BHARAT HEAVY ELECTRICALS LIMITED
CORPORATE RESEARCH & DEVELOPMENT DIVISION
VIKASNAGAR, HYDERABAD - 500 093, INDIA
PHONES:23774494 (EXCHANGE)
DIRECT:23882104/23882204/
23778474/23776772
FAX : 91 40 23770698

ENQUIRY

RD:DP:MPX:F-04

To

-

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Pin

Email :

Attn. .

Enquiry No:	Enq Date:	Due Date:	Delivery By:
500890631	08-NOV-08	04-DEC-08	

PLEASE SUBMIT YOUR QUOTATION IN SEALED COVER SUPERSCRIBED WITH ENQUIRY NO, ENQUIRY DATE AND DUE DATE SUBJECT TO OUR TERMS AND CONDITIONS ENCLOSED, FOR THE FOLLOWING MATERIALS SO AS TO REACH US ON OR BEFORE THE DUE DATE BY 12 NOON. THE TENDERS WILL BE OPENED AT 2 PM ON THE SAME DAY

PLEASE GIVE REFERENCE OF ENQ NUMBER , ENQ .DATE AND DUE DATE IN ALL YOUR CORRESPONDENCE FOR PROMPT ACTION. IN CASE IF YOU ARE NOT MAKING THE OFFER PLEASE POST A REGRET LETTER AND RETURN THE DOCUMENTS.

SL NO	DESCRIPTION / SPECIFICATION	UNIT	QTY
1	CAD DESIGN TOOLS MESH GENERATOR CFD ANALYSIS SOFTWARE AS PER ENCLOSED SPECIFICATION NO. COESP-ES 11	SET	1

NOTE: PLEASE SUBMIT YOUR OFFER IN TWO PARTS AS PER GENERAL TERMS AND CONDITIONS OF ENQUIRY & CONTRACT FOR THE PURCHASE OF GOODS/SERVICES IN SEPARATE SEALED COVERS AS DETAILED BELOW:

1) FIRST COVER SHALL CONTAIN THE FOLLOWING:

A) TECHNICAL COMMERCIAL BID ALONG WITH COMPLIANCE STATEMENT, MENTIONING APPLICABLE DUTIES, TAXES ETC., AND DELIVERY TIME CLEARLY, (TERMS, CONDITIONS AND COMPLIANCE FORM ENCLOSED)

B) A COPY OF THE PRICE BID WITHOUT THE PRICES (UNPRICED PRICE BID)

2) SECOND COVER CONTAINING PRICE BID

3) IF THE PRICE BID IS FOUND TO BE DIFFERENT FROM THE UNPRICED PRICE BID IN ANY WAY, YOUR OFFER WILL BE REJECTED

4) GUARANTEE CERTIFICATE : REQUIRED

5) MANUFACTURER'S TEST CERTIFICATE : REQUIRED

6) ERECTION & COMMISSIONING : REQUIRED

IMPORTANT: TAXES & DUTIES QUOTED BY YOU WILL BE TAKEN FOR COST EVALUATION AND ORDER PLACEMENT AND NO CHANGE WILL BE ENTERTAINED LATER EXCEPT IN THE CASE OF CHANGES MADE BY THE GOVERNMENT. CHANGES IN TAXES AND DUTIES BECAUSE OF THE CHANGES IN TURNOVER ETC ALSO WILL BE TO THE SUPPLIER'S ACCOUNT. IN CASE NO TAX/DUTY IS INCLUDED, A SELF DECLARATION FOR THE EXEMPTION MAY BE ATTACHED ALONG WITH THE OFFER.

AS WE ARE ENGAGED IN R&D ACTIVITY "C" FORM WILL NOT BE ISSUED

PLEASE FILL UP THE ENCLOSED VENDOR REGISTRATION FORM AND SEND IT ALONG WITH YOUR QUOTATION. OTHERWISE YOUR QUOTATION WILL NOT BE CONSIDERED. (IGNORE THIS IF YOU HAVE ALREADY SUBMITTED THIS FORM)

Yours faithfully
for
BHARAT HEAVY ELECTRICALS LTD

KAKKAR PK
Sr Manager

Email: pkkakkar@bheirnd.co.in

	PURCHASE SPECIFICATION	Rev. 0
	CAD Tools, Meshing and CFD analysis Software	Dt. 6.10.2008
	Item Code No. ES -11	Specification No. COECP_ ES11

S.No.	Technical Specifications
1	**SCOPE OF WORK:** The specifications covers the detailed requirement for supply of Preprocessor and CFD solver and its successful installation, testing, commissioning & handing over to BHEL complete with all major software components of latest configurations with updates & patches for a trouble free operation of the software and will prepare suitable component configuration & specification for the required hardware backup.
1.1	**SCOPE OF SUPPLY** Vendor's scope of supply shall cover the following:
1.1.1	Preprocessor consisting of CAD Design tools and Mesh generator
1.1.2	CFD Solver
2.0	**TECHNICAL REQUIRMENTS FOR CFD PACKAGE** System should be capable of 3D modeling of the complete layout of all types of pumps and compressor applications/ studies pertaining to flow dynamics including but not limited to following capabilities: • Initial sizing & modeling tools for blades • CFD flow Simulation for a Complete compressor & Pump study and analysis. • Optimizing head looses, Cavitation, erosion through appropriate intervening structures. • CFD software should have socket level connection with ANSYS Mechanical and be able to transfer the pressure load dynamically to ANSYS Mechanical for two-way Fluid Structure Interaction calculations.
3.1	**General Capabilities of pre-processing tools** The preprocessors (design tool and the mesh generator) should have the following capabilities • Given the machine duty parameters and geometric constrains the tool should be able to provide the initial sizing of the blade • The tool should have the design mode options (eg. Angle /thickness mode- e.g. NACA thickness profile, spanwise distribution modes, pressure side/ suction side mode, transform between angle thickness mode and pressure side suction side mode) • Other options such as meridional profiles, curve options • Should have auxiliary view options for geometric diagnostics • Data import options: IGES, PROE, Point data format etc. • Data export option: 2D & 3D DXF, IGES, PROE etc. • Should support custom or proprietary file format, standard user IO format – Simple RTZT, machine file, S1/S2 stacking format etc. • Blade geometry should be able to export for common preprocessing tool for CFD meshing as well as ANSYS Mechanical meshing without data losses

3.2	**Mesh Editing**
	• Connectivity checks
	• Quality checks
	• Mesh smoothing
	• Mesh morphing
	• Mesh repair tools
	  ○ Topology checker
	  ○ Remesh elements
	  ○ Remesh bad elements
	  ○ Remesh holes in mesh
	  ○ Close holes from selecting

Prepared by	BR Manohar	Approved by	A Dasgupta
Turbomachinery Laboratory		COE for Compressors and Pumps	
Corporate R&D Division, BHEL, Vikasnagar, Hyderabad 500093			

- Edges
  - Stitch edges
  - Locally smooth elements
- Merge volume meshes
- Merge nodes
  - Interactive
  - Tolerance
- Mesh splitting
  - Split nodes
  - Split edges
  - Swap edges
  - Split elements
- Node movement
  - Interactive
  - Project-to-surface
  - Project-to-curve
  - Project-to-point
  - Unproject
- Offset mesh
- Transformation
- Convert mesh types
  - Tri to quad
  - Quad to tri
  - Tet to hex
  - Hex to tet
- Adjust mesh density
  - Refinement
  - Coarsening
- Renumber mesh
- Variable mesh thickness
- Re-orient mesh

Delete elements/nodes

Mesh Controls

- Default sizing
- Mesh scaling
- Part-based sizing controls
- Surface-based sizing controls
- Curve-based sizing controls
- Density regions
- Curvature-based refinement
  - Min size
  - Deviation
- Proximity-based refinement
- Ignore feature size
- Virtual topologies/dormant entities
- Surface mesh type settings
- Surface mesh method settings

- Thin/internal wall settings
- Inflation controls for sizing and
- collision handling
    - Swept meshing controls
    - Periodicity settings for translation/rotation

Automatic Meshing

- Surface meshing
    - Automatic approach
    - Patch-based
    - Patch independent
    - Autoblocker (orthogonal)
    - Delaunay
    - Shrink-wrap
- Tetra meshing
    - Automatic approach
    - Delaunay approach
    - Octree approach
    - Advancing front approach
- Prism (boundary layer) meshing
    - Extrusion before meshing
    - Extrusion into mesh
- Hybrid meshing
    - Hexa-core
    - Hexa-core with prisms
    - Hex-dominant
- Swept hex meshing
    - Automatic swept
    - User-defined source/target
    - Thin swept meshing
- Cartesian meshing
    - Body-fitted Cartesian (cut cells)
    - Body-fitted Cartesian (pure hex)

Staircase Cartesian

Solver support

- Export for: various solver

Blocked hex meshing

- Geometry-independent approach
- Parametrically linked to CAD
- Structured or unstructured grid output

  Mixed structured/swept/unstructured blocks

Geometry

- Solid modeling tools
- Surface-based modeling tools
- Geometry repair tools
- Faceted data editing tools
- Automatic mid-surfacing (constant/variable)
- Feature detection/removal
- Shrink-wrapping

	CAD Associativity • CATIA® V4 • CATIA® V5 • Unigraphics® NX™ • I-deas® NX™ • Pro/ENGINEER® • SolidWorks® • Solid Edge® **CAD Readers** • ACIS • DWG • IDI • IGES • Parasolid® • STEP • STL • VRML
3.3	**General Modeling Capabilities/ Configuration CFD Software** The CFD Solver should have the following capabilities: • 3D flows • Steady-state or transient flows • All speed regimes (low subsonic, transonic, supersonic, and hypersonic flows) laminar, and turbulent flows • Full range of turbulence models (K-epsilon, SST, RSM, DES, SAS, LES, etc.) with predictive transition model. • Multiphase model capability including Cavitation model with ability to handle highly cavitating flows • Multiple reference frame (MFR): Moving mesh capability for modeling flow around moving objects with capabilities for sector or full model calculations (both transient and steady state) • Volumetric sourse of mass, momentum, heat • Matieral property database (Newtonian, real fluid, in built IAPWS library) • Automated turbo pre & post processing capability
3.4	**Mesh Capabilities** • Unstructured mesh (tetrahedral, hexahedral, prism and pyramid elements), • Non-conformal (non-matching) mesh interfaces including fluid/solid interfaces. • Mesh smoothing, improvement & manipulation tools. • Hybrid mesh generation utilities and • Grid-to-grid solution interpolation capability
3.5	**Numerical Method** • Solution for Navier Stokes equation using pressure based coupled solver o Element based finite-volume method based on fully unstructured meshes o Adaptive time stepping option for implicit schemes

	○ Dynamic memory allocation ○ Non-iterative transient solution options • Pressure based Coupled solver ○ Coupled solution for all mean flow qualities ○ Decoupled (segregate) solution of turbulence and user-defined scalar transport equations ○ Coupled or segregated solution for VOF. ○ First-order and second-order implicit time discretization schemes
3.6	**Boundary Conditions** • Codes should have the following boundary conditions: ○ Inlets, outlets, Opening (bi-directional) flow ○ Walls ○ Symmetries ○ Periodic
3.7	**Material Properties** • Constant or variable fluid properties including temperature and composition dependence • Comprehensive database containing material properties for standard fluids and solids (user-modifiable), including: • Custom database creation for storing material properties
3.8	**User-Defined Functions** • Capability to modify solver to incorporate user physical models using, FORTRAN, expressions etc., • Interpreted (complied at runtime) or complied (complied in advance and linked at runtime) • Access to memory for user-defined functions • Specification of volumetric sources in continuity, momentum, energy, turbulence, specifies, mixture fraction, and volume fraction transport equations • Definition of custom physical properties • User-defined density for compressible liquid modeling • Customized boundary/initial conditions • User-defined scalar transport equations • Creation of custom post processing variables
3.9	**Parallel Processing** • Parallel processing on shared and distributed memory systems
3.10	**Post Processing** • Fully interactive graphical and text-based user interfaces • Grid checking (validity, quality, size) and reordering utilities • Flexible units specification (SI units, British units, custom/mixed units) in post process • Computation, reporting, and monitoring of surface/volume integrals and averages • Calculator utility for user-defined (custom) field functions • Calculation of gradients (vector and scalar) and derived quantities • Histogram/graphs of geometric and solution data • Vector plots for velocity field and user-defined vector fields • Contour plots on boundary surfaces and user-specified surfaces • Pathlines (streamlines) • XY-plots • Phase-specific post processing for multiphase flows

	• Graphical probing of data • Interactive sweeping of planes through the solution domain • Auutomated animation creation tools • On-screen mouse-based view manipulation (rotation, translation, magnification) • Extensive hardcopy options • Automated report generation option with turbo specific report generation option • Export to 3-D viewer option • Turbo specific Post processing
3.11	**Interface, Graphics and Reporting** • Summary reports of solver and physical model settings • Dynamic interrupt and restart of calculations & modification • Residual reporting and display • Reporting and monitoring minimum and maximum values • Reporting and monitoring of fluxes of mass, heat, and chemical species • Reporting and monitoring of forces and moments • Time-average and RMS statistics
3.12	**Export /Import** • Export of solution data dynamically to ANSYS Mechanical package • Data export in ASCII format (CSV and space-delimited) • Data import from the various existing standard formats like CGNS format etc etc.
3.13	**On-Line Help and Documentation** • Should be able to provide context sensitive help. • Complete on-line documentation • User guide, including underlying theories and applications • Tutorial guide, with model-specific examples • User-defined functions manual • Text user interface manual • Validation manual • Online access to the User service centre
3.14	**Supported Hardware** • All major UNIX workstations: Sun, SGI, HP, IBM, etc. • Microsoft windows XP on latest configured PCs, CCS • Fully functionality on all platforms.

PART B: GUARANTEED TECHNICAL PARTICULARS

1.0 Guaranteed Technical parameters (as described above)

S.No.	Description
1.	**PRE PROCESSING FEATURES**
1.1	Direct CAD connections to all major CAD packages & design modeler a native sketch based solid modeler which can be used to create solid model from scratch.
1.2	Unstructured mesh (triangle and quadrilateral elements for 2D; tetrahedral, hexahedral, prism and pyramid elements for 3D),
1.3	Non-conformal (non-matching) mesh interfaces including fluid/solid interfaces.
1.4	Initial sizing tool for the centrifugal pump
1.5	Design mode option for the blade geometry generation tool (Angle/Thickness mode, Pressure side/suction side mode, Transform between angle/thickness mode and pressure side/suction side mode)
1.6	Blade geometry generation tool should have meridional profile and curve option
1.7	• Bidirectional associativity to major CAD package (UG, ProE, Solid Works, etc.) • Wrapping technology • Unstructured tetra/hexa mesh capability • Structured multiblock hexa mesh capability • Conversion from Tet mesh to Hex Mesh • Multizone method for anisotropic mesh • Different algorithm to generate Tetra mesh (Octree algorithm, Delauney algorithm, Advace fronting method) • Hexa core with prism boundary • Prism layer splitting option • Top down approach to create hexa mesh and tetra mesh • Bottom up approach to create hexa mesh and tetra mesh • Blocking method to generate the hexa mesh • Hexa morphing • O Grid topology creation in Hexa mesh inside and outside of the block • C Grid topology creation in Hexa mesh inside and outside of the block • Y Grid topology creation in Hexa mesh inside and outside of the block • Scripting option to automate the process • Patch independent method for Tetra/Hexa mesh generation
2	**SOLVER NUMERICS**
2.1	DISCRETISATION – Element based finite volume method, fluxes assembled on mesh dual faces within each element, fundamentally supports 2nd order integration accuracy
2.2	Coupled solver for – Mass+Momentum equations, MASS + Momentum + VOF (for multiphase flow), decoupled energy equation
2.3	User programmable

3.	MODELS
3.1	Full range of turbulence models (SST, DES, LES, SAS) and predictive transition model
3.2	Multiphase models capability including Cavitation model with ability to handle highly cavitating flows
3.3	Multiple reference frame (MFR): Moving mesh capability for modeling flow around moving objects
3.4	Dynamic Mesh Modeling: Mesh motion and deformation automatically should be handled by solver, automatic refinement/coarsening capability and Compatible with all other physical models including multiphase
3.5	Automatic and Scalable wall functions
3.6	Cavitation Model
3.7	Automation-Application Specific wizard creation Capability, user expressions for most widgets and variable, dynamic visualization of expressions and profile conditions, Scripting of unified command language pre-solve post, loops, logic, macros

General conditions:

1. The vendors are requested to interact with the user group before submission of the quotation to make sure that the specifications are understood.
2. A demo package with the solved sample problems should be made available within a week from the date of opening of technical bid for 2 weeks in BHEL so as to evaluate the same.
3. Methods of validation of results from the offered software to be spelt out in the technical bid.
4. The packages should be warranteed and supported for a period of at least one year. During this period, the updates and support services for all the modules shall be provided by the vendor free of cost.
5. The amount of annual maintenance charges payable after the first year, for subsequent 5 years should be spelt out clearly and they would be binding during the tenure by an agreement.
6. The software shall be used on Local Area Network (LAN) and the license should be single user floating type. **The users shall also be able to use the modules independently**. Vendors to confirm the same in the technical bid.
7. Microsoft windows environment shall be used for the operating system. However vendor has to specify the OS requirements and the hardware configuration in the technical bid.
8. The hardware configuration shall be provided at the time of placement of order and the vendor is responsible for the installation and commissioning of the software in the hardware platform.
9. Multicore capability for enhanced process speed of the solver should be quoted separately as an option if applicable.
10. Vendors shall offer their quotation for the scope detailed above. However BHEL reserves the option of placing the order, for either the entire scope or part there of. Hence vendors are advised to offer quotation segment wise
11. The vendors are required to submit the quotation in two parts- Part A : Technical bid and Part-B: price Bid. Unpriced price bid to be enclosed to the technical bid.
12. Vendors to provide a technical compliance statement along with the technical bid.
13. Free training to working engineers for duration of 3 days. .
14. Software deliverable include host of User documentation and host of tutorials

BHARAT HEAVY ELECTRICALS LIMITED
CORPORATE R&D DIVISION, VIKAS NAGAR, HYDERABAD – 500 093, AP, India
Ph: 0091-40 – 23778474, FAX: 0091-40 – 23770698

RD:MPX:F-20 **General Terms and Conditions of Enquiry & Contract for the Purchase of Goods/ Services**

1. The quotation and any order resulting from this enquiry shall be governed by these General Terms and Conditions of enquiry and contract for the supply of goods and the supplier quoting against this enquiry shall, unless specifically stipulates any different terms or conditions, be deemed to have read and agreed to the same.
2. Sealed quotations in double cover with tenderer's distinctive seal, superscribing enquiry number, date and due date are to be submitted so as to reach on or before due date & time, addressed to **Additional General Manager(MM) and Head, Bharat Heavy Electricals Limited, Corporate Research & Development Division, Vikasnagar, Hyderabad, Andhra Pradesh, India – PIN–500 093, India.**
   In the case of **Two-part bid**, each inner cover shall clearly be labeled as a) **Technical & Commercial Bid** containing technical data/ drawings/ catalogues/ quality plans along with commercial terms and conditions & copy of the price bid with the price columns left blank (unpriced price bid), b) **Price bid** containing prices quotes. Installation and/or Commissioning charges shall be spelt out in absolutely lucid terms, taking into account total charges, rather than quoting vaguely, such as charges per man-day or charges per engineer per day etc. **If the price bid was found later to be different from the unpriced price bid in any way, the offer will be rejected summarily.**
3. **Tender/ Technical bid Opening**: Unless specified otherwise, tenders/ technical bids will be opened on appointed date and time as mentioned in the enquiry or as communicated changed date/time, if any, in the presence of such of those tenderers who may be present.
4. **Delayed/ Late Tender**: Tenders, which have been posted by registered post through the postal department in time before opening date but received after tender opening, shall be treated as regular tenders. Other tenders received after tender opening time shall be treated as late tenders and normally they may be rejected.
5. The Quotation should be free from overwriting and erasures. Corrections and additions, if any, must be attested. Supplier should indicate in the quotation dimensions (Size), weight, rate etc., in the metric system unless the enquiry calls for different unit.
6. **Validity of Quotation**: All quotations shall be kept open for acceptance for a period of ninety days from the date of opening of Tenders/ Technical bid and this shall be deemed to be an express condition of all quotations. The rate shall be quoted in both figures and in words.
7. In the case of Two-part bid, the vendor should furnish technical clarifications, if any, within stipulated time mentioned, failing which, it will be construed that the vendor is not interested in the tender and BHEL shall not consider the offer for further evaluation.
8. **Revision of Pricebid**: In the event of any bidder, after finalizing the technical specifications and scope of supply, opting to revise and submit their latest price bid, then BHEL reserves the right to open their original / previous price bid also while evaluating revised bid.
9. **Pricebid Opening**: Unless specified otherwise in the enquiry, the Price bids of technically qualified vendors shall be opened with prior intimation in the presence of such of those tenderers who may be present.
10. **Conformity to Specifications**: The material should be of the best quality and shall be conforming to our specification given in our enquiry. Unless otherwise agreed upon by BHEL, no payment shall be due by BHEL in respect of any sample. Offers without details of specifications/ applicable catalogues will not be considered and are liable to be rejected.
11. **Terms of Delivery**: All suppliers shall quote the lowest prices on ex-works and FOB/FCA basis. Foreign suppliers will also indicate their Indian agent's name and address with percentage of agency commission out of the quoted price, if any. Name and Address of the supplier's Bankers address should also be given. Indian suppliers for the indigenously manufactured/ imported stock shall quote on Ex-works /Free-on-Rail/Road /FOR-destination basis, indicating packing & forwarding charges, if any, separately.
12. **Taxes and Duties**: Unless specified otherwise in the enquiry, BHEL do not provide "C" or "D" Form as it is engaged in R&D. All Indian suppliers shall clearly mention current Sales Tax/ VAT, Excise Duty, and Service Tax etc, if any, payable in addition to the quoted price and indicate applicable rates/ percentage, item-wise clearly. It will be paid only if Registration Number under State(TIN)/ Central Sales Tax or Service Tax is specifically mentioned in the Bill/Invoice. Vendors without a Sales Tax/VAT registration and applicable Service Tax registration will not be considered.
13. **Insurance:** Insurance will be arranged by BHEL in case of Ex-Works as well as FOB basis supplies.
14. **Terms of Payment:** Full payment will be made within 30 days after receipt, inspection and acceptance of the material (and where involved, Erection and commissioning of the material/ equipment at BHEL/Destination) though Electronic Fund transfer (RTGS/NEFT/SEFT) with bank charges to the supplier's account. For foreign suppliers, the preferred payment term will be on Sight Draft basis and bank charges inside India will be to BHEL account and outside India will be to supplier's account.
15. Suppliers shall quote competitive price and best delivery for all the items mentioned in the enquiry. BHEL reserves the right to reject partial quotations and to place order on overall landed cost basis. Correct date of effecting supplies in the event of an order should be indicated in the offer. If the supplier's quoted terms are different from BHEL standard payment terms (Refer #14 above), interest @11% per annum (or as indicated in the enquiry) will be loaded to the quoted prices for difference of payment period.
16. **Packing**: The supplier shall be responsible for the goods being properly and adequately packed so as to prevent any loss, damage or deterioration during transit and indicate packing charges, if any, separately.
17. **Part/ Split Ordering**: BHEL reserves right to Order part of the item/ quantity of the enquiry and split the order among qualified vendors.
18. In case the goods enquired are on Rate Contract basis with any other unit of BHEL, such fact should be clearly indicated in the quotation giving full particulars of Rate Contract number, validity and price and also your willingness to comply with order if placed against such Rate Contract. A true copy of Rate contract signed by the supplier should be sent with the quotation.
19. **Inspection**: On receipt, the goods shall be subjected to inspection and also test, if necessary, and our decision regarding the acceptability of the goods shall be final and binding on the suppliers.
20. **Penalty for late delivery**: The time stipulated for delivery of goods shall be deemed to be the essence of the contract and delivery must be completed within the stipulated date/s. In the event of supplier's failure to supply the goods by the stipulated date/s , a penalty of ½% per week for the delayed no of weeks or part thereof for the undelivered portion of PO subject to a maximum of 10% of total order value shall be levied at the discretion of BHEL.
21. **Withdrawal from the Contract:** In case the supplier withdraws the quotation after its acceptance by BHEL or fails to supply the goods as per the terms and conditions of contract, or at any time repudiated the contract wholly or in part, BHEL shall be at liberty to cancel the Purchase Order and to recover from the supplier the extra cost and other loss, incidentals due to the breach of contract on the part of the supplier through risk purchase.
22. **Guarantee/ Warranty certificate and Manufacturer's Test report**: Invariably in all cases where it is so stipulated, the supplier should furnish Guarantee/ Warranty certificate valid for a period of 18 months from date of supply or 1 year from the date of receipt, acceptance and commissioning(or more, if provide by oem) whichever earlier and manufacturer's Test report along with the goods, failing which, BHEL shall have the right to reject the goods.
23. All ferrous/ non-ferrous items shall be colour coded as per bureau of Indian standards/ or IS standards/ BHEL Standards.
24. **Recovery of Dues**: BHEL shall recover any amount due from the supplier or any amount outstanding to the credit of the supplier with BHEL R&D unit or any other BHEL unit(s) and/or by legal action.
25. **Arbitration & Forum for Legal Proceedings**: All disputes arising in connection with indigenous/ foreign supplies shall be settled through arbitration held at Hyderabad, AP, India and arbitration shall be appointed by Arbitration Tribunal of the Federation of Andhra Pradesh Chambers of Commerce and Industry, Hyderabad, AP, India. The Courts at Secunderabad/ Hyderabad, AP, India shall have jurisdiction in respect of any suit or other legal proceeding arising from or relating to this contract

The rights and remedies of BHEL stated in these General terms and conditions shall be in addition and supplemental to its rights and remedies under law and custom or usage of trade or business and shall in no way be deemed to limit, curtail, supercede or derogate from its said rights and remedies.

RD:MPX:F-18

BHARAT HEAVY ELECTRICALS LIMITED
CORPORATE R&D Division
Vikasnagar, Hyderabad, Andhra Pradesh, India – 500093.,

IMPORTED

Suppliers' compliance statement to basic conditions of enquiry (to be submitted along with Technical & Commercial bid)

Enquiry number: **Enquiry dt:**

(In case Order to be placed on the Principal and foreign currency)

Condition	BHEL R& D's terms	Supplier's compliance (indicate Yes/No. if 'No', state terms desired)
1. Validity of offer	90 days from the tender opening date (or as per enquiry)	
2. Delivery requirements	FCA – Nearest International Airport (or as indicated in the enquiry)	
3. Warranty	Unless specifically mentioned in the enquiry, all supplied items to be provided with warrantee for one year (or more, if provided by the OEM) from the date of acceptance/ commissioning. In case of equipment involving erection and commissioning, warrantee shall be for 18 months from the date of dispatch or 12 months from the date of commissioning, whichever is earlier	
4. Terms of payment	Sight draft. All bank charges inside India will be to BHEL R&D account and outside India will be to the supplier's account. Documents through State Bank of India, Trade Finance Central processing Cell (TFCPC), Opp. Anand Theatre, Secunderabad, Andhra Pradesh, India-500003. SWIFT Code: SBININBB602, Phone: 91-40-27816795, FAX: 91-40-27720459	
5. Agency commission	Pl specify Indian agency commission charges, if any, in percentage of quotation. The same shall be paid to the agency in Indian Currency only.	
6. Erection/ Commission	As per enquiry	
7. Documentation	As per enquiry	
8. Insurance	BHEL will arrange Insurance based on intimation to our Insurance agency. Address of the agency will be mentioned in the Purchase Order.	
9. Penalty for late delivery	0.5% per week beyond the delivery date on undelivered portion subject to a maximum of 10% of the total order value.	

* BHEL R&D reserves the right to reject any offer due to non-compliance with the above conditions and/or non-receipt of this form in duly filled condition
* Any other elements of cost in addition to the above may please be specified in detail

(Signature and Stamp/ Seal of Vendor)

RD:MPX:F-17

BHARAT HEAVY ELECTRICALS LIMITED
CORPORATE R&D Division
Vikasnagar, Hyderabad – 500093, India.

Suppliers' compliance statement to basic conditions of enquiry (to be submitted along with Technical & Commercial bid)

Enquiry number:: **Enquiry date::**

(In case Order to be placed on Indian supplier in Indian currency)

Condition	BHEL R& D's terms	Supplier's compliance (indicate Yes/No. if 'No', state terms desired)
1) Validity of offer	Unless specifically mentioned in the enquiry, 90 days from the tender opening date	
2) Delivery requirements	Free delivery at our stores or FOR destination (or as indicated in the enquiry)	
3)Warranty	Unless specifically mentioned in the enquiry, all supplied items to be provided with warrantee for one year (or more, if provided by the OEM) from the date of acceptance/commissioning. In case of equipment involving erection and commissioning, warrantee shall be for 18 months from the date of despatch or 12 months from the date of commissioning, whichever is earlier	
4) Terms of payment	Unless specifically mentioned, full payment will be made within thirty days after receipt, inspection and acceptance of the material at BHEL R&D (and where involved, erection and commissioning of the material/equipment at BHEL/destination), by EFT/RTGS with bank charges, if any, to supplier's account.	
5) Taxes & Duties	Unless specifically mentioned in the enquiry, we do not provide 'C' or 'D' form. Supplier to specify rates of taxes and duties element wise and related percentages. Terms like "inclusive" or "extra" are not acceptable. Please mention "NIL" if taxes/ duties are exempted/ not applicable.	
6) Penalty for late delivery	0.5% per week beyond the delivery date on undelivered portion subject to a maximum of 10% of the total order value	

* BHEL R&D reserves the right to reject any offer due to non-compliance with the above conditions and/or non-receipt of this form in duly filled condition
* Any other elements of cost in addition to the above may please be specified in detail

(Signature and Stamp/Seal of Vendor)

RD:DP:MPX:F-14

BHARAT HEAVY ELECTRICALS LTD.
Corp. R&D DIVISION
VIKAS NAGAR,
HYDERABAD- 500 093 (INDIA)

SUPPLIER REGISTRATION FORM

(FOREIGN SUPPLIER)

ALL COLUMNS SHOULD BE PROPERLY FILLED IN THE SPACE PROVIDED FOR. WHEREVER IT IS NOT APPLICABLE PLEASE WRITE "NOT APPLICABLE". INCOMPLETE OR INCORRECT FORMS MAY NOT BE CONSIDERED.

1.0 GENERAL INFORMATION:

1.1 ….NAME OF COMPANY

1.2 ….DETAILS OF HEAD OFFICE:

ADDRESS :
TELEPHONE :
FAX :
.EMAIL :
.WEB SITE :

1.3 ….DETAILS OF FACTORY/WORKS:

ADDRESS :
TELEPHONE :
FAX :
.EMAIL :
.WEB SITE :

1.4 ….DETAILS OF MARKETING AGENT

ADDRESS :
TELEPHONE :
.FAX :
.EMAIL :
.WEB SITE :

1.5 CHIEF EXECUTIVE

1.6 CONTACT PERSON(S)
FOR PRODUCT OFFERED
NAME(S)
OFFICIAL CPACITY
ADDRESS:
TELEPHONE
FAX
E-MAIL

1.7 YEAR OF ESTABLISHMENT

1.8 PRODUCTION CAPACITY PER ANNUM

1.9 PARTICULARS OF PRODUCT INCLUDING
SPECIFICATION AND RANGE OFFERED
FOR REGISTRTION
(ATTACH BROUCHERS AND CATALOGUE)

1.10 NAME(S) OF BANKERS

1.11 BANKER'S CERTIFICATE

1.12 PORT OF LOADING

1.13 NEAREST AIRPORT

1.14 NAME OF THE INDIAN AGENT, IF ANY
WITH AUTHORISATION LETTER

2.0 FINANCIAL INFORMATION

2.1 …TOTAL CAPACITY

2.2 …ANNUAL TURN OVER FOR LAST 3 YEARS

2.3 …WHEHER CREDIT LICENSE ACCEPTABLE YES/NO

3.0 QUALITY MANAGEMENT SYSTEMS
ENCLOSED FORMAT PART-B

3.1 EXPERIENCE LIST FOR SAME/SIMILAR ITEMS
TO BE ENCLOSED

4.0 …..**FUTURE EXPANSION PLANS:**
(GIVE DETAILS)

5.0 LIST OF ENCLOSURES:
INCLUDING BROUCHERS, CATALOGUES, TECHNICAL
LITERATURE ETC.

6.0 ANY OTHER INFORMATION

SIGNATURE OF SUPPIER (AUTHORIZED SIGNATORY)

NAME
DESIGNATION
DATE
…….OFFICIAL SEAL

Note: Please attach separate sheets, if space found is inadequate

BHARAT HEAVY ELECTRICALS LTD.
Corp. R&D DIVISION
VIKAS NAGAR,
RD:DP:MPX:F-13 **HYDERABAD- 500 093 (INDIA)**
Ph: 040 – 23778474, Fax: 040 – 23770698, email: mpx@bhelrnd.co.in

VENDOR REGISTRATION FORM

(Indigenous supplier)

[FORM TO BE SUBMITTED* BY THE BIDDER ALONG WITH TECHNICAL-BID]

Before filling, please refer to instructions on page-4

1.0 VENDOR PROFILE:

1.1 Name and address of the vendor:

_____

_____

_____

Phone Nos.:
Fax No.:
Email: 1. 2.

1.2 Local representative name & address in Hyderabad/ Secunderabad:

_____

_____

_____

_____

Phone Nos.:
Fax No.:
Email:
Contact person:
Mobile No.:

2.0. TYPE OF ORGANIZATION:

PROPRIETORSHIP	COMPANY	SISTER CONCERN (mention vendor registration number of main organization)	
PARTNERSHIP	CORPORATION	Small Scale Industry	ANY OTHER (Please specify)

In case of SSI unit, copy of registration to be enclosed.

3.0 ANNUAL TURN OVER:

#	Year	Turn-Over
1	Current Year(budgeted)	
2	Previous year (200 - 0)	
3	Prior Year (200 - 0)	

4.0 NAME AND ADDRESS OF THE BANKER:

1. Bank Name
2. Branch name
3. Account number
4. Account Type
5. MICR Code:
6. IFSC Code(RTGS/NEFT):
7. Bank Phone number(s),

Blank cheque, duly cancelled, to be enclosed.

Please note that all payments shall be made through Electronic clearance services to your above account against the orders executed, if any.

5.0 REGISTRATION PARTICULARS (relevant copies to be enclosed)

5.1 IT Permanent Account No.(PAN):
5.2 State sales tax/VAT Registration No.:
5.3 Central Sales Tax Registration No.
5.4 ED Registration No.
5.5 Service Tax Registration No.:
5.6 PF Account No.:
5.7 Labour Licence No.:
5.8 **ESI Account No.:**

6.0 CONTACT PERSON: S/Sri

Designation::: Phone/ Mobile No. :

7.0 TOTAL NUMBER OF EMPLOYEES:

Graduates (Engr./Scientists/ Mgmt/Fin.)	Consultants	Workers		
		Sup./Skilled	Semiskilled	Unskilled

8.0 WISH TO REGISTER FOR SUPPLIES/SERVICES:

#	**Service/Supplies**	**Capacity**
1		
2		
3		
4		
5		
6		
7		

9.0 REFERENCE LIST :

(Only recognized public and private sector companies, attach if printed copy available)

#	Customer	Volume / Year
1		
2		
3		
4		
5		
6		
7		

10.0 INFRASTRUCTURE / FACILITIES:

#	Facility (with specifications)	Age/ Year procured
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

11.0 REGISTRATION WITH OTHER BHEL UNIT/UNITS:

#	Unit	Registration No.	Year
1			
2			
3			
4			

12.0 ANY OTHER INFORMATION :

DECLARATION:

The information furnished above is true and authentic.

(CEO / PROPRIETOR)

SEAL:

DATE:

The competent authority reserves the right to accept or reject the registration. Registered vendors will be informed by mail / email, as convenient. Contact AGM (MM) for clarification/ additional information on registration.

A separate communication will be sent to you in case of non-registration, citing reasons thereof.

Instructions

1. Answer all items; use NA for items not applicable.
2. BHEL units do not require this registration.
3. Use additional sheets for want of space if required.
4. Attach copies of latest document s in respect of items 5.0 (Registration no.s)
5. Photographs of registered office and the chief executive/proprietor shall be furnished.
6. Use A4 sheets for this document and the enclosures.

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* REGISTERED BIDDERS, HAVING BHEL (R&D) REGISTRATION NO. OR HAVE SUBMITTED THIS FORMAT FOR REGISTRATION, NEED NOT FURNISH THIS INFORMATION AGAIN