REQUEST FOR QUOTATION



BHARAT HEAVY ELECTRICALS LIMITED
Electronics Division
PB No. 2606, Mysore Road Bangalore - 560026
INDIA

RFQ NUMBER: NVNM000003

Due Date 21.JAN.2009 Time: 13:00 HRS

RFQ DATE: 18.DEC.2008

VENUE : **NEW ENGG. BLDG**

(for all correspondence)

Purchase Executive: NARAYANASWAMY NV

Phone: 26742395 Fax: 00918026744227

E-mail: narayanaswamy@bheledn.co.in

Please submit your lowest quotation subject to our terms and conditions attached for the material mentioned below. The quotation must be enclosed in a sealed envelope / Fax superscribed with RFQ no.and due date, should reach us on or before the due date by 13.00 hours IST and will be opened on the same day

1.TENDER / OFFER SHALL BE SUBMITTED IN TWO PARTS ie "TECHNICAL

BID" AND " PRICE BID" IN SEPARATE SEALED COVER.

- 2. QUOTATONS MAY BE OEM OR THEIR AUTHORISED DEALERS.
- 3. VENDOR IS EXPECTED TO HAVE ESTABLISHED SALES SERVICE AND SUPPORT NETWORK PRERABLY, IN INDIA.A LIST OF THE SAME NEEDS TO ENCLOSED WITH THE OFFER
- 4.A LIST OF REFERANCES INCLUDING CUSTOMER'S DETAILS LIKE
 - CONTACT, MACHINES INSTALLED, DATA OF INSTALATION IN INDIA AND
 - ABROD SHALL BE SUBMITTED, THAT ESTBLISHES THE SATICFACTORY
 - PERFORMANCE OF SUPPLIER'S EQUIPMENT FOR THREE YEARS.
- 5. VENOR IS ADVISED TO GO THROUGH THE TERMS AND CONDITIONS DOCUMENT CPD-00 ENCLOSED WITH RFQ.
- 6.BHEL RESERVES THE RIGHT TO "REVERSE AUCTION" BEFORE THE PRICE BID OPENING
- 7. VENDOR HAS TO CONFIM TO ALL THE CLAUSES LISTED IN THE TECHNO-COMMERCIAL TERMS(ANNEXURE-B OF DOCUMENT CPD-00). DEVIATIONS IF ANY, TO BE HIGHLIGHTED AND BROUGHT OUT CLEARLY.
- 8. VENDOR HAS TO CONFIRM ALL THE CLAUSES IN THE SPECFICATIONS.
- 9. DELIVERY REQUIRED: 31-03-2009
- 10.TERMS OF PAYMENT :90% IN 30 DAYS FROM THE DATE OF RECEIPT & ACCEPTANCE OF MATERIAL.BALANCE 10% AGAINST SUBMISSION PBG.

1

Sl No.	No. Description		Unit	Delivery qty	Delivery Date
	CU9095003178 LT Distribution Panel as per PS-445-085		NO		30.MAR.2009
1	DRW PS-445-085 00	1		1	

Total Number of Items -

Please note that the tender will be opened in the presence of the bidders or his authorised representatives (maximum two per organisation) who choose to be present with authorisation letters. Refer annexure for the terms and conditions.

Preference will be given to vendors who accepts our standard payment terms i.e.100% payment - 30 days after receipt of material at our works subject to acceptance.

Please specify Terms of delivery, Excise duty, sales tax, Ex-BHEL, Ex-works surcharge, Insurance, P&F, Freight and other taxes very clearly

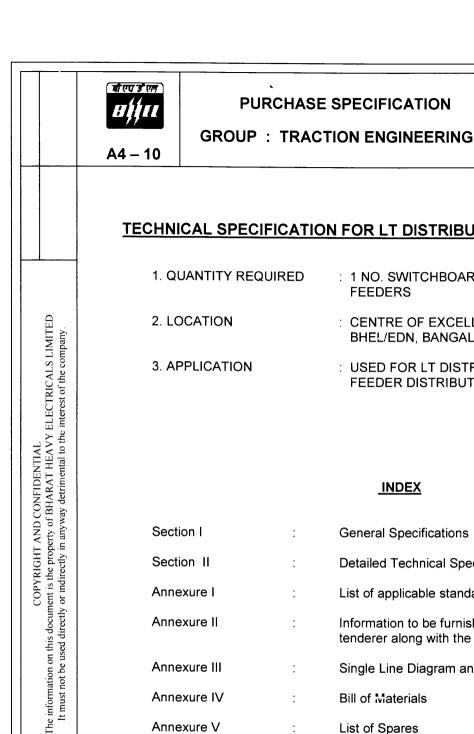
- i). This is only RFQ not an order.
- ii). In all correspondence quote RFQ No. & due date.
- iii). In Quotation BHEL material code / RFQ Sl. No. should be mentioned clearly.
- iv). Quotation Envelope / Fax not superscribed with RFQ No.and due date is liable for rejection.
- v). Quotation should remain valid for a minimum peiod of 90 days from due date.
- vi). In case of non-receipt of Quotation or regret letter for 3 consecutive RFQs you are liable to be removed from our vendors list.
- vii). All Prices should be written in words and numbers.
- viii). Excise Chapter Heading should be mentioned for all items where VAT is applicable .

Vendors list to whom RFQ has been sent:

1. BHEL, Electronics Division (X563699) - 6300042933

For and On behalf of BHEL.

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TECHNICAL SPECIFICATION FOR LT DISTRIBUTION PANEL

: 1 NO. SWITCHBOARD WITH COMPONENTS &

FEEDERS

: CENTRE OF EXCELLENCE (COE),

BHEL/EDN, BANGALORE

: USED FOR LT DISTRIBUTION AND AUXILIARY

FEEDER DISTRIBUTION

INDEX

General Specifications

Detailed Technical Specifications

List of applicable standards

Information to be furnished by the

tenderer along with the offer

Annexure III

Single Line Diagram and Layout Diagram - 3-661-00-52647

Annexure IV

Bill of Materials

Annexure V

List of Spares

Annexure VI

Pre-Qualification Criteria

NOTE: Deviation if any from the purchase specification enclosed to be clearly spelt out in the offer, otherwise it will be presumed that the offer is in line with

our requirement.

REVISIONS 00

APPROVED BY

PREPARED BY

ISSUED BY

DATE

V Peshed

TRACTION

14-11-2008



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SECTION - I

GENERAL SPECIFICATIONS

1.0 Site conditions

1.1 Ambient Temperature : 45°C

1.2 Relative humidity (%) : 100 %

NOTE: Max. Ambient temperature and relative humidity do not occur simultaneously.

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2.0 **Power supply available**

2.1 L.T.A.C

 $\begin{array}{ccccc} \text{- Voltage} & : & 415\text{V} \pm 10\% \\ \text{- Phase} & : & 3 \text{ } \phi \text{, 4 wire} \\ \text{- Frequency} & : & 50\text{Hz} \ \pm 3\% \end{array}$

- Short circuit fault level : 25 KA rms at 415V rms L-L

2.2 - L.T.A.C

- Voltage : 240V AC for ACB motor mechanism and

Auto Transformer motors

2.3 - D.C

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- Voltage : 110V DC for ACB and MCCB shunt trip coils



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SECTION II

DETAILED TECHNICAL SPECIFICATIONS

1. Standard of design:

The panel and its components shall be designed, assembled, wired and tested in accordance with the Indian Standards listed in Annexure –1 wherever applicable. The equipment shall also conform to the latest Indian Electricity Rules as applicable in the state of Karnataka, where the equipment is going to be installed.

2. General Arrangement & Mechanical Design:

The panel shall generally conform to IS:8623 Part I and IS:13947. These shall be of non-draw out design, sheet steel clad, totally enclosed, indoor floor mounted and free standing type, multi-tier compartmentalised and assembled by suitable combination of panels arranged side by side and extensible on both sides by bolting additional panels.

2.1 The panel shall have

- Horizontal copper busbars to feed functional units of rating 1000A
- Vertical copper busbars (droppers) to feed distribution units.
- Vertical wire rack channel to permit cable entry to each compartment.
- Busbars for outgoing power connections with holes for external cable terminations
- Vertical TB arrangement for outgoing cable terminations.
- 2.2 All components including terminal blocks shall be accessible and capable of being removed from the front. A separate marshalling chamber is to be provided for terminal blocks & busbars. All wiring shall be from the front. However rear bolted cover shall also be provided.
- 2.3 Cable entry shall be from Bottom.
- 2.4 The incoming terminations shall be suitable for the rating and shall have adequate supports for cabling.
- 2.5 Danger name plates in accordance with IS:2551-Danger notice plates and IS: 8923-Warning symbols for dangerous voltage shall be provided.
- 2.6 Sheet steel used shall be of thickness 2 mm min for load bearing members, front / rear doors, end covers, partition sheets, top covers and reinforced with angle iron. For doors and covers the sheet steel shall be cold rolled only.
- 2.7 The degree of protection provided by the enclosure shall be IP-41 of IS: 2147-Degrees of protection provided by enclosure for low voltage switchgear and control gear.
- 2.8 Durable rubber gaskets shall be provided for all doors & covers. Gaskets shall be adequately secured. Glueing alone is not sufficient.

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2.9 A base channel / frame of 100mm height painted black shall be provided. The panels shall be in 1 shipping section.

- 2.10 Removable cable gland plates shall be provided at the bottom of the panel. These plates shall be undrilled and made of 6 mm. thick aluminium sheets.
- 2.11 All fasteners shall be zinc bichromated and passivated. All bolts shall be with spring washers.
- 2.12 Provisions shall be made for lifting and handling, for example, by eye-bolts / lifting beams.
- 2.13 Sheet steel surfaces shall be free from dents and hammer marks. All openings & cutouts shall be machine made and shall be free from burrs.
- 2.14 At least two hinges shall be provided for each hinged door.
- 2.15 All panels are to be Powder coated as follows:

Exterior: Front and Rear - RAL 9002 Grey; End Cover - RAL 5012 Blue

Powder Coated with Matt Finish

Interior: Front and Rear - RAL 9002 Grey; End Cover - RAL 5012 Blue

Powder Coated with Glossy Finish

- 2.16 All sheet steelwork shall undergo a process of degreasing, pickling in acid, cold rinsing and phosphatising and then sprayed with a corrosion resistant primer followed by stoving. Thickness of powder coating shall not be less than 70 microns.
- 2.17 For Bill of material see Annexure IV
- 2.17 GENERAL INSTRUCTIONS:
- 2.17.1 Each compartment shall be effectively partitioned from top, bottom and sides, except to the extent of space required for cable entry and ventilation if required.
- 2.17.2 The disposition of components, wiring etc. shall be identical for similar units.
- 2.17.3 Each component shall have individual sheet steel flanged doors with concealed hinges. The doors should be on the side opposite to the terminals to prevent obstruction to their access.
- 2.17.4 The power-disconnecting device shall be operable from outside without opening the door. Door shall be so interlocked that it cannot be opened unless the power-disconnecting device is switched off. However, it shall be possible to defeat the door interlock if necessary.
- 2.17.5 The ON/OFF push buttons, control switches etc. shall be at an operable height Meters and signal lamps (ON/OFF/TRIP) shall be provided on the door. Emergency Trip Push Button shall be provided with a protective shroud to prevent accidental activation.



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- 2.18 Mounting of components
- 2.18.1 All components shall be mounted in such a manner as to facilitate easy accessibility.
- 2.18.2 The lower most point of any electrical component shall not be less than 250mm from the bottom level of the panel to facilitate inspection and maintenance.
- 2.18.3 Indicating instruments shall not be located higher than 2000mm from the bottom of the panel to facilitate easy reading. The maximum operating height of any device shall not exceed 1900mm and minimum operating height shall not be less than 400mm.

3. **Busbars and Bus Connections**

- 3.1 The busbar arrangement and rating shall generally conform to IS:375
- 3.2 Busbar Material:

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- 3.2.1 Power bus shall be of Tinned, Electrical grade copper of rating 1000A 4 numbers..
- 3.2.2 Auxiliary Distribution bus shall be of size 25x8 mm. 4 numbers.
- 3.2.3 The cross-section shall be uniform throughout the length. Current density to be maintained as 1.3 A/mm² maximum.
- 3.2.4 Allowance shall be made for reduction in section by bolt holes and stab-in holes if provided in the vertical buses.
- 3.3 Mechanical arrangement of busbars.
- 3.3.1 All power bus joints shall be designed to prevent overheating.
- 3.3.2 Busbars shall be supported on tough non-hygroscopic, self-extinguishing and fire retardant resin cast/SMC insulators with anti-tracking contour and rigidly held to the frame work of the chamber.
- 3.3.3 The clearance between phase buses and between phase to earth in air shall be not less than 25 mm. Abnormal conditions such as short circuits shall not permanently reduce the distance between the busbars and connections below the minimum acceptable values. In case such clearances are not possible, suitably insulated barriers shall be provided.
- 3.3.4 Busbars shall be phase identified by colour. The colour code shall be as per IS 375. This shall be done through coloured PVC sleeves. Where connections are to be taken, the sleeves are to be removed.



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4. Labelling, wiring and termination:

The panel shall be completely factory assembled and wired. All labelling, wiring and termination shall be strictly as per the schematic drawings to be approved by BHEL.

- 4.1 Labels.
- 4.1.1 An identification nameplate indicating the designation of the panel shall be affixed at approx. the center of the panels (lengthwise).
- 4.1.2 The vertical section identification and designation numbers shall be suitably indicated on each panel as specified.
- 4.1.3 An inscription label of anodised aluminium bearing the description of the functional unit shall be provided on the door of the compartment. Inscriptions shall also be provided for signal lamps, operating handles of switches, breakers, push buttons etc., which are available on the front of the door indicating its purpose and modes of operation. Each TB shall also be identified by an inscription label. Inscription details shall be finalized during detailed Engineering.
- 4.1.4 Each compartment shall be clearly labelled on the base plate as per the schematic diagram by aluminium anodised labels.
- 4.1.5 All inscriptions on inscription plate shall be in English with characters of equal heights with contrasting background. Each character shall not be less than 3 mm high and shall be in sizes suited to the items to which they refer.
- 4.2 All ACB power connections shall be done by copper busbars of suitable rating. All distribution feeders shall be wired using single core PVC insulated copper cables. Adequate cable size to be used for the given current rating of the feeders.
- 4.3 Control wiring shall be done by 1100 V grade PVC insulated single core copper conductor of min. cross section 1.5 mm² as per IS:694.
- 4.4 All wires shall be run properly and fixed neatly and shall allow clear access to all components. Control wires shall be bunched.
- 4.5 All wiring shall be arranged and supported in such a manner that there shall be no strain on the terminations.
- 4.6 Wiring between 2 devices shall have no splices or joints. Connections shall be made at fixed terminals only. Not more than 2 wires shall be terminated at one control terminal.
- 4.7 Each wire shall be identified at each end in accordance with the schematic diagram with indelible ferrules.
- 4.8 Door wiring shall be done by flexible cables in non-metallic flexible hose and so installed that no mechanical damage can occur to the wiring as a result of movement of the door.

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4.9 Wire ways shall be smooth & entirely free from sharp edges, burrs, fins, etc. that may cause abrasion of the insulation on conductors.

- 4.10 Wires shall not, as far as possible, be connected in parallel. However, if necessary, this should be done after taking extra precautions of keeping the same length, same conductor material, same cross section, same insulation type and terminated in the same manner.
- 4.11 All connections external to the module shall brought to accessible terminals.
- 4.12 Outgoing power terminations shall be designed for connecting 3, 3 ½ or 4 core aluminium cables selected as per the following guidelines.
- 4.13 The Power terminals for main Incomer shall be Busbar type. Outgoing power feeders terminals shall be busbar type. Cable sizes and number of cables shall be specified during detailed Engineering. For auxiliary power distribution, stud type terminals shall be used and size depends upon individual feeder current rating with a minimum size of 16mm². All control terminals shall be of Elmex CATM 4 type. All TBs shall be complete with terminal screws, label carriers, links, Cable ferrules, transparent covers & Shrouding for power terminals etc. Wherever CT is used CT shorting type TB shall be used. 20% spare terminals shall be provided.

Earthing & Protection

- A continuous earth bus shall be provided along the full length of the panel running at the bottom with an earthing terminal at each end. The earth bus shall be minimum 25mm x 6mm copper.
- 5.1.1 The main horizontal and vertical busbars shall be designed, fabricated and supported to withstand the thermal and dynamic stresses corresponding to the rated short time and the peak withstand currents.
- 5.1.2 The outgoing functional units shall be designed such that the components and wiring can withstand the stresses arising out of the short circuit at the outgoing terminals till such time that the short circuit breaking device clears the fault. The protection class shall be type C given in A-2.1 of IS 8544.
- 5.1.3 The short circuit protection shall be so graded that the short circuit protective device in the faulted branch without affecting the other outgoing branch circuits clears a fault occuring in any outgoing branch circuit.

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Provision shall be made to connect earth continuity conductors from incoming and outgoing cables.

For the earthing of the withdrawable part, a spring loaded scrapping earth shall be provided having an effective connection to the earth bus.

Tests

The supplier on the panels shall perform the following tests. The supplier shall give three weeks clear notice to enable the purchaser or their representative to witness all routine tests for panels.

- 6.1 **Routine Tests**
- 6.1.1 Physical Inspection
 - i) Check for overall mounting dimensions and painting with respect to approved OGA drawings.
 - Checking with respect to General Arrangement like feeder arrangement and ii) designation, mounting of components, termination arrangement, buses, wiring and connections.
 - Checking of mechanical interlocks like door interlock etc. iii)
 - Checking of mechanical work like doors and covers, gaskets, surface finish, iv) movement etc.
 - v) Checking of Busbar sizes as per approved drawings.
- 6.1.2 Checking of protective measures and earthing in line with relevant standards.
- Insulation resistance measurement and HV test in line with relevant standards. 6.1.3
- 6.1.4 Checking with respect to final schematic diagrams for technical data, ratings and settings of components, wiring and terminations.
- 6.1.5 Functional test: Functional test of all device like switches, contactors, relays, push buttons and lamps etc. will be checked after energisation with simulation.

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7 <u>Documentation</u>

The following drawings and documentation will be supplied:

7.1 Drawings to be supplied within 2 weeks of Purchase Order

SI. No.	Description	Form	Quantity	Remarks
1.	Certified OGA drawings and SLD for approval	Prints A3 size	3	From supplier to BHEL
2.	Certified compartment wise equipment list giving type, make, rating of all components.	Prints A3 size	3	From supplier to BHEL
3.	Detailed Schematic Diagram and Terminal Plan.	Prints A3 size	3	From aupplier to BHEL

7.2 Final documents within 2 weeks of despatch of equipment.

SI. No.	Description	Form	Quantity	Remarks
1	Final OGA and SLD Drawings	Prints A3 size	4 Copies	From supplier to BHEL
2	Bill of Material	Prints A3 size	4 Copies	From supplier to BHEL
3	Test Certificates	Prints A4 size	4 Copies	From supplier to BHEL
4	O&M Manuals and Catalogues for all components used	Prints A4 size	4 Copies	From supplier to BHEL

Supplier shall also provide 1 set of Operation & Maintenance Manual and 1 set of Final drawings in Compact Disk (CD) .

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ANNEXURE - I

LIST OF STANDARDS

- 1. IS: 8623: Specifications for low voltage switchgear and control gear assemblies.
- 2. IS:13947: Specification for low voltage switchgear and control gear assemblies.
- 3. IS:2147 : Degrees of protection provided by enclosures for low voltage switchgear and control gear.
- 4. IS:8544 : Specification for Motor Starters for voltages not exceeding 1000V AC.
- 5. IS: 375 : Marking and arrangement for switchgear, busbars, main connection and auxiliary wiring.
- 6. IS:5578: Guidelines for marking of insulated conductors.
- 7. IS:613 : Copper rods for electrical purposes.
- 8. IS:694: PVC Insulated cables for working voltages upto 1100 Volts.
- 9. IS:2551: Danger notice plates.
- 10. IS:8923: Warning symbols for dangerous voltages.

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ANNEXURE - II

INFORMATION TO BE FURNISHED BY THE TENDERER ALONG WITH THE OFFER

- 1. List of typical feeders with ACB/MCCB rating and specifications like type, make, and rating of various components / equipment selected. Bill of Material for items to be indicated.
- 2. Drawings
 - i) GA drawings indicating
 - Arrangement of power and control busbars, sizes etc. with supporting calculations
 - Facia of typical feeders
 - Cable alleys and cable entries.
 - Mounting arrangement
 - Door interlocking arrangement
 - Equipment disposition for typical feeder
 - ii) Panel wise proposed OGA drawings indicating the shipping section and foundation details, weights and dimensions
- 3. Reference list
- 4. List of Deviations, if any. The List of Deviations shall be explicit. A statement that the "offered equipment is generally in line with Specification" is not acceptable. If there are no deviations, this must also be included explicitly.
- 5. Price for 2 numbers of Auto Transformers shall be quoted separately. Price evaluation will be done for total price only, as a package.

ANNEXURE - III

For electrical connections refer the single line diagram called in the index sheet.

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ANNEXURE-IV BILL OF MATERIAL AND SPECIFICATIONS FOR MAJOR COMPONENTS (Latest type numbers and Catalogues to be indicated by the Supplier along with offer)

COMPONENT	SPECIFICATION	APPROVED MAKES
Air Circuit Breaker	Thermal magnetic type, Drawout type, Motor mechanism and Shunt Trip coil 110V DC; Auxiliary Contacts for interlocking with additional Auxiliary Contactor 3TH of Siemens make. (4NO+4NC) – 110V DC	Siemens, ABB, L&T
MCCB	Thermal magnetic type, Variable Thermal and Short circuit Releases and Shunt Trip coil 110V DC. Auxiliary Contacts for interlocking with additional Auxiliary Contactor 3TH of Siemens make (4NO+4NC) – 110V DC	Siemens, ABB, L&T
MCB	With Auxiliary contacts	Havells, MDS, Legrand, Kopp, Siemens, ABB
Indicating lamp with resistors LED type, 110V DC	3SB Type, Colours as specified in Scheme	Siemens
Push Buttons	3SB Type, Colours as specified in Scheme	Siemens
HRC Fuse link	Blade type	Siemens, GE Power Controls, L&T, Bussmann
Control Switches. Instrument Selector Switches		Kaycee / Salzer
Voltmeters and Ammeters	Analog – 96 x 96. mm.	Meco / AEL
Door Switch Limit switch type	5A, 230 V	-
Cub Illumination lamp	CFL, 20W, 230 V AC	-
Current Transformers	Ring type with bar primary	Kappa, Kalpa, Instrans
Current and Voltage Transducers	Dual outputs – 4-20mA	Meco, AEL, Elster, Southern Transducers
Auto Transformer	415V – 0 to 440V Output 3 Phase – Manual 20A – Air Cooled, Panel mounted 3 Phase – Motorised 150A – Oil Cooled, Loose Supply	Automatic Electric
Auxiliary Contactors		Siemens

NOTE: All makes shall be as per this list only



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Distribution Feeders:

(Power Feeders as per Single Line Diagram)

SI. No.	Voltage	Quantity
1	415V, 3 Phase, 4 wire – MCB 25A	12
2	240V, 1 Phase – MCB 2A	30
3	240V, 1 Phase – MCB 6A	15

Ratings of Major Components

Designation.	Rating	Quantity
A6	Air Circuit Breaker - 690V, 1000A	1
A11	Air Circuit Breaker - 690V, 1250A	1
A1, A9, Q6	MCCB - 415V,150A	3
MCCB-3, Q1	MCCB – 415V, 25A	2
MCCB-4, Q3	MCCB – 415V, 63A	2
MCCB-1, 2, Q4, Q5	MCCB – 415V, 200A	4
A2	MCCB - 440V,150A	1
Q2	MCCB - 440V,25A	1
AT1	Auto Transformer – 3 phase, motorized	1
	with Motor Supply Voltage – 240V AC.	
	Input – 415V; Output: 0-440V – 150A	
	Oil Cooled. Loose Supply.	
AT2	Auto Transformer – 3 phase, manual.	1
	Input – 415V; Output: 0-440V – 20A	
	Mounted in Panel	

Notes:

- 1. Breakers MCCB-1 and MCCB-2 to be mechanically interlocked so that only 1 can be closed at a time.
- 2. MCCBs for 110V DC Circuit and 240V AC Motor Mechanism for ACB not included in the above llist and has to be considered with adequate rating.

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Features:

Component	Feature	Quantity
ACB Feeder	ON/OFF Push Button Emergency Trip Push Button ON/OFF/TRIP LED Indication Lamp	2 sets
	Local / Remote Selection Switch Current Transformers – 3 numbers with Ammeter with	
	ASS	
	Current Transducers – 1 per phase Voltage Transducers – 1 per phase	
MCB Feeders	Voltmeter with VSS and fuses MCBs to be mounted inside with knobs operable on front door	57 sets
MCCB Feeders	MCCBs to be mounted inside with handles operable on front door ON/OFF LED Indication Lamp	13 sets
	Current Transformers – 3 numbers with Ammeter with ASS	
Incomer	R, Y, B Indication Lamps Voltmeter with VSS and fuses Auxiliary Contactor – 3 numbers with fuses and 415V AC coil	1 set
	Current Transformers – 3 numbers with Ammeter with ASS	
MCCB Feeder for	MCCBs to be mounted inside with handles operable on front door	1 set
110V DC	ON/OFF LED Indication Lamp Shunt – 1 number with Ammeter Auxiliary Contactor – 1 number with fuses and 110V DC coil	
MCCB Feeder for	MCCBs to be mounted inside with handles operable on front door	1 set
240V AC	ON/OFF LED Indication Lamp Current Transformer – 1 number with Ammeter Auxiliary Contactor – 1 number with fuses and 240V AC coil	
Auto Transformer – AT1	Increase / Decrease Push Buttons on Panel Local / Remote Selection Switch Provision for Increase / Decrease Push Buttons from Remote	1 set
	Input and Output Voltmeters with VSS and fuses (6 numbers each) Oil: First fill + 10% shall be supplied loose.in containers	



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PURCHASE SPECIFICATION

GROUP: TRACTION ENGINEERING

P.S NO.	: PS/445/085
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REV. NO: 00

PAGE 15 OF 16

ANNEXURE-V LIST OF SPARES (Format to be filled up by the tenderer)

SI. No.	Item	Quantity required	Quantity used	Quantity offered	Unit Price *
1	Shunt trip coil for ACB	1 of each type			
2	Auxiliary contacts for ACB	2 of each type			
3	Motor for ACB	2 of each type			
4	Shunt Trip coil for MCCB	1 of each type			
5	Auxiliary contacts for MCCB	1 of each type			
6	MCCB	1 of each type			
7	MCB 25 A	5			
8	MCB 6A	6			
9	MCB 2A	10			
10	Push Buttons	10% of each colour and type			
11	Pilot Lamps	20% of each colour and type			
12	VSS and ASS	3 each			
13	Control Switches	3 each			
14	Indicating Meters	2 of each type			
15	Auxiliary Contactors (110V DC)	5			
16	Auxiliary Contactors (415V AC)	1			
17	Auxiliary Contactors (240V AC)	1			
18	Current Transformers	1 of each type			
19	Terminal Blocks	10% of each type			
20	Brushes for Auto Transformers	2 sets each			
21	Current Transducer	2 of each type			
22	Voltage Transducer	1 of each type			

Unit Price shall be left blank in the Technical Bid but filled up in the Price Bid. BHEL reserves the option to modify the list during placement of order.

बाल्प इला **महिद्या** A4 – 11

PURCHASE SPECIFICATION

GROUP: TRACTION ENGINEERING

P.S NO	. : PS/	/445/08	35	
REV. NO :00				
PAGE	16	OF	16	

ANNEXURE-VI PRE QUALIFICATION CRITERIA

- The vendor shall be an Original Equipment Manufacturer (OEM). Only the OEM or their authorized dealers along with an authorization letter can submit offers. An authorized Representative/Dealer cannot quote for the same equipment from more than one OEM.
- 2. Offer shall be for a new equipment and not for any refurbished / used equipment. All the parts used in the equipment shall also be new and not used / refurbished ones. A declaration to the above effect to be furnished.
- 3. The vendor should have the capability to design LT Distribution Boads. He should have already supplied and installed 3 nos. of similar Boards in India during the past 5 years and these must be operating satisfactorily for at least past one year. The details of the customers with contact details, date of installation etc. to be provided.
- 4. The vendor or their authorized service representatives shall have trained engineers for commissioning & service for the offered equipment and shall be in a position to provide prompt after sales service and spares support for our installations.
- 5. The vendor shall be in a position to undertake AMC or provide service support for the equipment supplied, after the expiry of the warranty / guarantee period either directly or through a service representative.
- The vendor shall furnish a comprehensive warranty for at least 12 months from the date of commissioning.

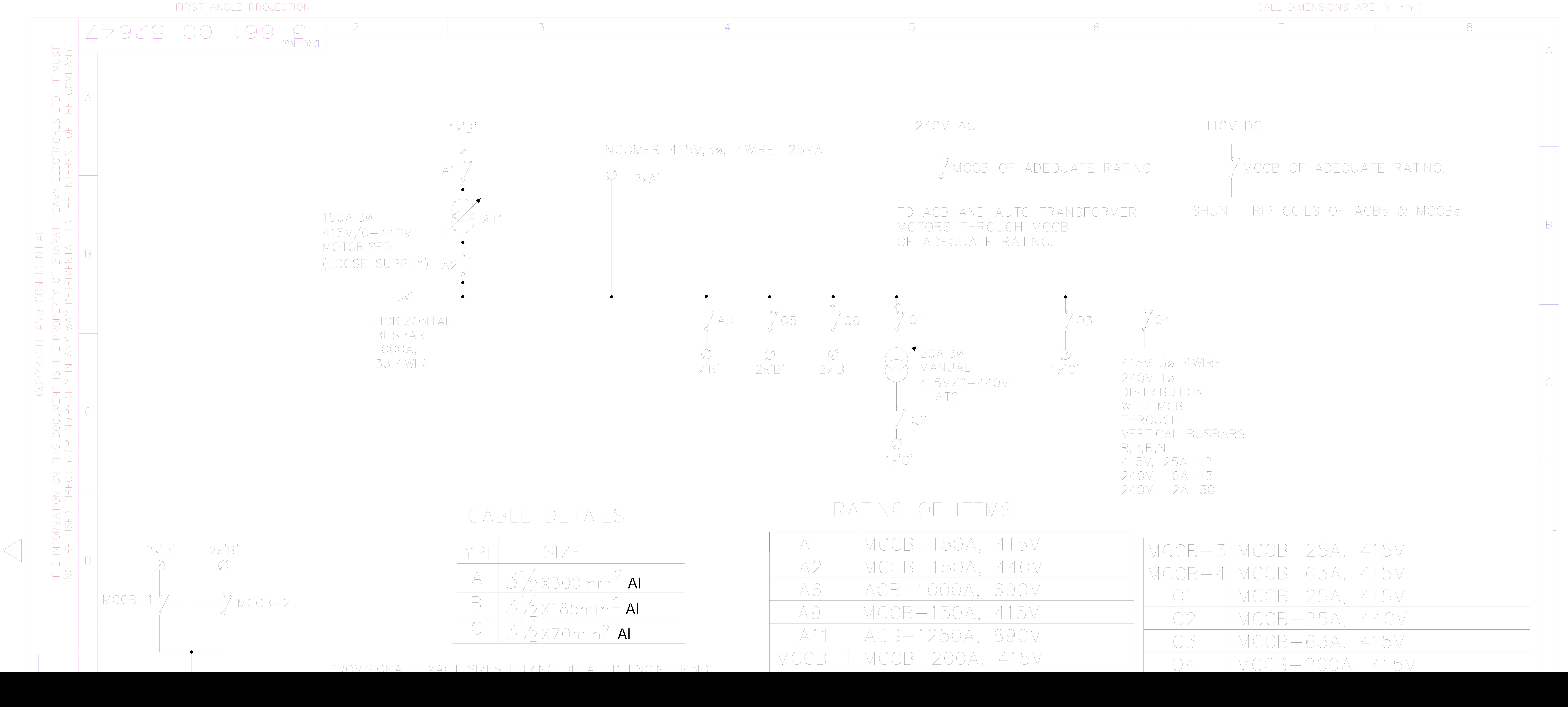
Note:

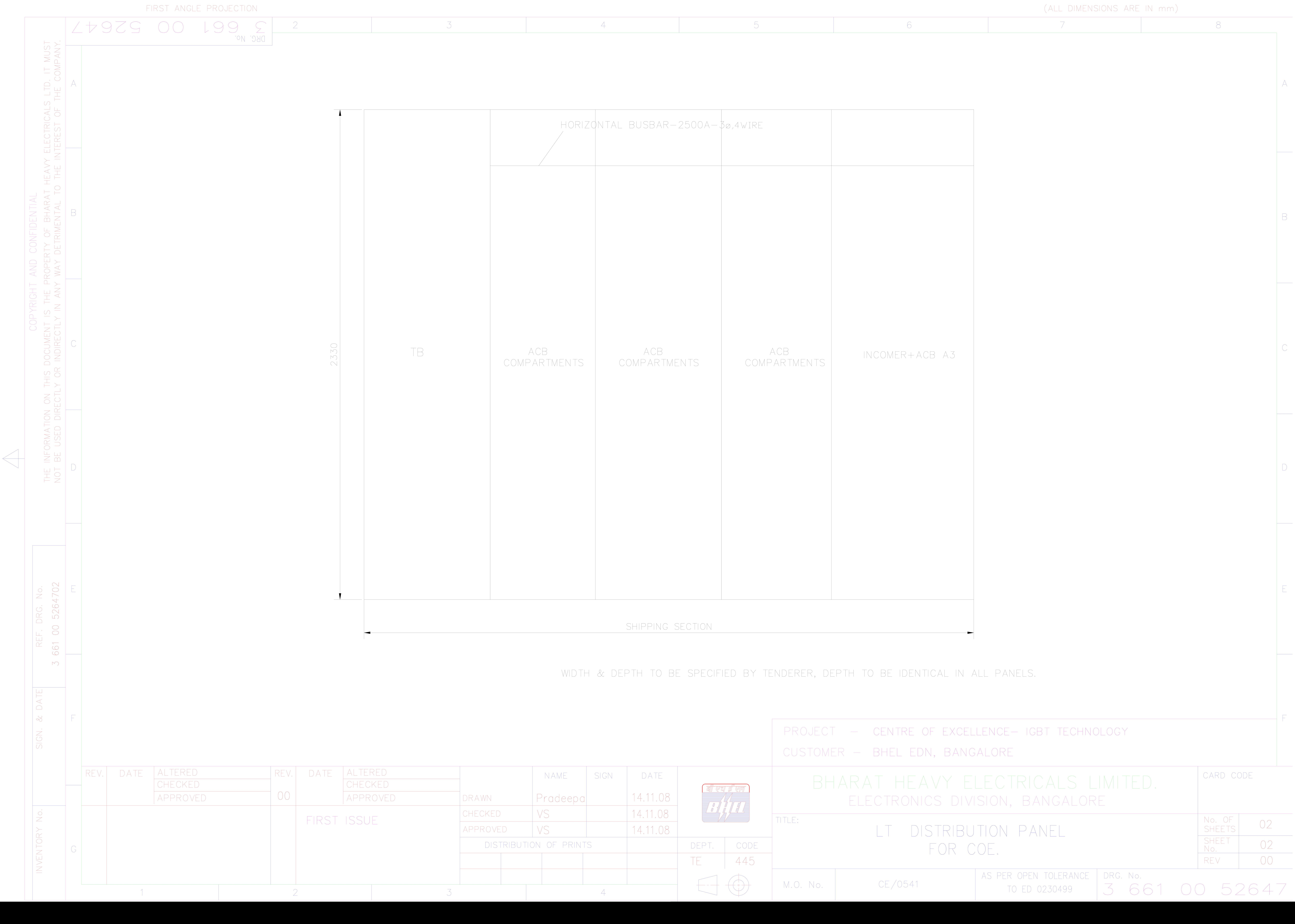
- 1. Pre qualification will be carried out based on the details furnished by the vendor / feedback from their customers / inspection of the company / product if required by BHEL and at its sole discretion.
- 2. The Pre qualification criteria are mandatory requirements and the technical bids will be evaluated only when the Pre Qualification criteria are met.

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Bharat Heavy Electricals Ltd.,

(A Government of India undertaking)

Electronics Division

PB No.2606, Mysore Road, Bangalore-560026, India

Ph: +91-80-26742974 / 26998663

Fax: +91-80-26740138

General Terms & Conditions for Supply of Imported & Indigenous Capital Items (Two part bid)

Bidders are required to read the general terms & conditions carefully and submit their quotation covering all the points. Any order resulting from this enquiry shall be governed by the general terms and conditions listed below.

- 1. TWO PART BID: Quotation shall be submitted in two part bid i.e.
 - a) Techno-commercial i.e., Un-priced Bid: Techno-commercial bid shall be submitted with complete description of the equipment, specification compliances to the enquired specification and all the commercial terms & conditions indicated in the QUOTATION FORMAT (ANNEXURE A / ANNEXURE B) preferably in the same format. Any other enclosure, which the supplier wishes to submit like product catalogue, technical literature etc., may also be submitted in a sealed envelope super scribed clearly as "TECHNO-COMMERCIAL BID" with RFQ No. and DUE DATE. Un-priced copy of price bid (without price) shall also be enclosed with the techno-commercial bid i.e. a copy of the price bid without prices.

Confirmation to BHEL specifications shall be indicated by the vendor in the respective columns provided in the purchase specification wherever applicable. Deviations to the specification / item description, if any shall be brought out clearly indicating "DEVIATION TO BHEL SPECIFICATION" without fail as a part of technical offer.

Compliance to Pre-qualification criteria (if applicable) shall also be enclosed with the Techno-commercial bid.

Manufacturer's name, their trade mark and brand if any, should be invariably mentioned in the tender and illustrative leaflets giving technical particulars etc., are to be attached to the tender to facilitate consideration of the offer.

b) Price Bid:

Price bid should contain basic unit prices, discount if any, applicable taxes & duties, packing & forwarding charges (if applicable), Freight & insurances (if applicable) FOB charge (if applicable) etc., in a sealed envelope super scribed clearly as "PRICE BID" with RFQ No. and DUE DATE. Installation, commissioning, start-up and training charges (if any) shall also be included in the price bid.

Please indicate the rates in both figures and words. However in case of difference / discrepancy, the rates indicated in figures shall be considered as correct.

Both these sealed envelopes [(a) Techno-commercial i.e., un-priced Bid and (b) Price Bids] shall be kept in a single sealed envelope and superscribed clearly with **RFQ No. and DUE DATE.**



- 2. The above sealed envelope (Tender) shall reach our office on or before the due date by 13:00 hrs. Quotations are to be dropped in the tender box marked for the OPENING ON respective days i.e., MONDAY / WEDNESDAY / FRIDAY kept at BHEL-EDN's Reception area of our works with caption "CE, M&C, SC&PV, TSC, DEFENCE, TELECOM, CPD". Quotations also can be dispatched by Couriers / Registered post / FAX / e mail to the Purchase Executive indicated in the RFQ. Late Tenders i.e. Tenders received after due date & time are liable to be rejected.
- **3.** The rates quoted against each item shall be in the same units stated in the enquiry. If the quotations are submitted in any other unit than specified, relationship between two sets of units must be furnished in the offer.
- **4.** As far as possible, the quotations shall be free from corrections / overwriting. Corrections if any should be initialed with your seal and signature. Any typographical errors, totaling mistakes, currency mistakes, multiplication mistakes, summary mistakes observed in your priced bids, BHEL may consider whichever is beneficial to BHEL for evaluation.
- **5.** Quotations are to be duly signed. Unsigned bids/offers are liable for rejection.
- **6.** All the bidders or their authorized representatives (with authorization letter from their principals) can witness opening of techno-commercial bid on the due date.
- **7.** After evaluation of techno-commercial bids, price bids of only those which are technically & commercially accepted, will be opened on a subsequent date, which will be intimated to the concerned in advance for witnessing of price bid opening.
- **8.** The quantities in each item to be purchased may vary from quantities enquired according to the actual requirement at the time of placing the purchase order. Quantity discount if any should be mentioned in your offer.
- 9. BIDDERS (for indigenous purchase) shall indicate clearly Excise duty, Education cess, Sales Tax/VAT, Octroi, Entry tax, Service Tax as applicable for the quoted items. In the absence of clarity of these, any claim at a later date will not be entertained. Any changes in Taxes and duties after award of the contract will not be considered except such are those, which are imposed by Govt., notification within the contractual delivery. Seeking price amendments for change in Excise duty due to crossing of turnover limits will not be considered under any circumstances.
- 10. <u>TOTAL COST TO BHEL:</u> Purchase order will be placed on the lowest bidder (L1) only among the technically & commercially accepted offers. Lowest Bid (L1) is determined on the basis of the total cost to BHEL.

(a) FOR FOREIGN PURCHASE:

Total cost to BHEL = Total basic value in foreign currency + FOB charges (if any) + Packing & Forwarding charges (if any) + Cost Insurance Freight (CIF) + Basic Custom Duty (BCD) + Counter Veiling Duty (CVD) + Educational Cess + Special Additional Duty (SAD) + Entry TAX + Service TAX (if applicable) + Loading factors for deviations to commercial terms & conditions.

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Note: Exchange rate ruling on the date of Tender opening (Techno-commercial / un-priced Bid) will be considered for converting foreign currency to Indian currency. Exchange rates published in Economic Times (TT selling) will be considered.

(b) FOR INDIGENOUS PURCHASE:

Total cost to BHEL = Total basic value + Packing & forwarding charges + Excise duty Education cess + sales Tax/VAT + Octroi + Exit/Entry tax + Freight & Insurance + Service Tax (if applicable) + Loading factors for deviations to commercial terms & conditions.

11. <u>FIRM PRICE</u>: Rates quoted should be firm and no enhancement in the rates and changes in the techno-commercial terms will be allowed once the quotation is accepted and order is placed.

If Installation & Commissioning is in supplier's scope, then the price shall remain FIRM till commissioning & handing over of the complete system.

12. TERMS OF PAYMENT:

(a) FOR FOREIGN PURCHASE:

Payment will be made against "SIGHT DRAFT" on presentation of documents to our bankers. Payment through LC is also made subject to loading factors as per Clause 26 (Ai).

The payment terms are as follows:

- a) 100% against complete dispatch documents i.e. AWB / BOL, Invoice, Packing list, Nil shortage certificate, Certificate of country of origin etc., (where commissioning & warranty is NOT involved).
- b) 90% against complete dispatch documents i.e. AWB / BOL, Invoice, Packing list, Warrantee certificate, Nil shortage certificate, Certificate of country of origin etc., & 10 % on submission of Performance Bank Guarantee (PBG) (where commissioning is NOT involved).
- c) 75% against complete dispatch documents i.e. AWB / BOL, Invoice, Packing list, Warrantee certificate, Nil shortage certificate, Certificate of country of origin etc., 15% on successful installation, commissioning and start-up trials & 10% on submission of Performance Bank Guarantee (PBG).
- d) If PBG is not submitted by the vendor, then the final 10% payment will be made against submission of supplementary invoice after warranty period + 6 months of claim period.

(b) FOR INDIGENOUS PURCHASE:

- a) 100% within 30 days from the date of receipt of equipments / materials (where commissioning & warranty is NOT involved).
- b) 90% within 30 days from the date of receipt of equipments & balance 10% against submission of PBG (where commissioning is NOT involved).
- c) 75% within 30 days from the date of receipt of equipments, 15% after the successful installation, commissioning & start-up trials & balance 10% against submission of PBG (wherever commissioning & warranty are involved).



- d) If PBG is not submitted by the vendor, then the final 10% payment will be made against submission of supplementary invoice after warranty period + 6 months of claim period.
- 13. <u>ADVANCE PAYMENT:</u> Quotations with payment terms of "Advance" or "Inland Letter of Credit" will not be considered and such offers are liable for rejection commercially.
- **14. PENALTY:** Failure to supply the item within the delivery date specified in the purchase order will make the supplier liable to an unconditional penalty of ½% (One half percent) of the basic value of the goods in arrears per week subject to a maximum of 10%.

If pre-shipment inspection is involved, date of issue of pre-shipment call by the vendor along with test certificates / test reports / certificate of conformance / calibration reports as proof of completion will be treated as date of dispatch for the purpose of penalty calculation.

In the absence of reports stated above, actual date of inspection will be considered as date of dispatch for penalty calculation.

15. <u>PBG:</u> Performance Bank Guarantee (PBG) to be submitted as per the BHEL prescribed format given in **ANNEXURE - D / ANNEXURE - E** for 10% of the basic equipment value obtained from any BHEL member banks.

PBG shall be valid for 12 months from the date of commissioning or 18 months from the date of dispatch whichever is earlier. The PBG shall also have 6 months claim period from the date of dispatch / commissioning.

The Bank Guarantee shall be submitted directly to the concerned Purchase Executive by the issuing Bank with their forwarding letter.

16. WARRANTY: Goods dispatched shall have warranty period of 12 months from the date of dispatch or as mentioned in the RFQ.

17. TERMS OF DELIVERY:

(a) FOR IMPORTED PURCHASE:

Price offered shall be for goods packed and delivered **F.O.B.** (named international Airport) including packing, forwarding, Handling, Ancillary charges like processing of Sight Draft, Letter of credit (L/C) if applicable, negotiation of bank documents, Export declaration, Certificate of origin etc.

Packing shall be Airworthy & Roadworthy, best suitable for trans-shipment and to prevent transit damages.

Vendors shall indicate the name of International Airport.

Note: Name of International Airport has to be selected from any one of the airports indicated in the table provided in **ANNEXURE - C** herewith.

(b) FOR INDIGENOUS PURCHASE:

Equipment shall be delivered on EX-EDN/BHEL, Bangalore basis, inclusive of packing & forwarding charges.

Packing shall be Road / Air / Rail worthy, best suitable for transshipment and to take care of transit damages.



Dispatch the consignments through EDN/BHEL approved transporters on Door Delivery basis furnished below.

- 1. M/s Awagaman Road Carriers Itd., Bangalore. (AWG)
- 2. M/s BLR India pvt., ltd., Bangalore. (BLR)
- 3. M/s Delhi Assam Roadways corporation ltd., Bangalore. (DRL)
- 4. M/s Indo Arya Central transport ltd., Bangalore. (IACT)
- 5. M/s Prakash parcel Services, Bangalore. (PPS)
- 6. M/s Road Carrier of India, Bangalore. (RCI)
- 7. M/s Union Roadways ltd., Bangalore. (URL)

Small consignments can be dispatched through M/S First Flight Couriers Ltd.

Transit insurance shall be arranged by BHEL. Vendor shall intimate the dispatch details to BHEL immediately after effecting shipment, to arrange transit insurance accordingly.

- **18.** <u>DELIVERY REQUIREMENT:</u> Equipment shall be delivered, as per the delivery schedule indicated in the RFQ.
- 19. <u>VALIDITY:</u> Quotation should remain valid for a period of **90 days** from the date of technical bid opening.
- **20.** BHEL reserves the right to RE-FLOAT/REJECT/CANCEL the TENDER ENQUIRY (RFQ) without assigning any reason or cause thereof. Quotes received against this TENDER ENQUIRY are subject to and governed by all these terms and conditions. BHEL's decision will be final in awarding of the contract and binding on all vendors.
- **21. REVERSE AUCTION:** BHEL reserves the right to resort to reverse auction / online Bidding before opening of price bid.

22. POST-ORDER REQUISITES:

- a) Pre-shipment inspection at vendor's works, if required, will be carried out by BHEL. Required assistance will have to be provided by the vendor at the time of pre-shipment inspection.
- **b)** Test certificates, Calibration certificates and warranty certificates as stipulated at the time of ordering shall be furnished.
- **c)** Items shall be dispatched by Air/Road/Sea worthy packing. Any damage and later rejection, due to poor / improper packing shall be to supplier's account.
- **d)** Any damage/rejection should be made good or replaced immediately without any extra cost to BHEL.
- **e)** Wherever commissioning is involved, it shall be carried out by the vendor's qualified engineers. Scope of work includes installation, commissioning and start-up trials till satisfactory performance level is reached as certified by BHEL.
- f) BHEL will not be responsible for any loss, damage or injuries to vendor's personnel sustained during installation / commissioning / start-up trials. Vendor shall ensure compliance with all statutory requisites as laid down by local bodies, state & Central Government.
- **g)** Performance Bank Guarantee to be executed on Rs.100/- non-judicial stamp paper as per BHEL prescribed format as given as Annexure (c).



- **23.** Any dispute arising out of this contract shall be referred to the sole arbitration of Head of Materials Management, Control Equipment, BHEL, EDN, Bangalore or any other officer nominated by him and his decision shall be final and binding on the parties. The venue of the arbitration in all cases shall be Bangalore.
- 24. All suits in respect of the above lie in the court of Jurisdiction of Bangalore (India) only.
- 25. Equipment shall comply with the standard requirements of ISO 14001 & OHSAS 18001.
- **26.** <u>REGRET LETTER:</u> In case, the supplier is unable / not willing to quote (for BHEL's registered vendors), a letter of regret shall be sent.

27. LOADING FACTORS:

Loading factors as detailed below will be added to the quoted price (basic) to evaluate the lowest quote for non compliance of BHEL standard commercial terms.

A(i). For non compliance of standard Terms of payment (For Foreign Purchase Orders)

SI. No.	BHEL standard term	If you quote	Loading factor in % for non-compliance
1	100% against "SIGHT DRAFT" on presentation of dispatch documents to our Bankers.	(a) 100% Through Letter of Credit (LC)	(a) 3.50 %
2	90% against "SIGHT DRAFT" + 10% against PBG (wherever PBG is involved)	(b) 90% Through Letter of Credit (LC)	(b) 2.25 %
3	75% against "SIGHT DRAFT" + 15% after commissioning + 10% against PBG (wherever commissioning & PBG is involved)	(c) 75% Through Letter of Credit (LC)	c) 1.875 %

A(ii). For non compliance of standard Terms of payment (For Indigenous Purchase Orders)

SI. No.	BHEL standard term	If you quote	Loading factor in % for non- compliance
1	100% within 30 days from the date of receipt (credit payment)	Payment through bank	2 % x percentage quoted through bank
		Payment against proforma invoice	1.25 % x percentage quoted through proforma invoice
2	90% within 30 days from the date of receipt + 10% against PBG (wherever PBG is	Payment through bank	2 % x percentage quoted through bank
	involved)	Payment against proforma invoice	1. 25 % x percentage quoted through proforma invoice
		100% within 30 days from the date of receipt & PBG	Nil



3	75% within 30 days from the date of receipt + 15% after commissioning + 10% against PBG (wherever commissioning & PBG is involved)	Payment through bank	2 % x percentage quoted through bank	
		Payment against proforma invoice 100% within 30 days and after commissioning &	1. 25 % x percentage quoted through proforma invoice Nil	
		PBG		

B. For non compliance of Penalty clause:

SI. No.	BHEL standard term	If you quote	Loading factor for non- compliance
1	Penalty of 0.5% per week	Not agreed.	10 %
	subject to max. of 10% on the	5% max., agreed.	5%
	basic value of the items not	Other than the above.	10% - (minus) agreed max. %
	supplied /delayed		

C. For non compliance of Performance Bank Guarantee (PBG):

SI. No.	BHEL standard term	If you quote	Loading factor for non- compliance
1	PBG for 10% of the basic	Not agreed.	10 %
	material cost shall be	5% agreed.	5 %
	furnished in the BHEL prescribed format.	Other than the above.	10% - (minus) agreed max. %

D. For Non conformance to delivery requirement indicated in the RFQ:

SI. No.	BHEL standard term	If you quote	Loading factor for non- compliance
1	Delivery requirement as indicated in the RFQ in number of weeks from the date of issue of PO or from the document approval	Not agreed for the stipulated delivery in the enquiry	1 % per week up to max. of 10% for the difference in period

E. For non compliance of Warranty:

SI. No.	BHEL standard term	If you quote	Loading factor for non- compliance
1	12 months from the date of	Not agreed.	6%
	dispatch or as indicated in the RFQ	Less than 12 months or as indicated in the RFQ	0.5 % per month for the difference in period





TECHNICAL BID (TO BE ENCLOSED WITH TECHNO-COMMERCIAL BID)

(for Foreign Purchase Orders)

SI. No.	Particulars	Bidder's confirmation
1	Price basis:	
	Firm i.e., from the date of PO to completion of supply	Acceptable / Not acceptable
	[Price Variation Clause (PVC) not acceptable]	
2	Terms of Payment: Against "SIGHT DRAFT" on presentation	
	of documents to our bankers.	
	(a) 90 % is payable on negotiation of complete set of original	(a) Acceptable / Not acceptable
	documents & balance 10% against submission of PBG (where	
	commissioning is NOT involved).	
	(b) 75 % is payable on negotiation of complete set of original	(b) Acceptable / Not acceptable
	documents, 15% after satisfactory commissioning & balance	
	10% against submission of PBG (wherever commissioning &	
	PBG is involved).	
	(c) Deviation if any please specify	(c)
	Note: Refer clause 12 above.	
3	BHEL's penalty clause:	
	(a) Delay in delivery as per PO delivery date will result in	(a) Acceptable / Not acceptable
	penalty of 0.5 % per week subject to maximum of 10% on the value of the items not supplier/delayed.	
	(b) Deviation if any Please specify	
	(b) Bertalier if any Floade opening	(b)
4	Performance Bank guarantee:	Yes / No
	PBG for 10% of the basic material cost shall be furnished in the	
	BHEL prescribed format as detailed in clause 15.	
5	Terms of delivery:	
	(a) F.O.B international Airport/Seaport as per clause 17	(a)Acceptable / Not acceptable
	Indicate name of International Airport/Seaport	
	(b) Deviation if any Please specify	(b)
6	Warranty:	
	(a) 12 months from the date of dispatch	(a)Acceptable / Not acceptable
	(b) Deviation if any Please specify	(b)
7	Delivery period: Indicate number of weeks from the date of	Weeks
	issue of Purchase order	
8	Validity:	
	(a) Quotation should remain valid for a period of 90 days from	(a) Acceptable / Not acceptable
	the due date	
	(b) Deviation if any Please specify	(b)



ANNEXURE - B

TECHNICAL BID (TO BE ENCLOSED WITH TECHNO-COMMERCIAL BID)

(For Indigenous Purchase Orders)

SI.	Particulars	Bidder's confirmation
No.		
1	Price basis: Firm i.e., from the date of PO to completion of supply [Price Variation Clause (PVC) not acceptable]	Acceptable / Not acceptable
2	Excise duty: If applicable indicate %.	Applicable / Not applicable ED:%
3	Sale tax: If applicable indicate %	Applicable / Not applicable (a) VAT% (b) CST% against form C
4	Payment terms: (a) 90 % basic + 100% taxes, duties & freight charges within 30 days from the date of receipt & balance 10% against submission of PBG (where commissioning is NOT involved)	(a) Acceptable / Not acceptable
	(b) 75 % basic + 100% taxes, duties & freight charges within 30 days from the date of receipt, 15% after satisfactory commissioning & balance 10% against submission of PBG (wherever commissioning & PBG is involved).	(b) Acceptable / Not acceptable
	(c) Deviation if any please specify Note: As per clause 12	(c)
5	BHEL's penalty clause: (a) Delay in delivery as per PO delivery date will result in penalty of 0.5 % per week subject to maximum of 10% on the value of the items not supplier/delayed. (b) Deviation if any Please specify	(a) Acceptable / Not acceptable (b)
6	Performance Bank guarantee (PBG): PBG for 10% of the basic material cost shall be furnished in the BHEL prescribed format as per clause 15.	Yes / No
7	Terms of delivery: (a) Ex EDN / BHEL, Bangalore (Free delivery to EDN/BHEL Bangalore including packing & forwarding charges) (b) Deviation if any Please specify	(a)Acceptable / Not acceptable (b)
8	Warranty: (a) 18 months from the date of dispatch or 12 months from the date of commissioning (b) Deviation if any Please specify	(a)Acceptable / Not acceptable (b)
9	Delivery period: Indicate number of weeks from the date of issue of Purchase order	Weeks
10	Validity: (a) Quotation should remain valid for a period of 90 days from the due date (b) Deviation if any Please specify	(a) Acceptable / Not acceptable (b)



ANNEXURE - C

LIST OF INTERNATIONAL AIRPORTS

SI. No	Country	Air Ports
1	Austria	Vienna, Linz, Graz
2	Australia	Sydney, Melbourne, Perth
3	Belgium	Antwerp, Brussels
4	Canada	Toronto, Montreal
5	China	Shangai
6	Cyprus	Lamaca
7	Czech Republic	Prague (Via Frankfurt)
8	Denmark	Copenhagen
9	Egypt	Cairo
10	Finland	Helsinki
11	France	Paris (Rossy), Lyon
12	Germany	Darmstadt, Manihiem, Nurnberg, Hamburg, Stutttgart, Munich, Koln,
40	l la a alca a a	Dusseldorf & Hannover, Frankfurt, Berlin
13	Hongkong	Hongkong Dama Milan Turin Balanca Flancasa
14	Italy	Rome, Milan, Turin, Bologna, Florence
15	Ireland	Dublin
16	Isrel	Telaviv
17	Japan	Tokyo, Osaka
18	Malaysia	Kaulalampur, Penang
19	Neatherlands	Amsterdam, Rotterdam
20	Newzealand	Auckland
21	Norway	Oslo
22	Oman	Muscat
23	Philiphines	Manila
24	Romania	Bucharest
25	Russia	Moscow
26	Saudi Arabia	Riyad
27	Singapore	Singapore
28	Slovakia	Bartislowa
29	South Africa	Johannesburg, Durban
30	South korea	Kimpo
31	Spain	Barcelona
32	Sweden	Stockholm, Gothenburg, Milano
33	Switzerland	Basle, Zurich, Geneva
34	Taiwan	Taipei
35	U.A.E.	Dubai
36	U.K.	Landon (Heathrow), Newcastle, Oxford, Cheltham, Bristol, Wellingborough, Birmingham, East Midland, Manchester, Leeds, Glasgow.
37	U.S.A.	Newyork, Chicago, Sanfrancisco, Los Angeles, Atlanta
38	Ukraine	Kiev



ANNEXURE-D

PERFORMANCE BANK GUARANTEE (FOR FOREIGN PURCHASE ORDERS)

BANK NAME AND ADDRESS

Bharat Heavy Electricals Limited (BHEL), Electronics Division, PB No. 2606, Mysore Road, BANGALORE- 560 026 INDIA

Dear Sir,

Ref: CONTRACT PERFORMANCE GUARANTEE.

Wŀ	HEREAS	you ha	ve ent	ered into a	a contrac	ct refere	ence					with M/s
 at					for the	cupply	- Of	having		ıts	registered	office
as	detailed	in you	r purch	nase orde	r No				wh		hereinafter	
as		"tne		said	cor	ntract"					HEREAS	
Gu	arantee	for 1	0% (Ten Per	cent)	of		tl	he co	ontract	en to produ price am	ounting to
its	obligatio	ons to	Electro	nics Divis	ion. BH	EL hav	ina i					elhi for the
pei	rformanc	e of	the	contract	includir	ng the	e w	arranty	of	the	equipment	supplied, hereby
exp M/s	oressly, i s	rrevoca	bly and	d unreserv	edly und	lertake _that i	and (guarante e even	ee as _l it Bha	principa arat H	al obligors o eavy Elect	on behalf of tricals Ltd.
											has	
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as	may be	determi	ned be	low:							 ,) Subject to
	•											
1)	Notwiths	standin	g any	right M/s.							may ha	ve directly
	against		you	or	an	У	dis	putes		raised	by	M/s
				11 1								shall be
	be bindi			o us tnat r	epaymei	nt is du	e und	ier the to	erms (or the s	said contrac	t and shall
2)				harged o					dertak	king a	nd Guarant	tee by any
		,			d Know	ledge c	r by	any alt			he obligation	ons of M/s.
	or other	wise.			<i>, ,</i> -					1 -7	, ,	

3) This guarantee shall remain valid until the end of twenty-four weeks after the close of the

warranty period or until the same is reported by BHEL to us whichever is earlier.



4)	We agree a writing by yo					_			g its va	alidity u	ınless di	scha	rged in
5)	This guaran discharged			a continui change			-			•	g and s Bank		not be M/s.
6)	This guarant	tee sha	all be g	overned by	and	constru	ıcted in	acco	rdance	with th	ne Laws	of In	dia.
7)	At any time paying to		Bharat	Heavy		Ban ectrical	•	rende td.	er this the (in	guarant full	tee null a amou		void by being words)

For and on behalf of Bank by its Authorised Signatory

Note:

- (1) To be executed in INR 100 Non-Judicial stamp paper by any authorized Indian Bank.
- (2) To be submitted directly by banker to concerned executive in purchase dept., Please give BHEL address to banker.
- (3) Do not enclose with Bank document.
- (4) Any Modification & omissions to this are not permitted



ANNEXURE - E

PERFORMANCE BANK GUARANTEE (FOR INDEGENOUS PURCHASE ORDERS)

	S DEED OF GUARANTEE made and executed on the day of (year), by the (Bank), registered under the
Com and t	panies Act 1956/Nationalised Bank constituted under the Banking Companies (acquisition transfer of undertakings) Act constituted under the State Bank of India Act / Subsidiary Banks having its registered / head office at represented in by its Branch Manager / authorised representative Sri &
herei Sri	in by its Branch Manager / authorised representative Sri &
its su	uccessors and assigns)
	IN FAVOUR OF BHARAT HEAVY ELECTRICALS LIMITED
and i	(Buyer's Name), a company registered under the panies Act, 1956 having its registered office at BHEL House at Siri Fort, New Delhi-100 049 its Electronics Division at Mysore road, Bangalore-26 (hereinafter referred to as the 'Company' ch term shall include its successors and assigns):
Whe	reas the company has placed an order on (State the name of the
and [·]	pany / firm and its address) (hereinafter referred to as the 'Supplier' which term shall mean include its liquidators, successors and assign) for the supply of system under order / tract NoDt
	WHEREAS the supplier has agreed to supply the materials and carryout the works as iled and in accordance with the terms set out in the said order/contract.
rendo is sa order Bank Bank Rupe perfo	WHEREAS the company is not required to pay to the supplier a sum of Rupees being the 10% of the value of the goods supplied / Works performed / Services ered under the said order / contract between the supplier and the company, till the company stisfied with the mechanical Warranties and the performance standards stipulated in the said r / contract between the company and the supplier has been duly fulfilled, except against a contract between the said sum of Rs in favour of the company by reputed company has agreed to make payment to the supplier of the said sum of the said sum of the supplier and the company and the supplier of the supplier and the company and the supplier of the supplier and the company and the supplier and the company and the supplier, agreed to furnish this Guarantee subject to the sand conditions stated below:
	V THIS DEED WITNESSES THAT IN pursuance of the above said agreement, the guarantor by agrees and covenants With company is as follows:-
Ĺ	That during the period this contract of Guarantee remains effectual, the guarantor shall be iable in respect of the amount due and owing to the company in respect of the payments to the extent of Rs (in words) against any loss or
	damage caused to or suffered by the company by reasons of any breach of the terms of the said order / contract / Agreement by the supplier.

2) The Guarantor hereby undertakes to pay the amounts due and payable under this guarantee without any demur, merely on demand from the company intimating that the amount claimed is due by way of loss or damage caused to or suffered or would be caused or suffered by the supplier of any terms contained in the said order / contract. Any such demand made on the



guarantor shall be conclusive as regards the amount due and payable by the Guarantor irrespective of the fact whether the Contractor / supplier admits or denies.

- 3) The Guarantor further agrees that the agreement herein contained shall remain in force and effect till all the supplies to be made / Works to be performed / Services to be rendered under the said order / contract / agreement are completed to the entire satisfaction of the company or till company certifies that the terms and conditions of the said order / contract / agreement have been fully and properly carried out by the said supplier and accordingly discharges the Guarantee. Unless a demand or claim under this guarantee is made on the guarantor in writing on or before the expiry of claim period indicated in clause 6 below, the guarantor shall be discharged from all the liability under this guarantee thereafter.
- 4) The guarantor further agrees with the company that the company shall have the fullest liberty without the consent of the guarantor and without effecting in any manner the obligations of the guarantor hereunder to vary any of the terms of the said order / contract / agreement or extend the time of performance by the said supplier from time to time or refrain from exercising the power exercisable by the company against the said supplier or to forebear or omit to enforce any of the terms and conditions relating to the said order / contract / agreement, and the guarantor shall not be relieved of its liability in whole or in part , by reason of any act, commission or forbearance on the part of the company or by reason of any such variation, or extension being granted to the said supplier or by reason of any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving the guarantor.
- 5) The guarantor undertakes not to revoke this guarantee during its currency except with the previous consent of the company in writing.

Notwithstanding anything herein	above	contained,	the liability	of the gua	arantor	under	these
presents is restricted to Rs			. The guar	antee sha	ll be in	force	till its
expiry on	unless	a demand	d is made	on the gu	arantor	withii	n SIX
months from the date of expiry,	all the	liability of	the guaran	tor under	this gua	rantee	shall
stand fully discharged. The dec	ision of	the claima	ant in regard	d to breach	h of cor	ntract is	s final
and binding on the Bank.							

IN WITNESS whereof, the guarantor, acting through it authorised representative has executed this deed of Guarantee on the day, month and year first above written.

(Seal of the Bank to be affixed)

WITNESS

1.

2.



ANNEXURE - F

BHEL MEMBER BANKS

PBG SHALL BE ISSUED FROM THE FOLLOWING BANKS OR THEIR BRANCH OFFICES ONLY

State Bank of India, CAG Branch 10 th Floor, Vijaya Building Barakamba Road, NEW DELHI - 110 001	Deutsche Bank, Tolstoy Marg, NEW DELHI - 110 001				
Canara Bank, 74, Janpath, NEW DELHI - 110 001	HDFC Bank Ltd, 5 TH floor, H T House, K G Marg, , NEW DELHI - 110 001				
Punjab National Bank, 74 Janpath, NEW DELHI - 110 001	CITI Bank NA, Jeevan Vihar Building, Sansad Marg NEW DELHI - 110 001				
Bank of Baroda, Corporation Banking Branch, 11 th Floor, BOB Building, Sansad Marg, NEW DELHI - 110 001	Standard Chartered Bank, H2, Block Connaught Place NEW DELHI - 110 001				
State Bank of Hyderabad, Surya Kiran Building, K G Marg, NEW DELHI - 110 001	ICICI Bank Ltd, ICICI Tower, Bisham Pitamah Marg, Pragati Vihar, NEW DELHI - 110 003				
State \Bank of Mysore, Antrikash Bhawan, K G Marg, NEW DELHI - 110 001	IDBI Bank Ltd, 19 K G Marg, Surya Kiran Building, NEW DELHI - 110 001				
State Bank of Mysore, Industrial Finance Branch, 18, Ramanashree Arcade,, M G Road, BANGALORE 0 560 001	HSBC Ltd, ECE House, 28K G Marg, NEW DELHI - 110 001				
State Bank of Travancore, Travancore House, IF Branch, NEW DELHI - 110 001					