEL guesthouse to reduce travel time from Jhansi to BHEL.
- 2.5. The Bidder shall post an adequate number of qualified and experienced personnel to execute the contract. The list of personnel proposed to be deployed shall be submitted as part of the technical proposal, by name and title. Annexure-J



- 2.6. Except as BHEL may otherwise agree, no changes shall be made in the key manpower. If, for any reason beyond the reasonable control of the Bidder, it becomes necessary to replace any of the key manpower, the bidder shall provide as a replacement a person of equivalent or better qualifications and experience, subject to approval of BHEL.
- 2.7. In case of Technical clarification bidder may contact directly to Engineering Division, Head(TRE), BHEL Khailar, Jhansi(UP) Pin:284129, AGM(TRE) email: nnraman@bhel.in or DGM.(TRE) email: aksoni@bhel.in

3. Pre-Bid Clarifications

- 3.1 The Bidder shall closely peruse all the clauses, specifications and drawings indicated in the Tender Documents before submission of their bid. Any clarifications on the tender specifications can be sought from the authority inviting the tender, before the last date of submission of the tender.

4. Validity of Offer and Evaluation

- 4.1. The offer shall be kept open for acceptance for a period of 180 days from the date of opening of Technical Bid. Only the Technical Bid will be opened on the due date mentioned in the enquiry.
- 4.2. Bidders shall not be permitted to make changes in their Technical or Price bids after bid submission, unless asked to do so by BHEL. Unsolicited clarifications are liable to be rejected.
- 4.3. In case of minor changes in scope and/ or technical specifications or commercial terms, having price implications, technically accepted Bidders shall be asked to submit their revised Price Bids in line with the revised scope and terms & conditions.
- 4.4. Bidder shall comply entire Qualifying mandatory requirement. [Refer Clause 16]. Bids not confirming the above are liable to be rejected.
- 4.5. Price Bids of only the qualified and technically acceptable Bidders will be opened.
- 4.6. Prices should be quoted on FOR Jhansi basis inclusive Packing & Forwarding charges, Freight charges etc.
- 4.7. In case BHEL calls for negotiations, such negotiations shall not amount to cancellation or withdrawal of the original offer, which shall be binding on the Bidder. All expenses for attending such negotiations are to be borne by the Bidder.
- 4.8. The total price for entire scope of work, together with taxes and duties (but excluding ITC, if applicable), AMC for 6 years after completion of warranty period and onsite support for 1 year after deployment (during warranty period) and six years after warranty period will be considered for bid evaluation purposes (i.e. the Net cost to BHEL on FOR Jhansi basis). [Net Cost refer to sum of Serial no 1 to 6 of Annexure- B Schedule of Prices]. However, order will be placed without AMC and Onsite support charges. But AMC price should be valid for 6 years after warranty period and onsite support price should be valid for 7 years after deployment.
- 4.9. The entire work covered in this Tender shall be entrusted to a single Bidder. The successful Bidder is not permitted to off load part or whole of the work to a sub vendor, without the prior written consent of BHEL.
- 4.10. The successful Bidder shall attend the office of the Official as mentioned in the Notice Inviting Tender on the date fixed by the Official through a written intimation. The Bidder shall forthwith



accept award of the contract and complete the execution of the agreement by signing all documents connected therewith.

5. Earnest Money Deposit (EMD):

EMD OF Rs. 1,75,000.00 is to be paid by tenderers for securing fulfilment of any obligations in terms of the NIT

5.1. Modes of deposit

The EMD may be accepted only in the following forms:

- a) Electronic Fund Transfer credited in BHEL account (before tender opening)
Account details: Account no.: 10670828866, IFSC code: SBIN0003807).
Receipt reference to be enclosed. Further, an email of Fund remitted in BHEL account is to be sent to IDs shreyanshjain@bhel.in, aksoni@bhel.in, jitendra.yadav@bhel.in & pawan.agrawal@bhel.in
- b) Banker's cheque/ Pay order/ Demand draft, in favour of BHEL, Payable at Jhansi (along with offer)
- c) Forfeiture of EMD

5.2. EMD by the Tenderer will be forfeited as per NIT conditions, if

- a) After opening the tender and within the offer validity period, the tenderer revokes his tender or makes any modification in his tender which is not acceptable to BHEL.
- b) The Contractor fails to deposit the required Security deposit or commence the work within the period as per LOI/ Contract.
- c) EMD by the tenderer shall be withheld in case any action on the tenderer is envisaged under the provisions of extant "Guidelines on Suspension of business dealings with suppliers/ contractors" and forfeited/ released based on the action as determined under these guidelines.
- d) EMD given by all unsuccessful tenderers shall be refunded normally within fifteen days of award of work.

5.3. EMD shall not carry any interest.

5.4. EMD of successful tenderer will be retained as part of Security Deposit.

6. Security Deposit (SD):

6.1. Security Deposit means the security provided by the Contractor towards fulfilment of any obligations in terms of the provisions of the contract. SD shall be forfeited if the contract is abandoned by the bidder or unsatisfactory performance by bidder during the contract period (Contract period shall be seven years from the date of acceptance of software till completion of AMC period). Security deposit shall be valid for whole period of contract.

6.2. The total amount of Security Deposit will be 5% of the contract value. EMD of the successful tenderer shall be converted and adjusted towards the required amount of Security Deposit.

6.3. Modes of deposit:



The balance amount to make up the required Security Deposit of 5% of the contract value may be accepted in the following forms:

- a) Local cheques of Scheduled Banks (subject to realization)/ Pay Order/ Demand Draft/ Electronic Fund Transfer in favour of BHEL
- b) Bank Guarantee from Scheduled Banks/ Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of BHEL
- c) Fixed Deposit Receipt issued by Scheduled Banks/ Public Financial Institutions as defined in the Companies Act (FDR should be in the name of the Contractor, a/c BHEL)
- d) Securities available from Indian Post offices such as National Savings Certificates,
- e) Kisan Vikas Patras etc. (held in the name of Contractor furnishing the security and duly endorsed/ hypothecated/ pledged, as applicable, in favour of BHEL)

(Note: BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith)

- 6.4. SD shall not bear any interest in any manner whatsoever.
- 6.5. 100% of security deposit amount shall be submitted before commencement of work.
- 6.6. Security Deposit shall be released to the Contractor upon fulfilment of contractual obligations as per terms of the contract.
- 6.7. The Security Deposit shall not carry any interest.

7. Intellectual Property Rights

- 7.1. Bidder shall treat all information that is generated in connection with this assignment as absolutely confidential. All information, analysis, reports and recommendations, both in the form of hard copy or on electronic media, will be the property of BHEL and is prohibited from being used by the Bidder for any purpose other than this assignment. All Bidders are required to sign non-disclosure agreement with BHEL. On award of the contract, all employees, associates and affiliates of the Bidder assigned to and working on the development work are required to sign BHEL's '3rd Party Non-Disclosure Agreement' as given in Annexure-C.
- 7.2. Bidder shall indemnify BHEL against any copyright or legal liabilities that may arise in use of the developed software or the methodology / models / techniques used by the Bidder in development / implementation of the software module.
- 7.3. In the event that the services provided by Bidder in connection with software programmes and related documentation supplied to BHEL in relation to which rights may be owned by third parties, Bidder shall warrant and represent that:
 - a) BHEL has all necessary permissions, express or otherwise, to enable the software programmes and documentation to be copied or otherwise used by Bidder during the course of the services without infringing any third party copyright, patent or trade secret;



- b) In providing the services Bidder shall not be infringing upon the intellectual property rights of any third parties;
- c) The disclosures or use of the software programmes and documentation during the course of services shall not involve the breach of any confidential or contractual relationship.

7.4. All source code as well as other deliverables generated under this work shall become the sole property of BHEL.

8. Completion of Contract

The Bidder shall meet the acceptance criteria within a delivery period of **06 Months** from the date of award of contract in strict adherence to the time schedule prescribed in Clause 13 of Section - I

- 8.1. The Bidder shall use all reasonable care and skill in providing the services and shall be responsible for the quality of workmanship and accuracy of the deliverables to the satisfaction of BHEL. Bidder shall implement in-house quality control and shall carry out 100% quality checks prior to submitting to BHEL for acceptance.
- 8.2. The Contract shall be considered successfully completed upon acceptance by the BHEL Project Leader of deliverables as specified in the contract. The BHEL Project Leader shall effect the sign-off along with the Bidder for closing the contract.
- 8.3. Bidder shall adhere to the material movement and security procedures of BHEL.
- 8.4. Bidder shall not utilize services of BHEL employees for carrying out contract jobs in any manner whatsoever. In case of any breach of this condition, the contract shall be terminated forthwith without any prior notice, or assigning any reason at the sole discretion of BHEL.
- 8.5. The obligation stipulated in this specification can only be suspended in the case of any particular item of work, in the event of Force Majeure or as the result of an agreement between the parties. In the event of Force Majeure, neither of the parties may be considered in default of its obligations under the terms of this tender.

Force Majeure is hereby defined as any cause which is beyond the control of the Bidder or BHEL, as the case may be, which they could not foresee or with a reasonable amount of diligence could not have foreseen and which substantially affect the performance of the contract, such as:

- Natural phenomena including, but not limited to, floods, droughts, earthquakes and epidemics;
- Acts of any government, domestic or foreign, including, but not limited to, war, declared or undeclared, priorities, quarantines, embargoes; provided either party shall within fifteen (15) days from the occurrence of such a cause notify the other in writing of such cause.

- 8.6. BHEL has the right to terminate the contract after due notice and forfeit the Security Deposit and recover the loss sustained in getting the balance work done through other agencies in addition to liquidated damages/ penalty in the event of:



- d) Bidder's continued poor progress.
- e) Withdrawal from or abandonment of the work before completion of the work.
- f) Corrupt act of the bidder.
- g) Insolvency of the bidder.
- h) Persistent disregard of the instructions of BHEL.
- i) Assignment, transfer, subletting of the contract work without BHEL's written permission.
- j) Non-fulfillment of any contractual obligations.

9. Warrantee Period & Annual Maintenance Charges

- 9.1 The developed software shall have warranty for trouble-free operation for a period of twelve (12) months **after the acceptance of complete solution**. In case of any defects observed during the operation of this module during this period, the Bidder shall render their services without any additional cost for repair / rectification of the same within the time as prescribed by BHEL.
- 9.2 Bidder shall quote AMC charges valid for a period of six (6) years after the 12 months' warrantee period in the price schedule. The AMC shall commence after expiry of warrantee period.
- 9.3 Bidder shall have one-point contact for any supply, support/services required in Software solution during the stage of development, warrantee and AMC.

10. Terms of Payment

- 10.1 No Advance Payments will be made.
- 10.2 Payment shall be made after certification issued by BHEL Project Leader regarding the satisfactory completion of scope of work as per the payment schedule enumerated hereunder.
 - a) 100% of Software, implementation, Training and data migration charges (Sr no 1 to 3 of schedule price) after final acceptance.
 - b) Yearly Onsite Support charges for 1 year after deployment (during warranty period) and Six years after Warrantee Period (Sr no 5 of schedule price): 100% Payment after completion of 12 months in subsequent years.
 - c) Yearly AMC Charges for Six years after Warrantee Period (Sr no 6 of schedule price): Quarterly payment after completion of each quarter.
- 10.3 Bidder shall submit the invoices to BHEL Project Leader within ten (10) days from the date of successful completion of milestones.
- 10.4 After final acceptance, Bidder shall be required to furnish security deposit equal to 10% of the contract value, to be valid for the duration of the warrantee period (12 months). The final payment will be released only after submission of the security deposit.
- 10.5 Payments to Bidders will be subject to deduction of taxes at source as per prevailing laws.



- 10.6 Bidders shall continue to have full liability to meet the complete requirements and rectify any defects till the completion of the contract, notwithstanding any part payments that may have been made for any part of the work.
- 10.7 GST shall be payable extra as applicable.
- 10.8 In case the government (Centre/ State) imposes any new taxes/ duties on the output services/ work after the award of contract, the same shall be reimbursed by BHEL at actuals. All necessary documents as required by BHEL shall have to be provided by the Bidder. However, in the event of delay in work execution attributable to the Bidder, the new taxes/ duties imposed during the delay period shall not be reimbursed to the Bidder. BHEL's decision in this regard shall be final.
- 10.9 In case any taxes/ levies are imposed after submission of Bidder's offer, the Bidder shall convey its impact on the price, duly substantiated by documentary evidence, before opening the Price Bid. Claim for any such impact after opening the Price Bid will not be considered by BHEL for reimbursement of tax or reassessment of offer.

11. Penalty Clause

- 11.1 Penalty @ 0.5% per week or part thereof, subject to a maximum of 10% of the order value, shall be levied for the late delivery/ execution of the job as per schedule of delivery mentioned in clause no. 13 of section - I.

11.2 DEDUCTION FOR DOWNTIME

Downtime calculation for the services

Vendor shall be responsible for running the system at the uptime of 98% per month or higher. The deduction for downtime will be as mentioned below.

Deduction from payments will be made for non-availability of Computer system during the entire Warrantee or AMC period. In case downtime is during Warrantee period than amount will be deducted from security deposit.

Downtime calculation for Computer system

In case of non availability of the system due to software, the vendor will be informed immediately and the vendor is expected to set right the system within 24Hours. After 24 hours of reporting of problem, if the system is not set right then for every 4 hours' deduction of one day of AMC charge will be made.

Downtime calculation will be applicable for non-availability of Computer system services arising because of malfunctioning of Software supplied.

12. Reverse Auction (RA)

"BHEL reserves the right to go for Reverse Auction (guidelines available on www.bhel.com) instead of opening the sealed envelope price Bids, submitted by the Bidder. This will be decided after Techno-Commercial Evaluation. Bidders to give their acceptance for participation in the RA. Non-acceptance to participate in the RA may result in the non-consideration of their bids, in case BHEL decides to go for RA

Those bidders who have given their acceptance to participate in the RA will have to



necessarily submit 'Process compliance form' (to the designated service provider) as well as 'Online sealed bid' in reverse auction. Non-submission of 'Process compliance form' 'Online sealed bid' by the agreed bidder(s) will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines for suspension of business dealings with suppliers/contractors (as available on www.bhel.com).

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

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

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

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

13. Acceptance Criteria / Delivery Schedule of complete solution:

Time is the essence of the contract. Therefore following timelines are expected from the bidder to be followed strictly.

- 13.1. Supply of Software licenses within **2 weeks** of Award of Contract.
- 13.2. Successful installation, implementation and integration with BHEL oracle system of customized software within **12 weeks** of Award of Contract.
- 13.3. Testing of the solution within **16 weeks** of Award of Contract.
- 13.4. Drawing data migration within **20 weeks** of Award of Contract.
- 13.5. Training of software within **2 weeks** after Testing of Solution.
- 13.6. **3 Work Orders** as Test cases to demonstrate following functionalities as mentioned in technical specification within **24 weeks** of Award of Contract.

- Drawing Storage and access control
- Integration with BHEL BOM database
- Drawing approval and revision control
- Printing of Documents
- Generation of Reports
- Searching of Documents



14. Settlement of Disputes & Arbitration:

- 14.1. All questions/interpretations regarding subject matter of the Contract shall be decided by the Purchaser on the request of the Seller and the decision of the Purchaser shall be final.
- 14.2. In case of dispute, steps shall be taken by the parties to the contract to settle the same through negotiations.
- 14.3. In case, dispute is not settled in negotiations, it shall be referred to Conciliator appointed by the competent authority of the Purchaser.
- 14.4. In case dispute is not settled in conciliation proceedings, the same shall be referred to Arbitration as per Corporate Guidelines of the Purchaser and the arbitration proceeding shall be conducted as per provisions of the Arbitration and Conciliation Act, 1996 read with Corporate guideline as amended from time to time.
- 14.5. The Seller shall continue to perform the contract, pending settlement of dispute(s).

15. Applicable Laws and Jurisdiction of Courts:

Indian laws both substantive and procedural, for the time being in force, including modifications thereto, shall govern the Contract including Arbitration proceedings. The competent Courts at Jhansi in the State of Uttar Pradesh, India shall have sole jurisdiction.



16. Qualifying Requirements:

Sl.No.	Requirements	Evaluation Criteria	Compliance Yes/No
1	The bidder must be the owner of the Software Package (Attach documentary proof) or Authorized Partner for selling and implementation of Software Package used for the Solution. In case the bidder is a Partner of the Software Manufacturer, a Certificate from the Software Manufacturer clearly stating the relationship with the Partner and authorization to the Partner to quote for this specific tender is to be furnished.	Mandatory	
2	Bidder should have experience of successful execution of similar projects in India during last 3 years from tender due date, of at least two projects each costing 20 Lakhs and above, for software and implementation. (Attach documentary proof)	Mandatory	
3	Bidder should have an Average Annual turnover of Rs. 24 Lakhs (Twenty-Four Lakhs only) during the last 3 years ending 31st march of 2018 and Annual Report (Balance sheet and Profit & loss account) of last 3 years to be submitted in support of this. In case the Balance Sheet of the last financial year is not yet audited, a certificate from a CA can be enclosed with declaration of annual turnover.	Mandatory	
4	The bidder should have successfully executed similar projects for any PSU / State Govt. / Central Govt. body during last 10 years. (Attach documentary proof)	Mandatory	



BHARAT HEAVY ELECTRICALS LIMITED

UNIT NAME: BHEL JHANSI

Tender Notification No.:

Dated:

SECTION-II

TECHNICAL SPECIFICATION



1. INTENT OF SPECIFICATION

BHEL Jhansi is looking for complete automation of Engineering Data Management (EDM), Change Management with customizable Work flow. The software should be capable of being handled by ITI trained people and can be integrated with ERP in future.

2. OBJECTIVES OF THE PROPOSED "ENGINEERING DATA MANAGEMENT SYSTEM"

- 2.1. Eliminate data loss
- 2.2. Manage Data Security
- 2.3. Increase Productivity
- 2.4. Reduce errors by Automating processes and driving conformity on corporate standards
- 2.5. Improve Quality Standards
- 2.6. Greater Team Work & Control
- 2.7. Efficient Review
- 2.8. Increase design reuse
- 2.9. Improve Planning
- 2.10. Reduce repeated errors
- 2.11. Improve Services
- 2.12. Eliminate manual handoffs by workflow automation
- 2.13. Effective revision and version control
- 2.14. Audit trail for maintaining accountability
- 2.15. Change Management
- 2.16. Search & Reuse

3. FLEXIBILITY AND USER FRIENDLINESS OF THE SYSTEM

System should be user friendly so that it can be easily used by ITI trained people at shop floor.
For further assistance, following things are also required:

- 3.1. Help buttons
- 3.2. Pop up messages, warnings
- 3.3. Proper training

4. SCOPE:

- 4.1. To supply a software package for Automation of Drawing and Data Management, Change Management and Engineering Processes etc.
- 4.2. Installation of application software in 2 servers that are in hardware cluster mode (so that in case of failure of one server another server will be active).
- 4.3. Configuration of application tables in existing BHEL Jhansi database
- 4.4. Testing of the customized software at each stage.
- 4.5. Implementation / Handholding of the customized software.
- 4.6. Methodology for Uploading Scanned Drawings.



- 4.7. Migration of Drawing database.
- 4.8. Training and user manual.
- 4.9. Single person onsite support for 1 year after deployment (during warranty period) and subsequent 6 years after warranty period.
Bidder may include anything else required for the development of & adding value to the package.

Note: - Software Application Development work may be done onsite so that BHEL may do intermediate reviews.

5. ESTIMATED WORK SCHEDULE

- 5.1. System Design and Project Plan
- 5.2. Development of software program including configuration, graphic user interfaces, database, reference libraries, and interfaces to other software like Oracle, MS Office as required.
- 5.3. Installation of developed software module.
- 5.4. Periodic testing of development with participation of BHEL team
- 5.5. Preparation of System Documentation and User Manuals
- 5.6. Implementation
- 5.7. Training to BHEL users and system administrator
- 5.8. Final acceptance testing of installed system by BHEL

Estimated Total duration of project including implementation – six months

6. SUGGESTED SOFTWARE PROGRAMS / PACKAGES TO BE USED

Software	-	Product Data Management Software
Data bases	-	RDBMS
Front end Display	-	Web Browser
Operating System Client	-	Windows 10 (64-bit version)



7. COMPUTER SOFTWARE AND HARDWARE

The server on which the bidder has to deploy the EDMS application has following specifications:

Sr No	Parameter/Feature	Detail Configuration
1	Processor	2 'Nos, of Intel* Xeon E5-2650 v2 or latest at 2.5GHzs or higher and each processor with SPEC CPU Rate 2006 (base) of 260 or higher (60% of SPEC Int Rate base2006 plus 40% of SPEC fp Rate base2006 scores-tested with 128GB RAM) with 15MB Cacher or higher.
2	HDD	6x 300GB 10k or higher SAS hot-plug HDD or better. Disk bays capacity for 8 SAS hot pluggable SAS drives or greater .Should support PCIe SSD-RAID Controller with 512MB BBW cache and should support RAID 0,1,1+0,5 Up to 8 HDDs
3	LAN card	2 Nos of separate 10/100/1000 Ethernet Cards each with 2 ports (with at least 1 card on board)
4	OS compatibility	Red Hat Linux Advanced Server latest version (with server virtualization capability), MS Window 2012 server (with server virtualization capability)

- 7.1. Before quoting the bid, bidder may visit BHEL Jhansi to understand the requirement related to integration with BHEL IT systems and RDBMS.
- 7.2. The developed module shall be installed on available servers and its satisfactory operation shall be demonstrated.
- 7.3. All BHEL Jhansi IT systems (Servers, PC and Printers) are connected through 1Gbps Network.

8. DELIVERABLES

- 8.1. Application Software Licenses
- 8.2. CDs with Source Code – 5 Copies
- 8.3. User manuals (Soft Copy) – 5 Copies
- 8.4. User manuals (Hard Copy) – 10 Copies

Note: (All deliverables need to be handed over to Project Incharge of BHEL upon successful installation to start the lease rentals.)



9. REQUIREMENT:

A Web Based Engineering Data Management System (EDMS) should hold master drawings / documents in an 'electronic vault', where its integrity can be assured and all access and changes to it monitored, controlled and recorded. The documents can be of specific projects / development projects and can be in the form of standards, customer technical specification, correspondence, Mails, Minutes of meetings, Project specification etc. Software should also be able to automate the Engineering Process via customizable workflow. It should capture the Project information (like project details, customer detail, vendor details, project team etc. and should create Work Break Down Structure.

The software must provide for access/control of the drawings/ documents across WAN networks working under TCP/IP. The software should be very user friendly and should be able to operate smoothly by all the working groups (engineers, draftsman).

9.1. Electronic Vault

- 9.1.1. The server component of the software should constitute a central vault that will be used to store drawings/ documents.\
- 9.1.2. All drawings/ documents should be stored at a single location (Vault), which is accessible to users across the network.
- 9.1.3. The backend database where the drawings / documents will be stored should be on Network based RDBMS like Oracle, MS SQL Server and should have integration to existing Oracle database in BHEL Jhansi.
- 9.1.4. The software should store data in their native formats, without any conversions to avoid translation errors. The formats which the software can handle should at least include the following
 - 11.1 AutoCAD 2010 onwards and Inventor formats
 - 11.2 Siemens NX 10& SolidWorks formats (including latest versions)
 - 11.3 Scanned or digitized images (vector as well as raster images)
 - 11.4 Microsoft Office formats (Excel, Word, Access, etc)
- 9.1.5. The software must track related drawings / documents (such as external references, OLE links and maintain links across revisions. This relationship should be maintained during check-in, check-out and release of drawings / documents.
- 9.1.6. Bhel Jhansi is having around 1 lakh drawing in dwg and pdf formats. The application software should be able to handle the above mention volume of data and migrate from existing system.

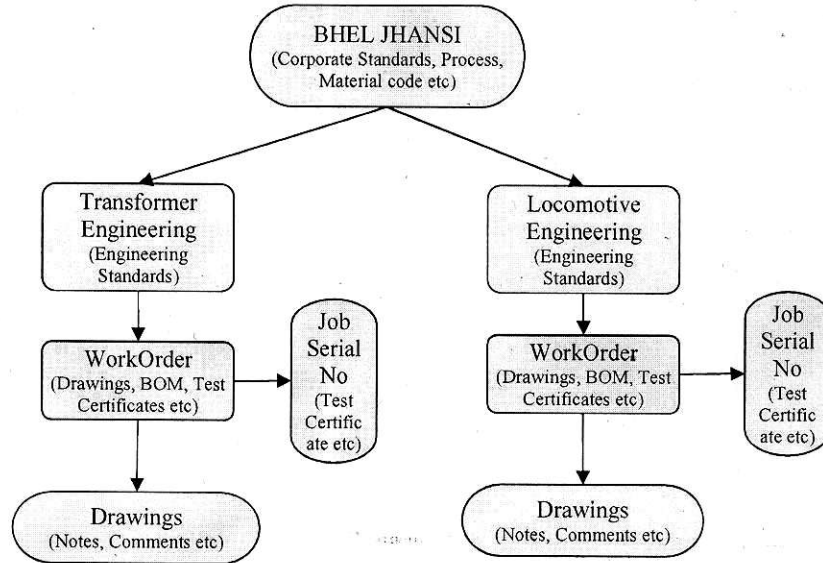
9.2. Project Information Capture

- 9.2.1. The system would capture all data related to a project such as Project details, broad technical specification, Client details, Vendor details, contact information and project team details.
- 9.2.2. System should capture man hr rates, site details specific to project.
- 9.2.3. System should capture project specific Minutes of the meeting review boards.
- 9.2.4. System should attach all related document such as customer proposals, schedules, site plans etc.



9.3. Drawing and Document Management

- 9.3.1. The software should be Web based. No need to install in client PCs. It should use standard web browser for all types of users.
- 9.3.2. The software should be able to view the stored drawings / documents in any client without having the software loaded of these drawings / documents in the client.
- 9.3.3. Five stages of storage of Drawing and Document is required as shown in fig below.



- 9.3.4. Drawing Instructions / associated documents will be attached to Part Number as a document, drawing or sketch.
- 9.3.5. System should define document release sequence for a part.
- 9.3.6. Drawing can be AutoCAD, DWF or Scanned PDF files.
- 9.3.7. Automatic no generation for other documents (like Electrical Specification, Test Certificate etc)
- 9.3.8. A Drawing may have more than one sheet (e.g. two separate drawing files having same drawing no distinguish by sheet "1 of 2" & "sheet 2 of 2"). It should also move in a workflow as a single entity.
- 9.3.9. Only Authentic AutoCAD file should be able to upload in the Vault. **Drawing made in education AutoCAD version should not be uploaded in the vault.**
- 9.3.10. During uploading of the drawing/document the system should manage the external references (X-Ref)/External Files.
- 9.3.11. System should be able to generate user defined title blocks for the company and also flexibility required to specify for project/customer specific title blocks.
- 9.3.12. In case of new AutoCAD drawings, title block format depending upon the drawing size should come in the drawing, the metadata (Drawing description, Workorder no, Product Rating etc) of that drawing should be asked by the system and should be linked with the drawing and should also appear in drawing Title Block. It should also update during



Revision. In case of Old AutoCAD Drawings and Scanned Drawings, metadata should be linked to the drawing only and not required to come in Title Block.

- 9.3.13. Updation of Title block with electronic signatures when routed through workflow.
- 9.3.14. The drawing / document should be retrievable for modification by authorized users only.
- 9.3.15. Only one client should be able to modify one drawing at a time.
- 9.3.16. Simultaneous viewing of any drawing / document from a number of clients on the network should be possible.
- 9.3.17. The software should maintain information as to who has checked out the drawing and should also update the revision history and versions, upon check in of the revised document. The old document shall not be available for checkout document by any other authorized user until the Revised Version has been checked in. The document shall, however, be available for viewing, with a customizable warning that document is under revision.
- 9.3.18. The revision trail should be 00, 01, 02 or 00A, 00B, 01A etc. For each revision, revision comments should be asked from the user (who is modifying the drawing) and should be visible along with the revised drawing.
- 9.3.19. In case of Old Drawing, the software should allow first time submission with Revision Number other than 00.
- 9.3.20. In each drawing, allocation of Workflow for checking and approval within department or other department (like tooling etc) should be done by the authorized users.
- 9.3.21. It should be possible to print/plot the drawings/ documents from any station, to any network printer/plotter.
 - (a) For each print, print job no should be generated by the system.
 - (b) The log of the printed drawings/ documents should be maintained. The log should contain Job Number, Department Name, Drawing Number, Revision Number, Number of prints etc.
 - (c) Whenever a print of a drawing is taken that is having a status of Pending Approval or is under Revision, a watermark stating "Drawing Not Approved" or "Drawing Under Revision" must appear on the printed drawing.
 - (d) In case of Final Approved Drawing, "Drawing is approved and should have print seal, no signature is required" should come in a corner of the print.
- 9.3.22. Selective Copying Out (Depending upon Date / Product Structure) of the released drawings / documents along with the profile data to predefined database in Original / PDF / DWF format, should be possible through authorized user. The name of the copied out drawing should contain Drawing Number, Revision Number, Sheet Number, Variant Number and Department name.
- 9.3.23. **The number of custom properties that can be attached to a drawing /document should not be less than 50.** The user should be able to search the drawings/ documents on any of these properties.
- 9.3.24. Access rights of the finally approved (released) drawing and Change Advice Request Form should be set for viewing for all concerned users for the purpose of revision control.
- 9.3.25. The system should have the facility for notification, tracking and alert mechanisms and ability for electronic approval of documents & advancing them to the next stage.
- 9.3.26. It should be possible to associate a workflow template with a particular document type, so that documents of the same type follow the same workflow process.
- 9.3.27. The system should enforce strict access control procedures where other users cannot edit documents being edited by one user.



- 9.3.28. The system should create and maintain revision history and issue dates automatically upon document release, and is automatically updated for tracking purposes.
- 9.3.29. The system should have Strong integration with CAD packages for extraction of product structure, item attributes and other information.
- 9.3.30. The system should attach action points with responsibility and scheduled date.
- 9.3.31. System to support traversing of CAD structure (**Where Used**).
- 9.3.32. System should define standard ISO templates and distribution list for a document type.
- 9.3.33. Facility to handle and track sub contracted drawings.

9.4. Project and Task Monitoring

- 9.4.1. System should create the master Work Break Down Structure for the complete project.
- 9.4.2. System should create a Work Break Down Structure master based on project types. The Design and development Plan for a project can also be created from the master.
- 9.4.3. Facility to identify drawing/document types as In-house, Outsourced and Vendor supplied.
- 9.4.4. Facility to import / export the Work Breakdown Structure to MS Project / Excel / Primavera.
- 9.4.5. System should link the task in Work Breakdown Structure either to the creation of drawing/document or to activities.
- 9.4.6. Automatic updation of Actual Start date and Actual End date of Work breakdown structure when the drawing/document is routed through the user defined workflow.
- 9.4.7. Automatic updation of percentage of completion for a task as and when the stages in the workflow are completed.
- 9.4.8. Revision of the Work breakdown structure and its release with the automatic increment of issue level. The history to be maintained and facility to compare the revisions.
- 9.4.9. Facility to set escalation or notification based on a) Completion of a task b) Delay of a task c) No of days before Scheduled completion date d) No of days before Scheduled Start date e) Actual Engineering time spent exceeding budgeted duration or reaching defined % of the budgeted time.
- 9.4.10. Facility to set reminder in periodic intervals
- 9.4.11. System should provide TO DO List to user for pending task

9.5. Security & Licensing

- 9.5.1. The software should provide multi-tier security such as at document level, folder level, user level, group level etc. It should be possible to attach a digital scanned signature to a file for electronic approval of the document.
- 9.5.2. Levels of security – minimum Seven levels as specified below:

- (a) View permissions
- (b) Print Permissions
- (c) Check-in and check-out permissions
- (d) Owner / Approval Permissions
- (e) Archiving permissions
- (f) Super-user permissions
- (g) Downloading



- 9.5.3. The group leader should be able to change the security of the drawings/ documents in a group.
- 9.5.4. The administrator should be able to view the information of all the logged in users.
- 9.5.5. EDMS system should have provision to generate License usage reports
- 9.5.6. EDMS system should generate project specific or global basis audit reports like user based, object based etc.
- 9.5.7. EDMS system should have provision of
 - (h) Trouble shooting and issue resolution
 - (i) Periodic testing and health check up
 - (j) Background system monitoring

9.6. Workflow & Release Process:

- 9.6.1. System should be able to define user-defined workflow graphically to all type of documents (like AutoCAD drawing, scanned drawing, pdf, Office document etc) and user defined checklist, multilevel escalation, notification and rights to user in that stage.
- 9.6.2. Facility to create serial and parallel stages and to define approval methodology (one or all).
- 9.6.3. Facility to define default user for each stage.
- 9.6.4. It should be possible to bypass the workflow stages and system to keep track of the same.
- 9.6.5. Workflow Process should be available for approving the drawings / documents by concerned agencies before release.
- 9.6.6. It should be possible to associate a workflow template with a particular object type, so that objects of the same type follow the same workflow process. For example, a review document could have an associated workflow requiring a review process. Such object-linked processes would begin as soon as an object of the specified type is created. This association should be through the object's lifecycle.
- 9.6.7. EDMS system should allow process designers to create small processes and link them into larger processes. For example, it should be possible to create a "sign-off" process template and use it in multiple processes wherever a sign-off is required.
- 9.6.8. The Workflow Process Designer Tool should be available for easy designing of different Workflow processes.
- 9.6.9. The system should have the facility to initiate workflow of group of drawings in one go i.e. all the drawings of a group assembly will be sent by a single command. Also the one agency in a workflow should be able to route different drawings in this group to different other agencies (can be more than one for a particular drawing) depending upon the requirement.
- 9.6.10. Activities could be defined as collector activities for control of grouped drawings/ documents.
- 9.6.11. Authorized users should be able to represent the following process conditions in workflow:
 - (a) Conditional branching of the process based on complex logic
 - (b) Conditional jumps to later or earlier tasks in the process
 - (c) Merger of branches
 - (d) "Wait" conditions (wait while other process or task completes)
 - (e) "Loop" conditions (repeat until condition is met)
- 9.6.12. The vendor will provide templates (A0, A1, A2, A3 & A4) for new drawings. The templates in general will be drawing formats with title box in which attributes on the drawings will be linked to database fields.



- 9.6.13. When the drawing passes through different agencies their initials, department name and date should appear on the drawing at predefined locations.
- 9.6.14. The system should give the option of selecting a template to the user when he starts making a drawing depending upon the drawing size.
- 9.6.15. It must be possible to define maximum task durations with escalation procedures (for example, notifying a supervisor in case of escalation)
- 9.6.16. System should alert the user via Popup mail as soon as a drawing/document arrived in the workspace or any mail coming to the mailbox.
- 9.6.17. System should send notification mails to POP3 external mailing system.
- 9.6.18. The system must offer the ability to apply an electronic signature to lifecycle steps, such as the promotion of an object from one lifecycle state to the next.
- 9.6.19. The application of such an electronic signature must require the user to enter a password, which may be either the same as or different than the user's standard system password. If the password for applying a digital signature is different, the system must maintain it as an attribute, separate from the standard LDAP passwords.
- 9.6.20. The EDMS system should support configuration of processes common to BHEL organization and also workflows specific to Projects. EDMS system should support changes in workflow only for one project without affecting other projects.
- 9.6.21. The EDMS should support workflow assignment based on roles defined in project team. These roles should get automatically resolved based on users assigned to the role.
- 9.6.22. EDMS software should give flexibility to modify workflow templates at any point of time post implementation. This modification can be for site specific or project specific.
- 9.6.23. In case user is out of station, then he can delegate his activities for a limited period to any other user of having same kind of rights. If the user suddenly gets leave, then administrator should able to delegate his activities to any other user at any stage of the running project.

9.7. Change Management

- 9.7.1. Change Management. Modification in drawing is to be done by the request of user departments, within department or via change in customer requirement. This request with comments should be generated through system and should go to the approver of that drawing. The approver has the authority to accept the request and issue the change notice. Based on the change notice only the prepare person should able to change the drawing.
- 9.7.2. The EDMS system should support closed loop engineering change management process for document, drawings, beginning from "Initiation of Engineering change request" till 'Engineering change implementation" process in an automated way.
- 9.7.3. EDMS Change Management process must be a closed loop system automatically linking issue leading to a change request and finally tracking change implementation. The synchronization between various changes should be done automatically based on their status.
- 9.7.4. The system must include a template including workflow processes for a complete, change management process, including all three Change Administrator roles, the Change Review and Change Implementation Boards, and closed-loop processes for all change objects. This template must support both fast-track and full-track processes.
- 9.7.5. The EDMS system should provide a facility to track the changes/modifications made to a document, drawing and model and should provide compare and view facility as well a comparison report.
- 9.7.6. The EDMS system should support workflow alerts and notifications so that overdue tasks are visible which will help to remove bottlenecks and delays in extending the duration of change processes.



- 9.7.7. System should handle multiple change requests for a drawing.
- 9.7.8. Users are prompted the drawing effected due to the revision.
- 9.7.9. User should be able to create graphical markups on the document and these markups should be stored in the EDMS system throughout the document's lifecycle.
- 9.7.10. The EDMS system should allow searching any object in the system to provide graphical results representation including change processes.
- 9.7.11. EDMS system should show Change reports like showing project specific or across projects changes pending, under implementation, closed etc in graphical format
- 9.7.12. EDMS system should support automatic propagation of affected data for change from Problem Report creation to Engineering Change Request.
- 9.7.13. It should capture and maintain the remarks/comments provided by the user during the engineering change request, approval process and can be used for tracking purposes.

9.8. Integration with Existing Oracle based systems

- 9.8.1. The vendor has to provide seamless integration with BHEL Jhansi existing Electronic Bill of Materials (EBOM) system. The vendor shall provide all such tools needed to achieve this integration.
 - (a) The vendor has to study the EBOM system & do the integration with EDMS system.
 - (b) The tables applicable for EBOM system should be linked with the EDMS system i.e., EDMS system needs to be configured with existing BHEL Jhansi Oracle Database and successful installation and commissioning is to be done on the available BHEL Jhansi servers which will be provided by **DTG Dept.**
 - (c) The bidder must assign a **Project Manager** who will be the single point of contact during the entire project execution till EDMS system is successfully installed and tested. **DTG and Engineering Depts.** of BHEL Jhansi will associate their representatives during the entire project execution process with the Project Manager assigned by the bidder.
 - (d) The project sign-off certificate is necessary (Successful testing, implementation & commissioning document) to start the Annual AMC.

9.9. Transmittal and Submittals management:

- 9.9.1. Facility to release the drawing through a transmittal for different stages (Internal release, To Client, Client consultant, Released for Construction)
- 9.9.2. Automatic generation of transmittal number as per user defined logic.
- 9.9.3. Generation of transmittal format as followed in COMPANY with customer/vendor/consultant name, address, drawing information and purpose.
- 9.9.4. Facility to export the drawings/ documents as attachment to external mail.
- 9.9.5. Automatic updating of revision number for different release categories.
- 9.9.6. Automatic updating of Work breakdown structure during release of drawing/document attached to it.
- 9.9.7. Report on released drawings prints taken by users.
- 9.9.8. Facility to ensure manual archive along with electronic archive.
- 9.9.9. Print of transmittal as per COMPANY format.
- 9.9.10. Release parts through transmittal.



- 9.9.11. Facility to Bulk copy latest as Build files of completed project with database information for handover to customer after completion of project.

9.10. Search

- 9.10.1. The system shall be able to carry out complex multi-parameter searches against combinations of attributes and objects including relationships. Outputs of such searches will be displayed on the user interface or as hard copy or output to a file. It shall be possible to preview and print or export any data retrieved via the search capability.
- 9.10.2. The EDMS System shall allow administrators to save search queries and make it available for all users.
- 9.10.3. The system must allow users to save and recall searches so that complex queries that are executed on a regular basis need not be reformulated every time.
- 9.10.4. It should have the search facility for the common document area to allow the permitted users to obtain a list of drawings/ documents meeting specific criteria without having knowledge of complex query parameter. The common search criteria can be defined and saved. In case of MS office or html document, it should be able to search the data inside the document also.
- 9.10.5. The system must the entire user to search on custom attributes as well as Out of the box attributes.
- 9.10.6. The system should have Key word based (indexing of Meta data and content). The system should automatically index information.
- 9.10.7. A search should not return as its result objects to which the user does not have at least read access.

9.11. Knowledge Management:

- 9.11.1. Facility to store or import past problems, causes and solutions in a database and reference them to a part, project, tool or process from Excel sheet.
- 9.11.2. Facility to capture tacit knowledge from the Minutes of meetings and action items and store in database.
- 9.11.3. Facility to specify Project engineering details and search options to search the Project based on the engineering details.

9.12. Reports:

Following **Reports** in proper formats are required to be generated through the system

- 9.12.1. Size-wise and Department-wise number of drawings deposited and released on server between any two dates ()
- 9.12.2. Number of drawings submitted by an individual submitter and released by an individual approver between any two dates.
- 9.12.3. Department-wise list of pending status of drawings.
- 9.12.4. Department-wise / Section wise / Project wise list of change advice processed between any two dates.
- 9.12.5. Master list of drawings and documents.
- 9.12.6. Department-wise / Section wise list of drawings on server which are printed on a date or between any two dates.

Also monthly and yearly reports of prints generate.

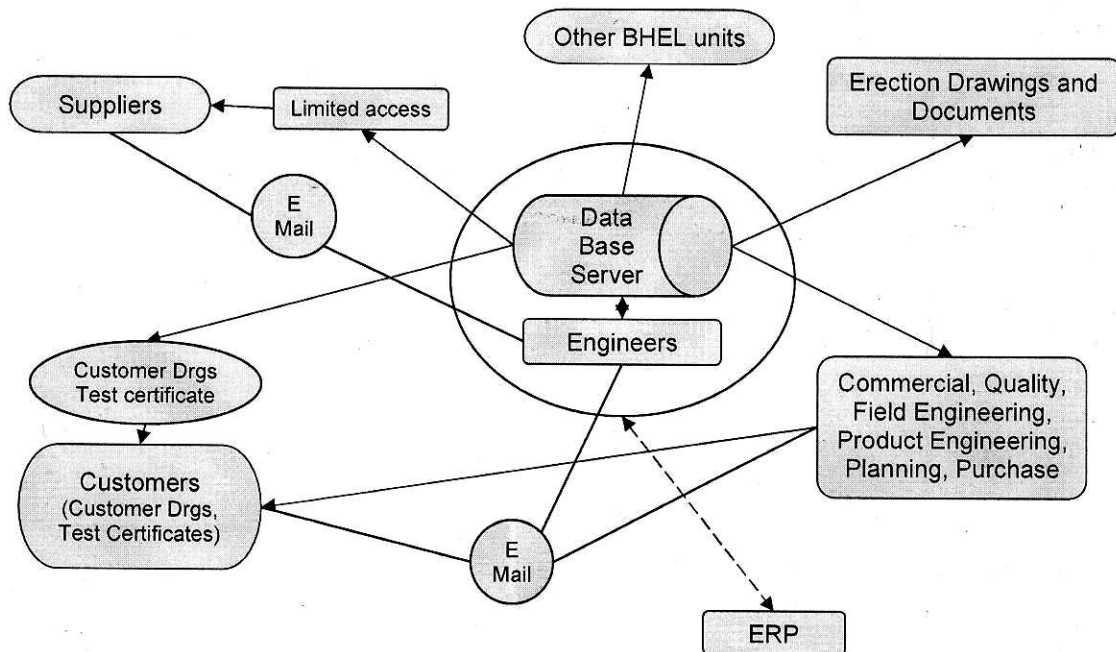


- 9.12.7. List of job orders pending under various categories.
- 9.12.8. The administrator should be able to see the complete workflow a document has passed through and where it is presently lying pending for action just by entering the document number.
- 9.12.9. Size-wise and department-wise number of released drawings copied out by administrator for archival purpose using Copy-Out utility.
- 9.12.10. Project status report.
- 9.12.11. Minutes of meeting for a Project / Document.
- 9.12.12. **Expediting query report.**

9.13. System Architecture

- 9.13.1. The EDMS software must support Web-based security protocols such as HTTPS/HTTP.
- 9.13.2. The system should make use of standard, well-understood Web technologies such as: J2EE and Java Beans, Java Server Pages, Java Message Service, HTML, HTTP, HTTPS, XML, XSL, SOAP, LDAP etc.
- 9.13.3. The EDMS Software shall be based on Web based architecture with no requirement of installing client module. The system must make use of standard, well-understood Web technologies however compatibility with MS IIS Server will be a desirable feature.
- 9.13.4. The EDMS web application shall be compatible with 64 bit operating system.
- 9.13.5. The EDMS Software shall support advanced secure file management support for storage and retrieval.
- 9.13.6. The EDMS Software shall store data in their native formats and should handle the following formats seamlessly: Siemens NX, Solid works, Inventor, AutoCAD, scanned images (jpg, bmp, gif, and tiff), neutral formats, and tight integration with Microsoft Office applications and .pdf files.
- 9.13.7. The backend server should store the related metadata information in RDBMS.
- 9.13.8. The data stored within The EDMS Software shall be available to users strictly in the secured environment based on roles, user ID and passwords.
- 9.13.9. A proper version control should be available with facility to maintain and control the version of data stored.
- 9.13.10. The EDMS Software shall support proper backup facility for storage / retrieval of data like online backup facility.
- 9.13.11. The EDMS Software shall have an organized data repository with administrative policies for access control, notification and indexing.
- 9.13.12. The EDMS Software shall provide customized queries for searching the data stored in the database.
- 9.13.13. The EDMS server application shall have necessary components for Authoring, Reviewing, workflow management, change management, configuration management, visualization etc (basic and advance).
- 9.13.14. All modules of EDMS should be provided by single and should be available in single database and should need user to login only once to access any modules based on his role. All data generated by these modules should be stored in single database. The User Interface should be web based for all modules of EDMS being proposed.
- 9.13.15. Vendor to furnish details on configuration capabilities of the EDMS software.

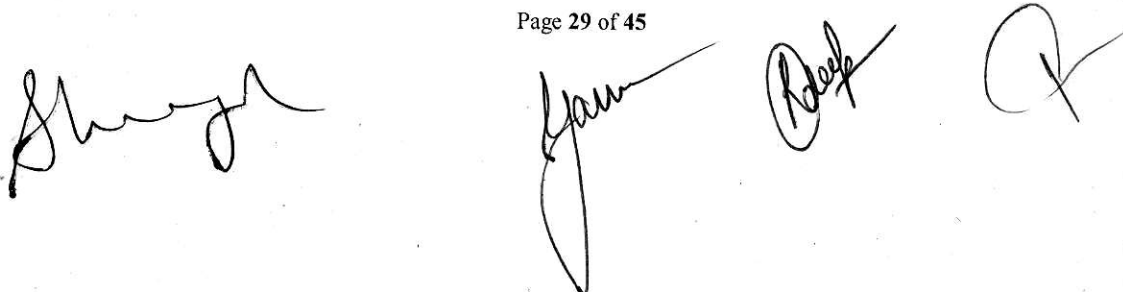
10. GENERAL SYSTEM REQUIREMENTS:



- 10.1. Complete solution: The vendor shall provide a complete software solution, which includes all software modules.
- 10.2. The system should be capable of implementation on enterprise wide basis. The software shall support multiple server environments (operating under different platform) without any degradation of performance. This shall allow document and database to be stored and accessed from different servers at different locations (physically separated).
- 10.3. The software must support AutoCAD 2010 onwards versions and other 3D CAD Software's like Siemens NX, IDEAS, Inventor, Solid Works. The general activities like check-in, check-out, approval, workflow etc. can be done directly through AutoCAD and 3D softwares. Process Scheduling and Monitoring along with report generation and online document status facility should be available in the system.
- 10.4. The new system should have integration with ERP.
- 10.5. Software should be able to generate the report in a form of graph or Bar/Pie chart for a project or for a product depending upon the queries.
- 10.6. The vendor will integrate with BHEL mailing system.

11. TRAINING:

- 11.1. Two tier training is envisaged
 - 11.1.1. Low end training to users, who will use the data management solution.
 - 11.1.2. Higher end training to selected engineers who will be apprised of the complete development process of solution. They will be given necessary inputs to guide users to resolve problems and to enable to make modification in software.





- 11.2. Vendor shall provide training on the solution offered in a phased manner to all the users, administrator, and the management personnel. The low end training shall be having minimum 4 batches of 25 persons for one week each. The high end training shall be for minimum 6 persons for two weeks.
- 11.3. Vendor shall provide training from the person having experience of at least 2 years.
- 11.4. Vendor need to formulate a training requirement in the structured manner for direct users and administrator.
- 11.5. On completion of the offered training, BHEL personnel should be in a position to use, administrator and modify on incremental requirements without the assistance of the Vendor or any other Product vendor.
- 11.6. Under software AMC, vendor shall provide the training for the updates / upgrades of the software supplied.
- 11.7. Vendor shall provide min 3 days refresher training program each year during AMC.
- 11.8. The vendor shall provide training at BHEL premises. The schedule for training shall be indicated by the vendor and finalized based on mutual agreement between the vendor and BHEL.
- 11.9. Complete training program including contents and course material etc. shall be approved by BHEL before commencement of training.
- 11.10. In case of unsatisfactory training of the trainer, BHEL has right to replace the trainer.
- 11.11. Vendor to provide required training with proper course kits that shall involve standard features of the implementation as well as customized features of the solution.
- 11.12. Vendor shall furnish Training schedule (e.g. Topics, No of Training Days, Trainer experience etc) in Technical Bid.

12. DOCUMENTATION:

- 12.1. Vendor to furnish the document as per Software Product Life Cycle which includes:
 - 12.1.1. Software Requirement Specification
 - 12.1.2. System Design
 - 12.1.3. Test Plan
 - 12.1.4. Test Records
 - 12.1.5. User Manual
 - 12.1.6. Maintenance Manual

13. SOFTWARE AMC AND ONSITE SUPPORT:

- 13.1. AMC shall include supply and installation of upgrades and updates and software support.
- 13.2. AMC shall include resolution of software problems being encountered by users.
- 13.3. AMC shall include maintenance of customization and migration to new versions/new products.
 - 13.3.1. Vendor shall give the services for maintaining compatibility with software updates/ upgrades.
 - 13.3.2. Removal of bugs etc shall be in the scope till the term of the resident engineer expires.
- 13.4. Information on updates and upgrades, product enhancements, etc. to be communicated timely to BHEL.



- 13.5. Refresher training programs for updates / upgrades of software being supplied shall fall under the scope of support.
- 13.6. The license of the EDMS system supplied by the bidder should be of perpetual type i.e., the overall EDMS system must work after the AMC expires.
- 13.7. Any software updates, patches updates including version change with respect to the OS, applications and DB should be regularly provided during the AMC period.
- 13.8. The price for AMC shall be fixed for 6 years after warranty period.
- 13.9. Single person onsite support for 1 year after the acceptance of solution (during warranty period) and subsequent 6 years after warranty period. The price for onsite support shall be fixed for 7 years.
- 13.10. The vendor shall provide comprehensive maintenance support on 24x7 hours basis with a trained resident engineer posted at BHEL Jhansi. The Engineer shall be engineering degree holder with minimum two-year experience of serving/troubleshooting Engineering Data Management System.

The resident engineer:

- Shall observe BHEL working hours and BHEL holidays. BHEL working hours are 7AM to 3:45PM, 6 days a week. However, the engineer shall always be available 24x7 hours on call basis in case of exigency.
- Maintenance during this period shall not be sub-contracted. The maintenance engineer posted at site shall be direct employees of the bidder. The maintenance engineer shall not be relieved before one year.
- Shall change the resident engineer only after seeking permission from BHEL and arranging for proper substitute.
- Shall have their own vehicles for movements and shall have mobile phones accessible from BHEL landline/mobile phones.
- Accommodation, boarding, transport and other logistics for the engineer is in vendor's scope.

14. OTHER TECHNICAL TERMS & CONDITIONS:

- 14.1. Bidder shall furnish the complete software details under the head "For development and "For deployment".
Development means what are software the modules that you would be using for developing the customized solution.
Deployment means what are the software licenses that would be ultimately installed in BHEL. (Please indicate the composition of any bundle and quantity also. Please give the names by which they are commercially known.)
- 14.2. The Bidder shall submit the proposed plan of execution and the methodology to execute the plan at the time of bid submission.
- 14.3. Successful bidder shall constitute a project implementation team headed by the project manager. This team will work with BHEL Engineering and DTG team to formulate the exhaustive project implementation plan for faster execution of the project.
- 14.4. The Successful Bidder shall assign a Project Manager with IT experience of around 5 years as the single point of contact for BHEL.
- 14.5. All EDMS modules required by BHEL should come from a single OEM.



- 14.6. Any customization done has to be documented and should only be taken up only after prior permission from BHEL representative.
- 14.7. Vendor to also make available customer references in India for EDMS application being recommended. BHEL can visit few of the reference customers as required during Technical evaluation.
- 14.8. Vendor to also share best practices available in the EDMS solution on various processes.
- 14.9. The bidder must implement and integrate the application software on the hardware supplied by BHEL.

15. DOCUMENTS TO BE SUBMITTED ALONG WITH THE OFFER: -

The following documents should be attached with the tender documents - Technical Bid forming part for submission in totality but not limited to:

- 15.1. Qualifying Requirement – Clause 14 of Terms and Condition
- 15.2. Declaration – Annexure A
- 15.3. Un-priced Price Bid Format with all details including applicable taxes – Annexure B
- 15.4. Third Party Non-Disclosure Agreement – Annexure C
- 15.5. Assumption/ Deviation – Annexure D
- 15.6. Software Details under the head “for Development” and “for Deployment” – Annexure E
- 15.7. Training schedule (e.g. Topics, No of Training Days, Trainer experience etc.) – Annexure F
- 15.8. Implementation plan/schedule for above scope.
- 15.9. Details of Major Executed Project - Annexure G
- 15.10. Executed major order details on integration of Engineering Data Management System with Database – Annexure H
- 15.11. Annual Turnover Chart (Audited annual accounts of last 3 years) – Annexure I
- 15.12. CV of the probable team undertaking this project. – Annexure J
- 15.13. Acceptance Test Procedure (ATP) Sign Off Document – Annexure K
- 15.14. Solution Area's – Annexure L
- 15.15. 3 case studies / customer satisfaction report of similar EDMS application along with customer references in India. It is preferable to have electrical industry case studies. – Annexure M
- 15.16. Customer certificate on implementation of the Data Management software integrated with ERP. – Annexure M



ANNEXURE-A

DECLARATION

Tender Enquiry No. due date

I/We, _____ hereby certify that, all the information and data furnished by me with regard to this Tender Notification No. _____ are true and complete to the best of my knowledge. I have gone through the specification, conditions and stipulations in detail and agree to comply with the requirements and intent of specification.

I/We, further certify that I am / we are the duly authorized representative(s) of the under mentioned tenderer and a valid power of attorney to this effect is also enclosed.

I/We, hereby declare that I/We shall treat the tender documents, drawings, specifications and other records connected with the work as secret/confidential and shall not communicate information / derived there from to any persons other than a person to whom I/We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety of the same.

Bidder's Name & Address Name & Signature
of the Bidder (Seal)



ANNEXURE B

SCHEDULE OF PRICES

Tender Enquiry No. due date

SR. NO.	DESCRIPTION	QTY	PRICE (Indian Rupees)	APPLICABLE TAX (%) (GST)	TOTAL PRICE	REMARKS
1.	Application Software Price					
2.	Software Development / Implementation Charges + Integration with BHEL oracle system + Drawing Data Migration					
3.	Training Charges					
4.	35 Concurrent users with 100 named users.					
4.1	25 Edit rights user					
4.2	10 Viewing rights user					
5.	Charges of onsite support for 1 year after acceptance of solution (during warranty period) and subsequent 6 years after warranty period.					
6.	Charges of AMC for 6 years after completion of 12 month warranty period					
7.	Total					
8.	Total (In words)					
Optional Items (not applicable for price bid evaluation)						
9.	Software charge of concurrent users (If there is an increase in users requirement)					
a	Edit rights user	1				
b	Viewing rights user	1				
c	Edit rights user	5				
d	Viewing rights user	5				

Note: Price for optional items shall be valid for at least one year after acceptance of complete solution.
Price for Sr.No - 9 is not applicable for price bid evaluation.

Bidder's Name & Address

Signature
&
Office Seal of the Bidder



ANNEXURE-C

THIRD PARTY NON-DISCLOSURE AGREEMENT

Tender Enquiry No. due date

I, _____, on behalf of the
(Name of Company), acknowledge that the information received or generated, directly or indirectly,
while working with BHEL on contract is confidential and that the nature of the business of the BHEL is
such that the following conditions are reasonable, and therefore:

I warrant and agree as follows:

I, or any other personnel employed or engaged by our company, agree not to disclose, directly or
indirectly, any information related to the BHEL. Without restricting the generality of the foregoing, it is
agreed that we will not disclose such information consisting but not necessarily limited to:

- Technical information: Methods, drawings, processes, formulae, compositions, systems, techniques,
inventions, computer programs/data/configuration and research projects.
- Business information: Customer lists, project schedules, pricing data, estimates, financial or
marketing data,

On conclusion of contract, I, or any other personnel employed or engaged by our company shall
return to BHEL all documents and property of BHEL, including but not necessarily limited to:
drawings, blueprints, reports, manuals, computer programs/data/configuration, and all other
materials and all copies thereof relating in any way to BHEL's business, or in any way obtained by me
during the course of contract. I further agree that I, or any others employed or engaged by our company
shall not retain copies, notes or abstracts of the foregoing.

This obligation of confidence shall continue after the conclusion of the contract also.

I acknowledge that the aforesaid restrictions are necessary and fundamental to the business of the BHEL,
and are reasonable given the nature of the business carried on by the BHEL. I agree that this
agreement shall be governed by and construed in accordance with the laws of country.

I enter into this agreement totally voluntarily, with full knowledge of its meaning, and without duress.

Dated at _____, this _____ day of _____, 20 ____.

NAME

SIGNATURE

DATE

SEAL OF COMPANY



ANNEXURE D

ASSUMPTIONS / DEVIATIONS

Tender Enquiry No. due date

Company Name:

Sheet No:

Contact no:

Date:

Sr No	Tender Specification Clause No & Page No	Remarks	Assumptions / Deviation



ANNEXURE E

'SOFTWARE DETAILS'

Tender Enquiry No. due date

S.No.	Software Module (used for Development & Deployment)	For Deployment (Qty)	For Development (Yes/No)	License Type (Named user / Concurrent)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Place:

Date:

Signature with seal



ANNEXURE F

'TRAINING SCHEDULE'

Tender Enquiry No. due date

S.No.	Training Schedule	Training Topics	Participants (Project Leader/ Developer/ Administrator/ User)	No of Days	Trainer Experience (No of Years)
1					
2					
3					
4					
5					
6					

Place:

Date:

Signature with seal



ANNEXURE G

EXECUTED MAJOR ORDER DETAILS

During last 3 years

(As per Qualifying Criteria)

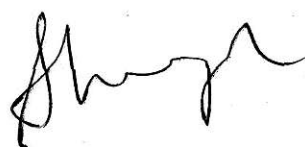
Tender Enquiry No. due date

S.No.	Organisation Name/ Contact Person details	Technical details of Type of Work Done	Project Cost (Rs)
1			
2			
3			

Place:

Date:

Signature with seal



ANNEXURE H

EXECUTED MAJOR ORDER DETAILS
ON INTEGRATION OF
ENGINEERING DATA MANAGEMENT SYSTEM
WITH DATABASE / ERP
During last 3 years

(As per Qualifying Criteria)

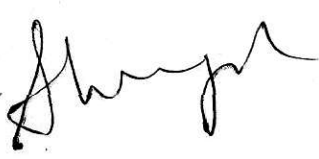
Tender Enquiry No. due date

S.No.	Organisation Name/ Contact Person Details	Technical details of Type of Work Done	Project Cost (Rs)
1			
2			
3			

Place:

Date:

Signature with seal



ANNEXURE I

'ANNUAL TURNOVER OF BIDDER'

Tender Enquiry No. due date

S.No.	Financial Year	Turnover (In Rs. Crores)
1	2015-2016	
2	2016-2017	
3	2017-2018	

Place:

Date:

Signature with seal



ANNEXURE J

'CV OF PROBABLE PROJECT TEAM MEMBERS'

Tender Enquiry No. due date

S.No.	NAME OF MEMBER	ROLE IN TEAM (Project Leader/ Team Member, Consultant)	Experience on doing similar projects (Years)	Qualification
1				
2				
3				
4				
5				
6				
7				

Place:

Date:

Signature with seal



Annexure K

Acceptance Test Procedure (ATP) Sign Off Document

Tender Enquiry No. due date

Serial no	Description	Compliance (Yes/No)	Vendor Remarks
1	Drawing Storage and access control		
2	Integration with BHEL oracle system		
3	Drawing approval and revision control		
4	Printing of Documents		
5	Generation of Reports		
6	Searching of Documents		
7	All deliverables as mentioned in CI 8.0		
8	End User Training as mentioned in CI 11.0		

Vendor Name :		Name :	
Organisation :		Organisation :	BHEL, Jhansi
Date :		Date :	
Signature :		Signature :	



ANNEXURE L

SOLUTION AREA'S:

Tender Enquiry No. due date

Vendor to specify (Yes/No) whether functionality expected in table below is available using following

S.No.	Solution	Available as OOTB using Configuration	Available as customisation (Programming)	Integrated using third party tools	Not Available
1	Electronic Vault	Mandatory			
2	Document Access & Retrieval	Mandatory			
3	Security & Licensing	Mandatory			
4	Workflow & Release Process	Mandatory			
6	Change Management	Mandatory			
7	Search	Mandatory			
8	Integration with existing ORACLE system	Mandatory			
9	Reports	Mandatory			
10	Project Details	Mandatory			
11	Where Used	Mandatory			

Place:

Date:

Signature with seal



ANNEXURE M

3 CASE STUDIES / CUSTOMER SATISFACTION
REPORT OF SIMILAR EDMS APPLICATION ALONG
WITH CUSTOMER REFERENCES

Tender Enquiry No. due date

Serial no	Case Study Title	Customer Reference	Compliance (Yes/No)	Vendor Remarks
1				
2				
3				

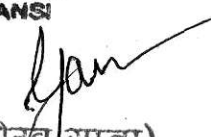
Place:

Date:


(प्रदीप तिवारी)
PRADEEP TEWARI
प्रबन्धक (डी.टी.जी.)
Manager (D.T.G.)
बी.एच.ई.एल., झांसी 45
B.H.E.L., JHANSI

Signature with seal


(SHREYANSH JAIN)
Sr. Engineer (Design)
Transformer Engineering
B.H.E.L., JHANSI


(गौरव गुप्ता)
(GAURAV GUPTA)
वरिष्ठ क्रय अधिकारी (साठ/प्र०)
Sr. Purchase Officer (MM)
बी.एच.ई.एल., झांसी
B.H.E.L., JHANSI


(पवन कुमार)
(PAWAN KUMAR)
उप प्रबन्धक (वित्त)
Dy. Manager (Finance)
बी.एच.ई.एल., झांसी
B.H.E.L., JHANSI