		REQUEST FOR (	QUOTATIO	N						
H	PU:RF:003	BHARAT HEAVY ELECTRICALS LII Electronics Division PB No. 2606, Mysore Road Bangalore - INDIA		RFQ NUMBER: NVNM000003 RFQ DATE : 18.DEC.2008	Due Date 21.JAN.2009 Time: 13:00 HRS VENUE: NEW ENGG. BLDG					
inas	•	ur lowest quotation subject to our terms and conditions attact pe / Fax superscribed with RFQ no.and due date, should re- ne day								
2.QU 3.VEI THE 4.A I CO AB PEI 5.VEI DO 6.BHI BIE 7.VEI CO IF 8.VEI 9.DEI 10.TE	<ul> <li>I.TENDER / OFFER SHALL BE SUBMITTED IN TWO PARTS is "TECHNICAL BID" AND " PRICE BID" IN SEPARATE SEALED COVER.</li> <li>2.QUOTATONS MAY BE OEM OR THEIR AUTHORISED DEALERS.</li> <li>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</li> <li>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.</li> <li>5.VENOR IS ADVISED TO GO THROUGH THE TERMS AND CONDITIONS DOCUMENT CPD-00 ENCLOSED WITH RFQ.</li> <li>6.BHEL RESERVES THE RIGHT TO "REVERSE AUCTION" BEFORE THE PRICE BID OPENING.</li> <li>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.</li> <li>8.VENDOR HAS TO CONFIRM ALL THE CLAUSES IN THE SPECFICATIONS.</li> <li>9.DELIVERY REQUIRED: 31-03-2009</li> <li>10.TERMS OF PAYMENT :90% IN 30 DAYS FROM THE DATE OF RECEIPT &amp; ACCEPTANCE OF MATERIAL, BALANCE 10% AGAINST SUBMISSION PBG.</li> </ul>									
Sl No.		Description 03178 LT Distribution Panel as per PS-445-085	Qty	Unit Delivery	y qty Delivery Date 30.MAR.2009					
1		PS-445-085 00	1		1					
Total	Number o	f Items - 1								
<ul> <li>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.</li> <li>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.</li> <li>Please specify Terms of delivery, Excise duty, sales tax, Ex-BHEL, Ex-works surcharge, Insurance,P&amp;F, Freight and other taxes very clearly .</li> <li>i). This is only RFQ not an order.</li> <li>ii). In all correspondence quote RFQ No. &amp; due date.</li> <li>iii). In Quotation BHEL material code / RFQ Sl. No. should be mentioned clearly.</li> <li>iv). Quotation Envelope / Fax not superscribed with RFQ No.and due date is liable for rejection.</li> <li>v). Quotation should remain valid for a minimum peiod of 90 days from due date.</li> <li>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.</li> <li>vii). All Prices should be written in words and numbers.</li> <li>viii). Excise Chapter Heading should be mentioned for all items where VAT is applicable .</li> </ul>										
		whom RFQ has been sent: nics Division (X563699) - 6300042933								
1. DI	<u></u> , <u></u> 0			For and O	n behalf of BHEL.					

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	A4 – 10	GROUP	: TRAC	TION	ENGINEERING		PAGE	01	OF	16		
	TECHN		FICATIO		R LT DISTRIBU							
	1. QI	JANTITY REG	UIRED		NO. SWITCHBOARI EDERS	D WITH C	OMPONI	ENTS	&			
IMITED. pany	2. LC	DCATION			NTRE OF EXCELL IEL/EDN, BANGALO		DE),					
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED It must not be used directly or indirectly in anyway detrimental to the interest of the company.	3. AF	PPLICATION			ED FOR LT DISTR		AND AUX	XILIAF	RY			
r' ELECTI le interest												
SNTIAL T HEAVY ental to th												
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AND C erty of 1 anywa	Sect	ion I	:	Gen	eral Specifications							
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this docum	Anne	exure II	:		Information to be furnished by the tenderer along with the offer							
tion on ot be us	Anne	exure III	:	Sing	le Line Diagram and	d Layout D	)iagram -	3-661	-00-52	2647		
informa must n	Anne	exure IV	:	Bill c	of Materials							
The i	Anne	exure V	:	List	of Spares							
	Anne	exure VI	:	Pre-	Qualification Criteria	3						
	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.											
	REVISION	IS 00			APPROVED BY Ali Im							
				F	PREPARED BY	ISSUED	BY	D	ATE			
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	A4	- 11	GROUP : TRAC	STION ENGIN	EERING	PAGE 02	OF	16
				SECTION	<u>-1</u>			
			G	ENERAL SPECI	FICATIONS			
	1.0	<u>Site c</u>	onditions					
Ū	1.1	Ambie	ent Temperature	:	45°C			
.IMITE npany.	1.2	Relativ	ve humidity (%)	:	100 %			
ICALS L		<u>NOTE</u>	: Max. Ambient tempe	rature and relative	e humidity do not o	ccur simultar	eously.	
ELECTR	2.0	Powe	r supply available					
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in anyway detrimental to the interest of the company.	2.1	- Sho - L.T.A	age se quency rt circuit fault level A.C		415V ± 10% 3 φ, 4 wire 50Hz ± 3% 25 KA rms at 415			
COPYI ment is the form of the control of the contro		- Volta	age	:	240V AC for ACB Auto Transformer		anism an	ıd
The information on this docu It must not be used direct	2.3	- D.C - Volta	age	:	110V DC for ACB	and MCCB s	shunt trip	o coils



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#### PURCHASE SPECIFICATION

#### **GROUP : TRACTION ENGINEERING**

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#### SECTION II

#### DETAILED TECHNICAL SPECIFICATIONS

#### 1. <u>Standard of design:</u>

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		e chann 1 shippii			100mm	n heig	ght pai	nted bl	ack sha	II be pro	ovided. Tl	ne pan	els sh	all
	2.10		vable ca be undril									e panel. <sup>-</sup>	These	plates	i
	2.11	All fast washe		shall be	e zinc b	bichrom	nated	l and p	assivat	ed. All b	oolts sha	all be with	n spring	g	
ITED. ny.	2.12	Provis	sions sha	all be n	nade fo	or lifting	g and	l handl	ing, for	exampl	le, by e	/e-bolts/	lifting	beam	6.
CALS LIM the compa	2.13		steel su be mach								narks. <i>A</i>	All openin	gs & c	utouts	i
ECTRIC erest of	2.14	At lea	ast two h	ninges	shall be	e provic	ded f	for eac	h hinge	ed door.					
COPYRIGHT AND CONFIDENTIAL this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. ed directly or indirectly in anyway detrimental to the interest of the company.	2.15	Exterio Powde Interio	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 nterior : Front and Rear - RAL 9002 Grey; End Cover - RAL 5012 Blue Powder Coated with Glossy Finish												
COPYRIGHT AND CONFIDENTIAL ent is the property of BHARAT HEAV or indirectly in anyway detrimental to	2.16	phospl	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.										nd		
DPYRIC t is the j indirec	2.17	For Bil	ill of mat	erial se	ee Anr	nexure	IV								
CC ocumen ectly or	2.17	<u>GENE</u>	ERAL IN	STRUC	CTION	<u>S</u> :									
n on this d be used dir	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.									he				
ormatio ust not	2.17.2	The di	ispositic	n of co	ompone	ents, wi	iring e	etc. sh	all be i	dentical	for sim	ilar units.			
The information on 1 It must not be us	2.17.3		oors sho									h concea nt obstruc			
	2.17.4	Door s	shall be e is swite	so inte	erlocked	d that it	t canr	not be	openeo	d unless	s the po	hout oper wer-disco oor interlo	onnecti		r.
	2.17.5	Meters	s and si	gnal la	imps (C	DN/OFF	/TRI	IP) sha	ll be pr	ovided	on the c	rable heig loor. Eme ccidental	ergenc		

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											1			
	2.18	Mounti	ng of com	ponents										
	2.18.1	All con	nponents	shall be	mounte	ed in si	uch a	manne	er as to	facilitate	easy acces	ssibility	<i>'</i> .	
ED.	2.18.2		wer most tom level								than 250m nce.	nm fron	n	
COPYRIGHT AND CONFIDENTIAL this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. ed directly or indirectly in anyway detrimental to the interest of the company.	2.18.3	the par	nel to faci ot exceed	litate eas	y readi	ing. Th	ne ma	ximum	operati	ing height	om the bott t of any de be less tha	vice		
ELEC <sup>7</sup> e interes	3.	<u>Busba</u>	rs and B	us Conn	ection	<u>s</u>								
TIAL IEAVY al to the	3.1	The bu	ısbar arra	ngement	and ra	ting sl	hall ge	enerally	y confoi	rm to IS:3	75			
FIDEN RAT H triment	3.2	Busba	r Material	:										
O CON of BHA way de	3.2.1	Power	bus shall	be of Tir	nned, E	lectric	al gra	ide cop	oper of r	ating 100	00A – 4 nui	nbers.		
HT ANI operty y in any	3.2.2	Auxilia	ry Distribu	ution bus	shall b	e of si	ize 25	5x8 mm	1. – 4 nu	umbers.				
COPYRIGHT AND CONFIDENTIAL cent is the property of BHARAT HEAV or indirectly in anyway detrimental to	3.2.3	The cr mainta	oss-sectio ined as 1	on shall b 3 A/mm	e unifo ² maxim	orm thr num.	rougho	out the	length.	Current o	density to t	be		
C nis docume d directly c	3.2.4		nce shall ded in the				n in se	ection b	by bolt h	oles and	l stab-in h	oles		
	3.3	Mecha	nical arra	ngement	of bus	bars.								
The information on It must not be us	3.3.1	All pov	ver bus jo	ints shal	be des	signed	to pr	event c	overhea	ting.				
The inf It m	3.3.2	retarda		ast/SMC	insulat						uishing and rigidly held			
	3.3.3 The clearance between phase buses and between phase to less than 25 mm. Abnormal conditions such as short circuit reduce the distance between the busbars and connections acceptable values. In case such clearances are not possible shall be provided.						uits shall Is below t	not perma he minimu	nently m					
	3.3.4	This sł		ne throug	gh coloi						be as per l ons are to			

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	4.	Labe	lling, wiring and termination:					
			anel shall be completely factory assembled and wired. A nation shall be strictly as per the schematic drawings to b					
	4.1	Labe	ls.					
11TED. uny.	4.1.1		entification nameplate indicating the designation of the p ox. the center of the panels (lengthwise).	anel shall b	be affixed at			
CALS LIN	4.1.2		vertical section identification and designation numbers sh panel as specified.	all be suita	ably indicated or	ı		
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in anyway detrimental to the interest of the company.	4.1.3	funct shall breal indica ident	scription label of anodised aluminium bearing the descri ional unit shall be provided on the door of the compartme also be provided for signal lamps, operating handles of kers, push buttons etc., which are available on the front of ating its purpose and modes of operation. Each TB shall ified by an inscription label. Inscription details shall be fin meering.	nt. Inscrip switches, f the door also be	otions			
(T AND CC pperty of B in anyway	4.1.4		compartment shall be clearly labelled on the base plate matic diagram by aluminium anodised labels.	as per the				
COPYRIGH ment is the pr y or indirectly	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.						
n on this docu se used direct	4.2	distril	CB power connections shall be done by copper busbars o bution feeders shall be wired using single core PVC insul uate cable size to be used for the given current rating of t	ated coppe	er cables.			
information t must not l	4.3		rol wiring shall be done by 1100 V grade PVC insulated s uctor of min. cross section 1.5 mm <sup>2</sup> as per IS:694.	ingle core	copper			
The	4.4		ires shall be run properly and fixed neatly and shall allow ponents. Control wires shall be bunched.	clear acce	ess to all			
	4.5		iring shall be arranged and supported in such a manner t n on the terminations.	nat there s	shall be no			
	4.6		g between 2 devices shall have no splices or joints. Conterminals only. Not more than 2 wires shall be terminated					
	4.7		wire shall be identified at each end in accordance with the indelible ferrules.	ie schema	itic diagram			
	4.8		wiring shall be done by flexible cables in non-metallic fle no mechanical damage can occur to the wiring as a resul					

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	4.9		vays shall be smooth & entirely free from sharp edges, burrs, on of the insulation on conductors.	fins, etc. that may cause					
	4.10	should	shall not, as far as possible, be connected in parallel. However be done after taking extra precautions of keeping the same al, same cross section, same insulation type and terminated	length, same conductor					
	4.11	All con	nections external to the module shall brought to accessible	terminals.					
LIMITED. mpany.	4.12		ng power terminations shall be designed for connecting 3, 3 selected as per the following guidelines.	<sup>1</sup> / <sub>2</sub> or 4 core aluminium					
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in anyway detrimental to the interest of the company.	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 16mm <sup>2</sup> . 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.							
o CONF of BHAI way det	5	Earthing & Protection							
COPYRIGHT AND CONFIDENTIAL ent is the property of BHARAT HEAV or indirectly in anyway detrimental to	5.1	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.							
COPY is document is directly or inc	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.							
information on thi t must not be used	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.							
The	5.1.3	faulted	nort circuit protection shall be so graded that the short circuit I branch without affecting the other outgoing branch circuits outgoing branch circuit.						

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5.2.1		sion shall be made to connect earth continuity conductors fro outgoing cables.	om incoming
5.2.2		ne earthing of the withdrawable part, a spring loaded scrapping an effective connection to the earth bus.	ng earth shall be provided
6	<u>Tests</u>		
uLS LIMITEI le company.	give	supplier on the panels shall perform the following tests. The three weeks clear notice to enable the purchaser or their rep ne tests for panels.	
1.6 CTRIC	Routi	ne Tests	
1.1.6 Htteinter	Physi	cal Inspection	
COPYRIGHT AND CONFIDENTIAL       The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED.       It must not be used directly or indirectly in anyway detrimental to the interest of the company.       1	Insulat Check of com Function	Check for overall mounting dimensions and painting with redrawings. Checking with respect to General Arrangement like feeder designation, mounting of components, termination arrange connections. Checking of mechanical interlocks like door interlock etc. Checking of mechanical work like doors and covers, gaske movement etc. Checking of Busbar sizes as per approved drawings. ing of protective measures and earthing in line with relevant tion resistance measurement and HV test in line with relevant ing with respect to final schematic diagrams for technical data ponents, wiring and terminations.	arrangement and ment, buses, wiring and ets, surface finish, standards. It standards. ta, ratings and settings



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#### 7 Documentation

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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		<u>ANNEXURE – I</u>								
		LIST OF STANDARDS								
	1.	IS: 8623 : Specifications for low voltage switchgear and con	ntrol gear assemblies.							
Ö	2.	IS:13947: Specification for low voltage switchgear and con	trol gear assemblies.							
S LIMITE company.	3.	IS:2147 : Degrees of protection provided by enclosures for and control gear.	low voltage switchgear							
CTRICAL est of the c	4.	IS:8544 : Specification for Motor Starters for voltages not e 1000V AC.	xceeding							
COPYRIGHT AND CONFIDENTIAL c information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in anyway detrimental to the interest of the company.	5.	IS: 375 : Marking and arrangement for switchgear, busbars auxiliary wiring.	s, main connection and							
COPYRIGHT AND CONFIDENTIAL ent is the property of BHARAT HEAV or indirectly in anyway detrimental to	6.	Ğ								
ONFII BHAR/ Iy detrii	7.									
AND C erty of 1 anywa	8.	IS:694 : PVC Insulated cables for working voltages upto 1	100 Volts.							
AIGHT ne prop ectly ir	9.	IS:2551 : Danger notice plates.								
COPYR ent is th or indir	10.	IS:8923 : Warning symbols for dangerous voltages.								
docum										
on this e used c										
The information on t It must not be use										
ne infor It mus										

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	INFORM			OFFE	в						
		ATION TO BE FURNISHED BY THE TENDERER ALONG			_	a of					
		of typical feeders with ACB/MCCB rating and specifications li us components / equipment selected. Bill of Material for item				iy ui					
D.	2. Draw	rings									
JMITE npany.	i) G	A drawings indicating									
COPYRIGHT AND CONFIDENTIAL this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. ed directly or indirectly in anyway detrimental to the interest of the company.	-	Arrangement of power and control busbars, sizes etc. with s Facia of typical feeders Cable alleys and cable entries. Mounting arrangement Door interlocking arrangement Equipment disposition for typical feeder	upporting (	calcula	tions						
NFIDENTIA ARAT HEA detrimental t	<ul> <li>Panel wise proposed OGA drawings indicating the shipping section and foundation details, weights and dimensions</li> </ul>										
ND CC ty of BI myway	3. Refe	rence list									
COPYRIGHT AND CONFIDENTIAL ent is the property of BHARAT HEAV or indirectly in anyway detrimental to	<ol> <li>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.</li> </ol>										
CO his document ed directly or		for 2 numbers of Auto Transformers shall be quoted separa for total price only, as a package.	tely. Price	evalua	tion wi	ll be					
		<u>ANNEXURE – III</u>									
The information on It must not be us	For elect	rical connections refer the single line diagram called in the in	dex sheet.								



## **GROUP : TRACTION ENGINEERING**

P.S NO. : PS/445/085

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	СОМРО	NENT	SPECIFICATION	APPROVED MAKES
pany.	Air Circui	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
it must not be used directly or indirectly in anyway detrimental to the interest of the company.	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
ay detrimer	resistors	g lamp with e, 110V DC	3SB Type, Colours as specified in Scheme	Siemens
3m fr	Push Bu		3SB Type, Colours as specified in Scheme	Siemens
	HRC Fu	se link	Blade type	Siemens, GE Power Controls, L&T, Bussmann
		Switches. ent Selector		Kaycee / Salzer
	Voltmete Ammete		Analog – 96 x 96. mm.	Meco / AEL
	Door Sw switch ty	itch Limit pe	5A, 230 V	-
		nination lamp	CFL, 20W, 230 V AC	-
	Current	Transformers	Ring type with bar primary	Kappa, Kalpa, Instrans
	Current a Transdu	and Voltage cers	Dual outputs – 4-20mA	Meco, AEL, Elster, Southern Transducers
		nsformer	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



**GROUP : TRACTION ENGINEERING** 

P.S NO. : PS/445/085

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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 with Motor Supply Voltage – 240V AC. Input – 415V; Output: 0-440V – 150A Oil Cooled. Loose Supply.	1
AT2	Auto Transformer – 3 phase, manual. Input – 415V; Output: 0-440V – 20A Mounted in Panel	1

#### 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 list and has to be considered with adequate rating.

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#### PURCHASE SPECIFICATION

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Features:

	Component	Feature	Quantit
	ACB Feeder	ON/OFF Push Button	2 sets
		Emergency Trip Push Button	
		ON/OFF/TRIP LED Indication Lamp Local / Remote Selection Switch	
		Current Transformers – 3 numbers with Ammeter with	
		ASS	
		Current Transducers – 1 per phase	
any		Voltage Transducers – 1 per phase	
		Voltmeter with VSS and fuses	
the c	MCB	MCBs to be mounted inside with knobs operable on	57 sets
toff	Feeders MCCB	front door MCCBs to be mounted inside with handles operable on	13 sets
srest	Feeders	front door	13 5015
inte	T CCUCIS	ON/OFF LED Indication Lamp	
o the		Current Transformers – 3 numbers with Ammeter with	
tal to		ASS	
men	Incomer	R, Y, B Indication Lamps	1 set
letri		Voltmeter with VSS and fuses	
/a /		Auxiliary Contactor – 3 numbers with fuses and 415V AC coil	
n An		Current Transformers – 3 numbers with Ammeter with	
in		ASS	
ectly	МССВ	MCCBs to be mounted inside with handles operable on	1 set
ndire	Feeder for	front door	
ori	110V DC	ON/OFF LED Indication Lamp	
ctly		Shunt – 1 number with Ammeter	
It must not be used directly or indirectly in anyway detrimental to the interest of the company.		Auxiliary Contactor – 1 number with fuses and 110V DC coil	
used	МССВ	MCCBs to be mounted inside with handles operable on	1 set
be	Feeder for	front door	
t not	240V AC	ON/OFF LED Indication Lamp	
snu		Current Transformer – 1 number with Ammeter	
It		Auxiliary Contactor – 1 number with fuses and 240V AC	
-	Auto	coil Increase / Decrease Push Buttons on Panel	1 set
	Transformer	Local / Remote Selection Switch	1 501
	– AT1	Provision for Increase / Decrease Push Buttons from	
		Remote	
		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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
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REV. NO : 00

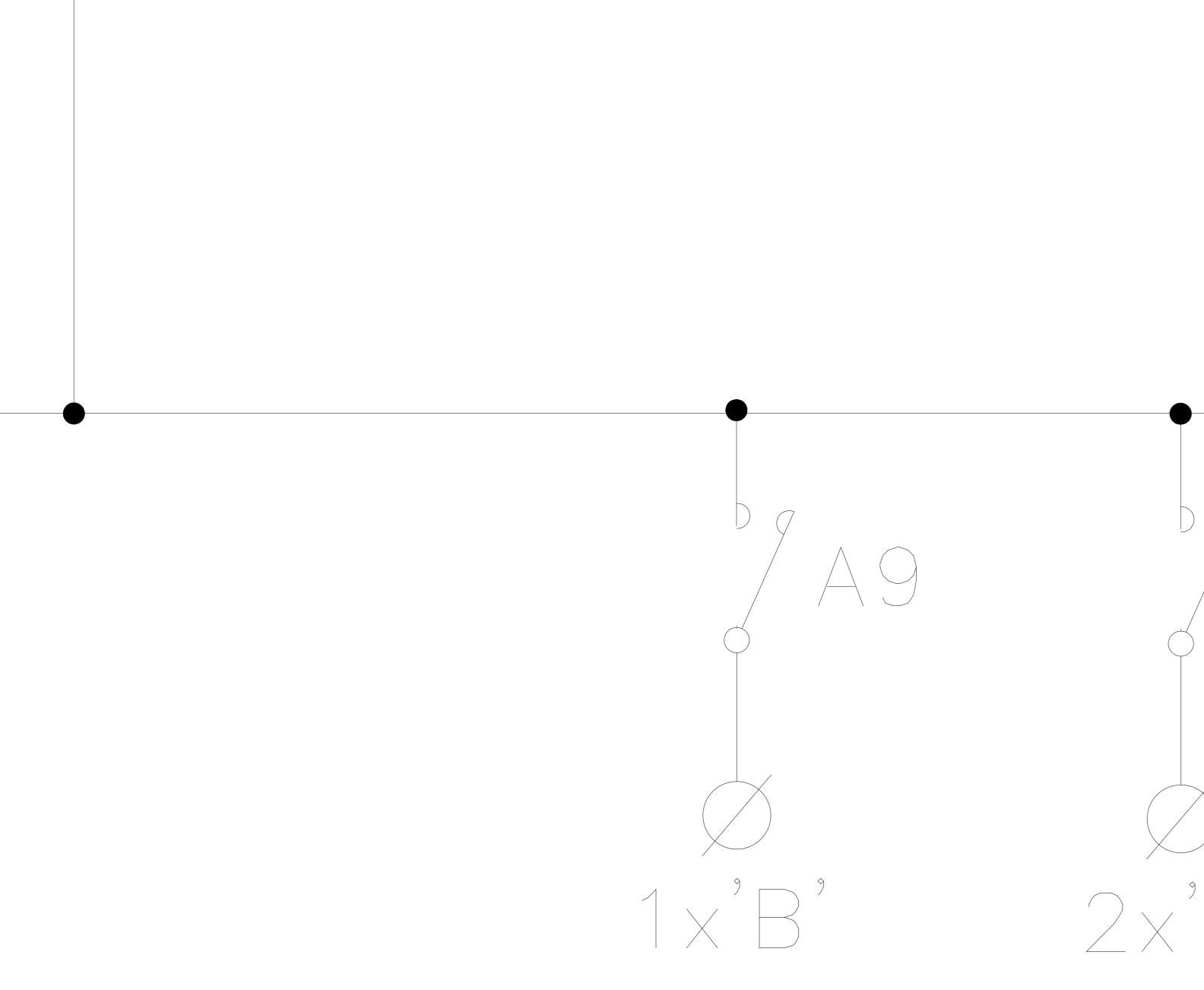
PAGE 15 OF 16

,		No. Item	Quantity required	Quantity used	Quantity offered	Unit Price *
lITED. uny.	1	Shunt trip coil for ACB	1 of each type			
	2	Auxiliary contacts for ACB	2 of each type			
LIN	3	Motor for ACB	2 of each type			
f the cc	4	Shunt Trip coil for MCCB	1 of each type			
ECTR	5	Auxiliary contacts for MCCB	1 of each type			
L VY EI the in	6	МССВ	1 of each type			
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in anyway detrimental to the interest of the company.	7	MCB 25 A	5			
	8	MCB 6A	6			
	9	MCB 2A	10			
of BHA way de	10	Push Buttons	10% of each colour and type			
perty of in any	11	Pilot Lamps	20% of each colour and type			
ctly	12	VSS and ASS	3 each			
the dire	13	Control Switches	3 each			
nt is r in	14	Indicating Meters	2 of each type			
locume rectly c	15	Auxiliary Contactors (110V DC)	5			
n this d used di	16	Auxiliary Contactors (415V AC)	1			
not be	17	Auxiliary Contactors (240V AC)	1			
inform [t must	18	Current Transformers	1 of each type			
The	19	Terminal Blocks	10% of each type			
	20	Brushes for Auto Transformers	2 sets each			
I	21	Current Transducer	2 of each type			
	22	Voltage Transducer	1 of each type			

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	вңн	GROUP : TRACTION ENGINEERING	REV. NO	:00		
	A4 – 11		PAGE	16	OF	16
		ANNEXURE-VI PRE QUALIFICATION CRITERIA				
TIAL TEAVY ELECTRICALS LIMITED. al to the interest of the company. 2. 2. 3. 3. 4. 5. 5.	dealers alo cannot quo Offer shall I in the equip effect to be The vendor supplied ar operating s date of inst The vendor commission after sales The vendor supplied, at representat The vendor commission <b>Note:</b> Pre qualific their custor The Pre qu	should have the capability to design LT Distribution Boads. d installed 3 nos. of similar Boards in India during the past 5 atisfactorily for at least past one year. The details of the cust allation etc. to be provided. or their authorized service representatives shall have traine ning & service for the offered equipment and shall be in a pos- service and spares support for our installations. shall be in a position to undertake AMC or provide service s fer the expiry of the warranty / guarantee period either direct ive. shall furnish a comprehensive warranty for at least 12 mont	ed Represe quipment. A leclaration t He should I years and omers with d engineers sition to pro support for t tly or throug hs from the e vendor / fe EL and at its	Intative It the p to the a these contac s for vide p he equ h a se date c sole o	e/Deal parts u above Iready must k ct deta rompt uipmen rvice of	er ised be iils, nt



	3	



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TO ACB AND AUTO TRANSFORMER MOTORS THROUGH MCCB OF ADEQUATE RATING.

# RATING OF ITEMS

MCCB-150A, 415V	
MCCB-150A, 440 $V$	
ACB-1000A, 690V	
MCCB-150A, 415V	
ACB-1250A, 690V	
MCCB-200A, $415V$	

(ALL DIMENSIONS ARE IN mm)	
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/MCCB OF ADEQUATE RATING.

SHUNT TRIP COILS OF ACBS & MCCBS

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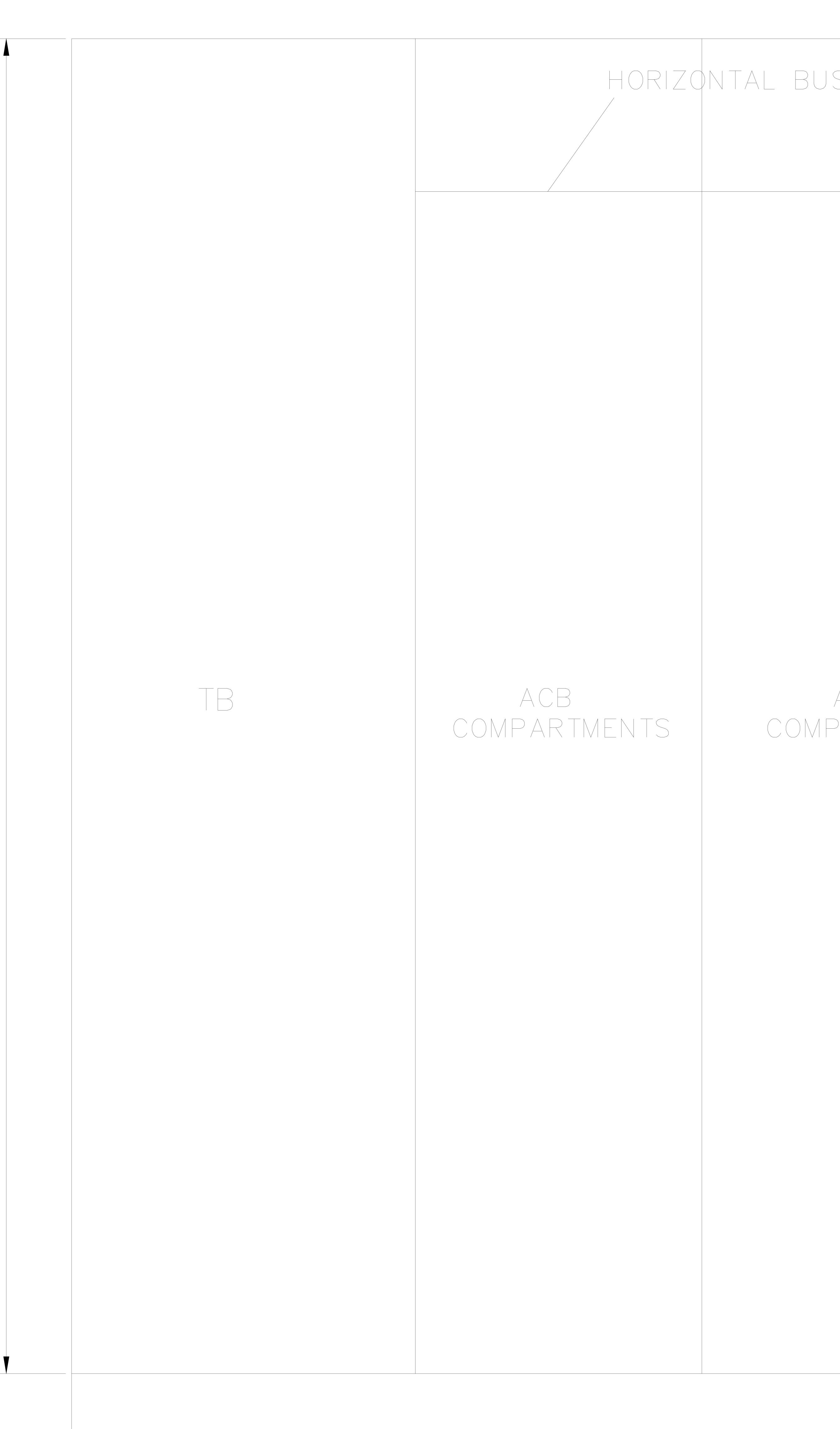
BUSBARS	
5 A - 1 2	
SA - 15	

	$\bigcirc \land \frown \land \bigcirc $
$240$ $\vee$	2 A - 3 O

CB-3 | MCCB-25A, 415VCCB-4 | MCCB-63A, 415V $\mathsf{NCCB-25A}, 415\mathsf{V}$  $\mathsf{MCCB-25A}, 440\mathsf{V}$ Q3 MCCB-63A, 415V

	NGLE PROJECTION		3	4			6	(ALL DIN 7	MENSIONS ARE I
EAVY ELECTRICALS LTD. IT MUST THE NTEREST OF THE COMPANY.	DBC: NO.			HORIZONTAL BU	JSBAR-2500A-3ø,4wir				
THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HINDER USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO				ACB PARTVENTS COM	ACB PARTVENTS CC	ACB MPARTVENTS	SOVER+ACB A3		
ATE REF. DRG. No. 3 661 00 5264702					IPPING SECTION	TENDERER, DEPTH TO	BE IDENTICAL IN AL	L PANELS.	
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(ALL DIMENSIONS ARE IN mm)

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(A Government of India undertaking)

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

**Electronics Division** 

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. <u>TWO PART BID:</u> Quotation shall be submitted in two part bid i.e.
  - a) <u>Techno-commercial i.e., Un-priced Bid:</u> 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.
- <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.



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. <u>PENALTY</u>: 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.

PBG: 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.** <u>WARRANTY:</u> 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 Itd., 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. <u>REVERSE AUCTION:</u> 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	lf 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	lf 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 involved)	Payment through bank	2 % x percentage quoted through bank
		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	Payment through bank	2 % x percentage quoted through bank
	PBG (wherever commissioning & PBG is	Payment against proforma invoice	1. 25 % x percentage quoted through proforma invoice
	involved)	100% within 30 days and after commissioning & PBG	Nil

#### 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	Other than the above.	10% - (minus) agreed max. %
	prescribed format.		

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

SI. No.	BHEL standard term	lf 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	Less than 12 months or	0.5 % per month for the
	RFQ	as indicated in the RFQ	difference in period



#### **ANNEXURE - A**

#### 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)
2	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	(a) Acceptable / Not acceptable
	value of the items not supplier/delayed.	
	(b) Deviation if any Please specify	(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)

Signature of renderer / with seal



#### **ANNEXURE - B**

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

#### (For Indigenous Purchase Orders)

SI. No.	Particulars	Bidder's confirmation
1	<b>Price basis:</b> 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	<ul> <li>BHEL's penalty clause:</li> <li>(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.</li> <li>(b) Deviation if any Please specify</li> </ul>	(a) Acceptable / Not acceptable (b)
6	<b>Performance Bank guarantee (PBG):</b> PBG for 10% of the basic material cost shall be furnished in the BHEL prescribed format as per clause 15.	Yes / No
7	<b>Terms of delivery:</b> (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	<b>Delivery period:</b> 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, Dusseldorf & Hannover, Frankfurt, Berlin		
13	Hongkong	Hongkong		
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		



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#### **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.

WHEREAS you have entered into a contract reference No PO NO with M/s							
	having	its	registered	office			
atfor the supply of			_				
as detailed in your purchase order No.		which is	hereinafter r	eferred to			
as "the said contract"	and	W	HEREAS	M/s			
	_ has	undertal	ken to produc	ce a Bank			
Guarantee for 10% ( Ten Percent ) of	the	contract	price amo	unting to			
(			/	to secure			
its obligations to Electronics Division, BHEL having its registered office at New Delhi for the							
performance of the contract including the warranty of the equipment supplied,							
We Bank ,				hereby			
expressly, irrevocably and unreservedly undertake and guarantee as principal obligors on behalf of							
			leavy Electr	icals Ltd.			
(B.H.E.L.) declares to us in writing that M/s has not fulfilled							
any obligation according to the contractual obligation of the said contract, to pay you on demand							
and without demur to Bharat Heavy Electricals Ltd., Electronics Division , Mysore Road, P.B.No.							
2606, Bangalore-560 026, India an ar	nount of		(in	words			
			)	subject to			

as may be determined below:

- Notwithstanding any right M/s. \_\_\_\_\_\_ may have directly against you or any disputes raised by M/s \_\_\_\_\_\_, Your written demand shall be conclusive evidence to us that repayment is due under the terms of the said contract and shall be binding on us.
- 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 and undertake not to revoke this guarantee during its validity unless discharged in writing by you subject to the provision of clause (7) below.
- 5) This guarantee shall be a continuing guarantee subject to the foregoing and shall not be discharged by any change in the constitution of the Bank or M/s.
- 6) This guarantee shall be governed by and constructed in accordance with the Laws of India.
- 7) At any time \_\_\_\_\_\_ Bank may render this guarantee null and void by paying to Bharat Heavy Electricals Ltd. the full amount being (in 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)

THIS DEED OF GUARANTEE made and executed on the \_\_\_\_\_ day of \_\_\_\_\_ (year), by the \_\_\_\_\_\_ (Bank), registered under the Companies Act 1956/Nationalised Bank constituted under the Banking Companies (acquisition and transfer of undertakings) Act constituted under the State Bank of India Act / Subsidiary Banks Act, having its registered / head office at \_\_\_\_\_\_ represented herein by its Branch Manager / authorised representative Sri. \_\_\_\_\_\_ & Sri. \_\_\_\_\_\_ (Hereinafter called 'guarantor ' which term shall mean and include its successors and assigns)

#### IN FAVOUR OF BHARAT HEAVY ELECTRICALS LIMITED

(Buyer's Name), a company registered under the companies Act, 1956 having its registered office at BHEL House at Siri Fort, New Delhi-100 049 and its Electronics Division at Mysore road, Bangalore-26 (hereinafter referred to as the 'Company' Which term shall include its successors and assigns):

 Whereas
 the
 company
 has
 placed
 an
 order
 on

 (State the name of the company / firm
 and its address) (hereinafter referred to as the 'Supplier' which term shall mean and include
 its liquidators, successors and assign) for the supply of system under order
 /

 Contract No\_\_\_\_\_\_Dt
 \_\_\_\_\_\_\_.

AND WHEREAS the supplier has agreed to supply the materials and carryout the works as detailed and in accordance with the terms set out in the said order/contract.

AND 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 rendered under the said order / contract between the supplier and the company, till the company is satisfied with the mechanical Warranties and the performance standards stipulated in the said order / contract between the company and the supplier has been duly fulfilled, except against a Bank Guarantee for the said sum of Rs\_\_\_\_\_\_ in favour of the company by reputed Bank, in which case the company has agreed to make payment to the supplier of the said sum of Rupees \_\_\_\_\_\_ being ( ...% ) of the value of the goods supplied / Works performed / Services rendered under the agreement between the supplier and the company and the Guarantor has at the request of the supplier, agreed to furnish this Guarantee subject to the terms and conditions stated below:

NOW THIS DEED WITNESSES THAT IN pursuance of the above said agreement, the guarantor hereby agrees and covenants With company is as follows :-

- 1) That during the period this contract of Guarantee remains effectual, the guarantor shall be liable 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.
- 6) Notwithstanding anything herein above contained, the liability of the guarantor under these presents is restricted to Rs\_\_\_\_\_\_. The guarantee shall be in force till its expiry on \_\_\_\_\_\_ unless a demand is made on the guarantor within SIX months from the date of expiry, all the liability of the guarantor under this guarantee shall stand fully discharged. The decision of the claimant in regard to breach of contract is 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,	Deutsche Bank,			
CAG Branch 10 <sup>th</sup> Floor, Vijaya Building	Tolstoy Marg,			
Barakamba Road, NEW DELHI - 110	NEW DELHI - 110 001			
001				
Canara Bank,	HDFC Bank Ltd,			
74, Janpath,	5 <sup>TH</sup> floor, H T House, K G Marg, ,			
NEW DELHI - 110 001	NEW DELHI - 110 001			
Punjab National Bank, 74 Janpath,	CITI Bank NA,			
NEW DELHI - 110 001	Jeevan Vihar Building, Sansad Marg			
	NEW DELHI - 110 001			
Bank of Baroda,	Standard Chartered Bank,			
Corporation Banking Branch, 11 <sup>th</sup> Floor,	H2, Block Connaught Place			
BOB Building, Sansad Marg, NEW DELHI	NEW DELHI - 110 001			
- 110 001				
State Bank of Hyderabad,	ICICI Bank Ltd,			
Surya Kiran Building, K G Marg,	ICICI Tower, Bisham Pitamah Marg, Pragati			
NEW DELHI - 110 001	Vihar,			
	NEW DELHI - 110 003			
State \Bank of Mysore,	IDBI Bank Ltd,			
Antrikash Bhawan, K G Marg, NEW	19 K G Marg, Surya Kiran Building,			
DELHI - 110 001	NEW DELHI - 110 001			
State Bank of Mysore,	HSBC Ltd,			
Industrial Finance Branch, 18,	ECE House, 28K G Marg, NEW DELHI -			
Ramanashree Arcade,, M G Road,	110 001			
BANGALORE 0 560 001				
State Bank of Travancore,				
Travancore House, IF Branch,				
NEW DELHI - 110 001				
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