



BHARAT HEAVY ELECTRICALS LIMITED

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(A Government of India Undertaking)
HIGH PRESSURE BOILER PLANT
PURCHASE DEPARTMENT - FOSSIL BOILERS
THIRUCHIRAPALLI - 620014
TAMILNADU (INDIA)

PHONE :2577645
GRAMS : BHARATELEC
FAX NO: 2520719
E-mail: srchandran@bheltry.co.in
Web:

429-002/A

Vendor Code : 23505	Enquiry No	Enquiry Date	Due Date for Quotation
Vendor Name : Open Tender Dummy Code Australia	2681400037	16.12.2014	19.01.2015
Please quote Enquiry No, Date and due date in all correspondences. This is only a request for quotation and not an order. Bid should be submitted in Two Parts. 1. Techno-commercial Bid (Part-I) and 2. Price Bid (Part-II) in a separate sealed cover and both the covers must be placed in a Third Cover and Sealed. Our Enquiry No., Enq. date & Enq. Due date must be written on all Three covers.			

Item	Description	Unit	Quantity	Delivery Quantity	Schedule Date
10	SPECIFICATION FOR 5 T TROLLEY ASSEMBLY WITH HOIST & CT MECHANISM FOR OUTDOOR GANTRY CRANE as per the Qualifying Criteria in PART-A and Specification & Scope of work as per SI.No:1 to 1.4.7 in PART-B.	NO	1.000	1.00	30.05.15
20	SPECIFICATION FOR 5 T TROLLEY ASSEMBLY WITH HOIST & CT MECHANISM FOR OUTDOOR GANTRY CRANE as per the Qualifying Criteria in PART-A and Specification & Scope of work as per SI.No:2 to 2.4.7 in PART-B.	NO	1.000	1.00	30.05.15
30	SPECIFICATION FOR LT MECHANISM COMPONENTS FOR 5T OUTDOOR GANTRY CRANE as per the Qualifying Criteria in PART-A and Specification & Scope of work as per SI.No:3 to 3.9 in PART-B.	NO	1.000	1.00	30.05.15

General Note:

1. Please submit your detailed offer in two part bid system i.e Part-I. Technical bid+ Checklist (Annexure-A) + unpriced bid with indicating taxes & duties (Annexure-B) in a sealed cover super scribing on the cover as "TECHNICAL & COMMERCIAL BID / PART-II"
Part-II. Priced offer in another separate sealed cover super scribing on the cover as Part-II

Both the covers shall be duly super-scribed with tender reference and due date of opening. These covers shall be put in a single cover duly super-scribed with tender reference and due date of opening and addressed to us.

2. Point-to-point confirmation to BHEL's specification and commercial terms & conditions shall be provided Annexure-A. All the Annexures should be filled and submitted along with the technical bid (no row shall be left blank), else your offer is liable for rejection.

3. Offers with validity of less than 120 days and non-acceptance of LD

The offers should reach us 30 minutes before the time of opening of tenders. The offers will be opened at 14.30 hrs on the due date of tender in the presence of tenderers who have submitted their offer and who may like to be present for the tender opening. Late and delayed offers are liable to be rejected.

Yours faithfully,
For BHARAT HEAVY ELECTRICALS LIMITED

MANAGER / PURCHASE
(FOSSIL BOILERS)
Yours faithfully,
P.G. ABRAM
Senior Manager
Purchase
BHEL, TRICHY - 620 014



BHARAT HEAVY ELECTRICALS LIMITED

(A Government of India Undertaking)
HIGH PRESSURE BOILER PLANT
PURCHASE DEPARTMENT - FOSSIL BOILERS
THIRUCHIRAPALLI - 620014
TAMILNADU (INDIA)

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2681400037 / 16.12.2014

23505

, RP clause, PBG & Payment terms, will lead to rejection of submitted offer.

4. If the due date of tender opening happens to be a holiday, the tenders will be opened on the next working day.

5. All clarifications may be sought at least ten days prior to tender due date, from the undersigned with due written request.

6. BHEL reserves the right to go for a reverse auction (RA) instead of opening the submitted sealed bid, which will be decided after technical evaluation. Information and general terms and conditions covering RA are given in commercial terms and conditions (Annexure-A/Point no.15)

7. Corrigendum if any, with respect to this tender will be hosted only in the website <http://www.bhel.com> or <http://tenders.gov.in>. You are requested to visit the website regularly for updates.

8. Vendors are requested to avoid the following points while submitting the Bid Documents:

- Loose or spiral bound bid documents are not encouraged.
- In case of any corrections/overwriting in the tender documents, the same shall be duly attested by the bid submitter.

9. Vendors representative having proper ID proof and authorization letter shall attend the tender opening.

List of Attachments:

- PART-A, 1 page.
- PART-B 7 pages
- Commercial Terms and Conditions - Annexure-A
- Price Format-Annexure-B
- CA Certificate for MSE Vendors-Annexure-III

Enclosures:

"LD clause has to be confirmed without fail."

The offers should reach us 30 minutes before the time of opening of tenders. The offers will be opened at 14.30 hrs on the due date of tender in the presence of tenderers who have submitted their offer and who may like to be present for the tender opening. Late and delayed offers are liable to be rejected.

Yours faithfully,
For **BHARAT HEAVY ELECTRICALS LIMITED**


MANAGER / PURCHASE
P.G. ABRAHAM
(FOSSIL BOILERS)
Yours faithfully,
Purchase / MFG
BHEL, TRICHY - 620 014

PART-A

SUPPLY OF TROLLEY ASSEMBLY WITH HOIST & CT MECHANISM, and COMPONENTS FOR LT MECHANISM OF 5T GANTRY CRANE

QUALIFICATION CRITERIA

Sl. No.	Description	Vendor to specify details
1	Only those vendors, who have Supplied and commissioned atleast one 5TON OR HIGHER CAPACITY, 14 M OR HIGHER SPAN SEMIGANTRY OR GANTRY CRANE in the past five years and such machine should be working satisfactorily for a minimum period of one year after completion of commissioning, as on the date of opening of this tender.	
2	The vendor should submit following details which are necessary for qualifying their offer.	
2.1	Name and postal address of the customer / company where similar equipment commissioned.	
2.2	Name and designation of the contact person of the customer.	
2.3	Phone, FAX no and email address of the contact person of the customer.	
2.4	Along with Technical offer, the Vendor should submit performance certificate from minimum one customer for the satisfactory performance of the same, supplied to them in the customers letter head.	
3	BHEL reserves the right to verify the information provided by vendor. In case the information provided by vendor is found to be false / incorrect, the offer shall be rejected.	

PART-B

**SUPPLY OF TROLLEY ASSEMBLY WITH HOIST & CT MECHANISM AND LT MECHANISM
COMPONENTS FOR 5T GANTRY CRANE
SPECIFICATION & SCOPE OF WORK**

Sl. No.	Description	Vendor to specify details
1	SPECIFICATION FOR 5 T TROLLEY ASSEMBLY WITH HOIST AND CT MECHANISM FOR GANTRY CRANE	
	APPLICATION: The trolley assembly is required to replace in the existing outdoor gantry crane.	
1.0	SCOPE OF SUPPLY: Trolley assembly with hoist mechanism	
1.1	CT mechanism detail:	
1.1.1	CT speed:15 m/min	
1.1.2	Wheel gauge / span: 2500 mm	
1.1.3	Wheel base:1600 mm	
1.1.4	Wheel size:250 mm dia- 4 Nos	
1.1.5	CT rail size: 50mm Square bar (For reference only. Not supplier scope)	
1.1.6	Wheel assembly: As per BHEL drawing 3M02R0011993 (Enclosed).	
1.1.7	CT Gear box type & size: Vertical VR 400 - 1 No. (All the gears shall be helical)	
1.1.8	CT Motor (1 No): CT Motor (1 No): 3.7 KW (min), frame -132 M , 6 pole, 3Ph 415V 50Hz, 300 starts/hour , S4 Duty , Duty Factor - 40% CDF, Terminal cover at side , Motor shall be of high efficient.	
1.1.9	Type of CT motor: Slip Ring induction motor	
1.1.10	CT BRAKE: 160 mm 18 KG thruster brake with brake drum - 1 No	
1.1.11	Couplings: Between motor & gearbox- Full gear coupling. Between gearbox & wheel - Half gear coupling	
1.1.12	Limit Switch: Lever type one no.	
1.1.13	Rotor cutting resistance - punched plate stainless steel grid resistance box - series 5 steps tapping , continuous rating , all Weldings between resistance shall be TIG type, resistance shall be suitable for outer door application , made water proof ,5 steps shall be provided. All the resistance steps values , calculation shall be given in the Drawing Approval	
1.2	HOIST MECHANISM DETAIL:	
1.2.1	Hoist speed:15m/min	
1.2.2	Height of lift: 10 mtr	
1.2.3	Hoist Motor (1 No): Hoist Motor (1 No): 15 KW (min), frame -180 L, 6 pole, 3Ph 415V 50Hz, 300 starts/hour , S4 Duty , Duty Factor - 40% CDF, Terminal cover at side , Motor shall be of high efficient.	
1.2.4	Hoist Motor type: Slip Ring induction motor	
1.2.5	Gear box size: Horizontal HR500 - 1 No (All the gears shall be helical)	
1.2.6	Hoist rope size & falls: 12mm dia 4 falls. Sufficient rope for 10 m height of lift to be supplied.	
1.2.7	Hook shall be with safety latch.	
1.2.8	Hoist rope drum size: 320mm dia. On both ends of rope drum, flange to be provided to a height of 100mm	

PART-B		
SUPPLY OF TROLLEY ASSEMBLY WITH HOIST & CT MECHANISM AND LT MECHANISM COMPONENTS FOR 5T GANTRY CRANE		
SPECIFICATION & SCOPE OF WORK		
Sl. No.	Description	Vendor to specify details
1.2.9	Couplings:	
	Between motor & gearbox- Full gear coupling Between gearbox & rope drum- Half geared rope drum coupling or spline.	
1.2.1	Pulley Sizes:	
	Equaliser Pulley - 200 mm dia minimum Hook Block Pulleys - 320 mm dia minimum	
1.2.11	Hook Block: 5 Ton Hook Block	
1.2.12	Hoist Brake:	
	250 mm dia DC Electromagnetic Brake with brake drum - 1 No	
1.2.13	Limit Switches: Rotary and Gravity each one no to be provided.	
	Dimensions of rotary shall be as per attached drawing.	
1.2.14	Rotor cutting resistance - punched plate stainless steel grid resistance box - series 5 steps tapping , continuous rating , all Weldings between resistance shall be TIG type, resistance shall be suitable outer door application , made water proof , 5 steps shall be provided. All the resistance steps values , calculation shall be given in the Drawing Approval	
1.2.15	Portable Device to measure the current drawn by motor- 4 quantities	
1.2.16	Portable device to measure the insulation reistance of motors- 3 quantities	
1.2.17	Portable device for drilling -3 quantities	
1.2.18	All the instruments shall be supplied with all accessories test certificate , warranty card ,etc.	
1.3	MAKES OF BOUGHT-OUT ITEMS	
1.3.1	Motors: GEC/Bharat Bijlee/Siemens/KEC/MARATHON	
1.3.2	Couplings: WMI/ALFLEX/FENNER	
1.3.3	Electrohydraulic thruster Brakes:	
	OMEGA/ELECTROMAG/SPEED-O-CONTROL	
1.3.4	DCEM Brake & Brake Panel: Only BCH	
1.3.5	Limit Switches: BCH/SKC/SOC	
1.3.6	Oil Seals: PARKER /MERKEL/ SIMRIT FREDENBERG/ BUSHAK SHAMBAN/ HUNGER/ HALLITE/ JAMES WALKER /SKF ECONOMOS	
1.3.7	Resistance - BCH/Omega/ Speed - O- Controls/OHMARK	
1.3.8	Current measuring device - Fluke 325 clamp meter / AMPROBE 52NAV / KYORITSU 2046R/ kleintools CL2100	
1.3.9	IR measuring device - Cambridge instruments and engineering co Model: 505 / KYORITSU 3321A / Fluke 1587	
1.3.10	Drilling device with bits- Bosch Gsb 16 Re , DEWALT DW235G	
1.4	Both gearbox casing shall be of fabricated type and gears in all stage shall be of helical	
1.4.1	Handrails to 1m height & Spring Buffer (4 Nos) are to be provided in the CT Trolley.	
1.4.2	Standard to be followed IS: 3177/1999 & IS: 807/2006.	
	For motors IS 325/1996 , IS 1231/1974 For control elements - IS 13947 /2004	
	Painting of trolley frame:	

PART-B		
SUPPLY OF TROLLEY ASSEMBLY WITH HOIST & CT MECHANISM AND LT MECHANISM COMPONENTS FOR 5T GANTRY CRANE		
SPECIFICATION & SCOPE OF WORK		
Sl. No.	Description	Vendor to specify details
1.4.3	1. One coat of red oxide with 48 hours of curing after painting.	
	2. Two coats of Deep orange enamel paint with intermittent curing of minimum 16 hours.	
1.4.4	Pre-dispatch Inspection shall be offered.	
1.4.5	The following drawing to be submitted for approval before manufacture.	
	1. Crab Frame	
	2. CT wheel Assembly	
	3. CT Gearbox Assembly	
	4. CT Mechanism Assembly	
	5. Hoist Gearbox Assembly	
	6. Hoist Mechanism Assembly	
	7. Rope drum	
	8. 5 Ton Hook Assembly	
9. GA drawing of Trolley Assembly		
1.4.6	Spares: The following spares to be provided along with supply	
	1. Oil Seals - 1 No. of each variety used in the trolley assembly.	
1.4.7	Note: No electrical control panel required	
2	SPECIFICATION FOR 5 T TROLLEY ASSEMBLY WITH HOIST AND CT MECHANISM FOR GANTRY CRANE	
	APPLICATION: The trolley assembly is required to replace in the existing Outdoor Gantry crane.	
2.0	SCOPE OF SUPPLY: Trolley assembly with hoist mechanism	
2.1	CT mechanism detail:	
2.1.1	CT speed:15 m/ min	
2.1.2	Wheel gauge / span: 1600 mm	
2.1.3	Wheel base:1600 mm	
2.1.4	Wheel size:250 mm dia- 4 Nos	
2.1.5	CT rail size: 50mm Square bar (For reference only. Not supplier scope)	
2.1.6	Wheel assembly: As per BHEL drawing 3M02R0011993 (Enclosed).	
2.1.7	CT Gear box type & size: Vertical VR 320 - 1 No.	
	(All the gears shall be helical)	
2.1.8	CT Motor (1 No):	
	CT Motor (1 No): 3.7 KW (min), frame -132 M , 6 pole, 3Ph 415V 50Hz, 300 starts/hour , S4 Duty , Duty Factor - 40% CDF, Terminal cover at side , Motor shall be of high efficient.	
2.1.9	Type of CT motor: Slip Ring induction motor	
2.1.10	CT BRAKE: 160 mm 18 KG thruster brake with brake drum - 1 No	
2.1.11	Couplings:	
	Between motor & gearbox- Full gear coupling.	
	Between gearbox & wheel - Half gear coupling	
2.1.12	Limit Switch: Lever type one no.	

PART-B		
SUPPLY OF TROLLEY ASSEMBLY WITH HOIST & CT MECHANISM AND LT MECHANISM COMPONENTS FOR 5T GANTRY CRANE		
SPECIFICATION & SCOPE OF WORK		
Sl. No.	Description	Vendor to specify details
2.1.13	Rotor cutting resistance - punched plate stainless steel grid resistance box - series 2 steps tapping , continuous rating , all Weldings between resistance shall be TIG type, resistance shall be suitable outer door application , made water proof ,2 steps shall be provided. All the resistance steps values , calculation shall be given in the Drawing Approval	
2.2	HOIST MECHANISM DETAIL:	
2.2.1	Hoist speed:15m/min	
2.2.2	Height of lift: 8 mtr	
2.2.3	Hoist Motor (1 No): Hoist Motor (1 No): 15 KW (min), frame -180 L, 6 pole, 3Ph 415V 50Hz, 300 starts/hour , S4 Duty , Duty Factor - 40% CDF, Terminal cover at side , Motor shall be of high efficient.	
2.2.4	Hoist Motor type: Slip Ring induction motor	
2.2.5	Gear box size: Horizontal HR500 - 1 No (All the gears shall be helical)	
2.2.6	Hoist rope size & falls: 12mm dia 4 falls. Sufficient rope for 8m height of lift to be supplied.	
2.2.7	Hook shall be with safety latch.	
2.2.8	Hoist rope drum size: 320mm dia. On both ends of rope drum, flange to be provided to a height of 100mm	
2.2.9	Couplings: Between motor & gearbox- Full gear coupling Between gearbox & rope drum- Half geared rope drum coupling or spline	
2.2.10	Pulley Sizes: Equaliser Pulley - 200 mm dia minimum Hook Block Pulleys - 320 mm dia minimum	
2.2.11	Hook Block: 5 Ton Hook Block	
2.2.12	Hoist Brake: 250 mm dia DC Electromagnetic Brake with brake drum - 1 No	
2.2.13	Limit Switches: Rotary and Gravity each one no to be provided. Dimensions of rotary shall be as per attached drawing.	
2.2.14	Rotor cutting resistance - punched plate stainless steel grid resistance box - series 2 steps tapping , continuous rating , all Weldings between resistance shall be TIG type, resistance shall be suitable outer door application , made water proof , 2 steps shall be provided. All the resistance steps values , calculation shall be given in the Drawing Approval	
2.2.15	Portable multimeter Device to measure the current drawn by motor- 4 quantities	
2.2.16	Portable device to measure the power quality of motors- 1 quantity	
2.2.17	All the instruments shall be supplied with all accessories test certificate , warranty card ,etc.	
2.3	MAKES OF BOUGHT-OUT ITEMS	
2.3.1	Motors: GEC/Bharat Bijlee/Siemens/KEC/MARATHON	
2.3.2	Couplings: WMI/ALFLEX/FENNER	

PART-B		
SUPPLY OF TROLLEY ASSEMBLY WITH HOIST & CT MECHANISM AND LT MECHANISM COMPONENTS FOR 5T GANTRY CRANE		
SPECIFICATION & SCOPE OF WORK		
Sl. No.	Description	Vendor to specify details
2.3.3	Electrohydraulic thruster Brakes: OMEGA/ELECTROMAG/SPEED-O-CONTROL	
2.3.4	DCEM Brake & Brake Panel: Only BCH	
2.3.5	Limit Switches: BCH/SKC/SOC	
2.3.6	Oil Seals: PARKER /MERKEL/ SIMRIT FREDENBERG/ BUSHAK SHAMBAN/ HUNGER/ HALLITE/ JAMES WALKER /SKF ECONOMOS	
2.3.7	Resistance - BCH/ Omega/ Speed - O- Controls/OHMARK	
2.3.8	Multimeter measuring device - Fluke 117/KYORITSU 1012/kleintools MM2300 / Cambridge instruments and engineering co Model: 505	
2.3.9	Power quality meter -Fluke 345/ Amprobe DM-II PLUS 1000A/KYORITSU 6315	
2.4	Both gearbox casing shall be of fabricated type and gears in all stage shall be of helical	
2.4.1	Handrails to 1m height & Spring Buffer (4 Nos) are to be provided in the CT Trolley.	
2.4.2	Standard to be followed IS: 3177/1999 & IS: 807/2006. For motors IS 325/1996 , IS 1231/1974 For control elements - IS 13947 /2004	
2.4.3	Painting of trolley frame: 1. One coat of red oxide with 48 hours of curing after painting. 2. Two coats of Deep orange enamel paint with intermittent curing of minimum 16 hours.	
2.4.4	Pre-dispatch Inspection shall be offered.	
2.4.5	The following drawing to be submitted for approval before manufacture. 1. Crab Frame 2. CT wheel Assembly 3. CT Gearbox Assembly 4. CT Mechanism Assembly 5. Hoist Gearbox Assembly 6. Hoist Mechanism Assembly 7. Rope drum 8. 5 Ton Hook Assembly 9. GA drawing of Trolley Assembly	
2.4.6	Spares: The following spares to be provided along with supply 1. Oil Seals - 1 No. of each variety used in the trolley assembly.	
2.4.7	Note: No electrical control panel required	
3	SPECIFICATION FOR LT MECHANISM COMPONENTS FOR 5T GANTRY CRANE.	
	APPLICATION: The LT mechanism assembly is required to replace in the existing outdoor gantry crane.	
3.1	SCOPE OF SUPPLY: LT mechanism components full set.	
3.1.1	Drive wheel assembly with coupling fitted - 2 Nos	
3.1.2	Non drive wheel assembly - 2 Nos	

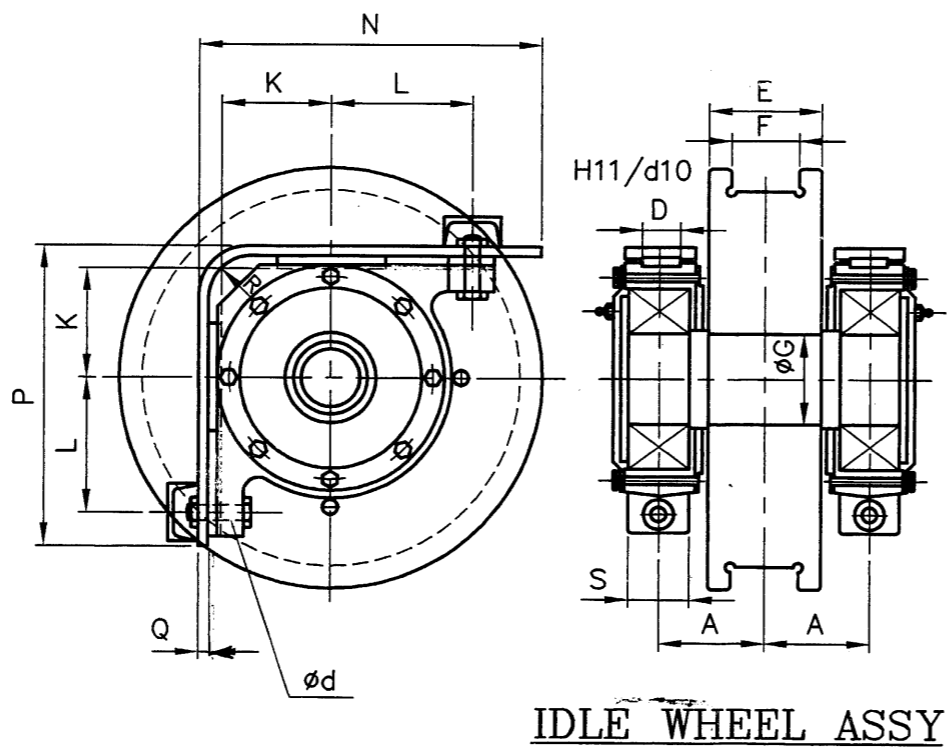
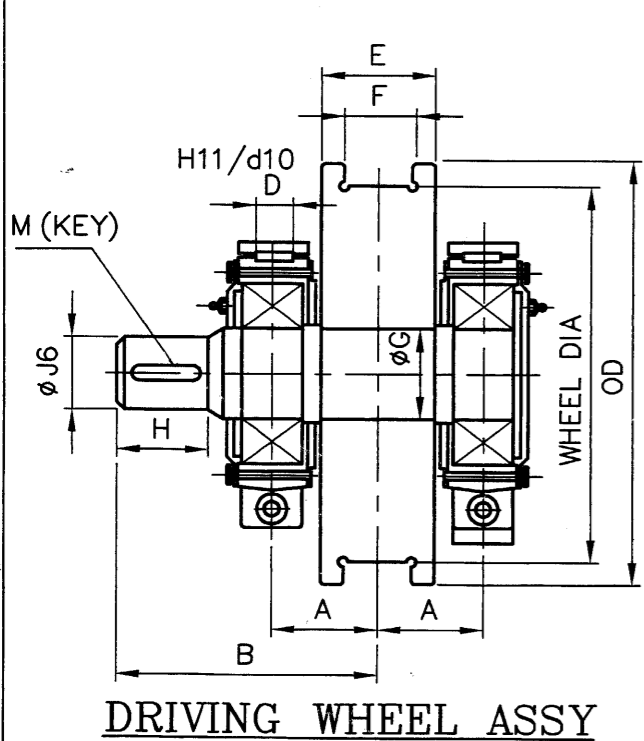
PART-B		
SUPPLY OF TROLLEY ASSEMBLY WITH HOIST & CT MECHANISM AND LT MECHANISM COMPONENTS FOR 5T GANTRY CRANE		
SPECIFICATION & SCOPE OF WORK		
Sl. No.	Description	Vendor to specify details
3.1.3	Gear box assembly with coupling & brake drum fitted in input shaft and coupling in output shaft-2 nos(Right & left handed each 1)	
3.1.4	Motor with coupling fitted - 2 Nos	
3.1.5	Brake unit-2 nos.	
3.2	Specification details:	
3.2.1	LT speed: 40 Mtrs / min.	
3.2.2	Wheel dia.: 400 mm. (REFER SL NO-5 IN THE ENCLOSED DRAWING No. 3 M 02R 00 11993) WHEEL TO BE FORGED AND TREAD PORTION TO BE HARDENED TO 300-350 BHN; SIZE AS PER DRAWING No.3 M 02R 00 11993. AXLE/SHAFT TO BE OF 45C8 AS PER IS-7283 AND SIZE AS PER DRAWING No. 3 M 02R 00 11993 For wheels and shafts supplier to provide certificates for material composition from government approved lab and certificate of heat treatment including hardness after heat treatment.	
3.2.3	Rail size:90 lbs/ yd.	
3.2.4	Wheel assembly: As per BHEL drawing :3-M-02R-0011993.	
3.2.5	Gear box type & size: VR 450 (Vertical) Size : VR 450 MM (Input to output center distance) Number of stage : 3 HP rating : 7.5 HP (Minimum) Casing type : MS fabricated Type of gears : Helical gear in all stage. Quantity required : 2 Nos (Left and Right each 1 no.) Brake drum : 160mm diameter Brake drum and coupling fitted in input shaft and coupling in output shaft. Coupling : Full gear coupling 102 size in input shaft and Full gear coupling 103 size in output shaft Oil level gauge, drain plug and inspection cover shall be provided. Lifting eye shall be provided at the top of the gearbox. Extension of input shaft on both sides and output shaft on one side only. Casing shall be of three parts and shall be with one horizontal split at output shaft and a vertical split from input to output shaft. All stage pinions shall be integral with shaft. The output shaft centre to gearbox bottom shall be 175 mm Maximum. All bearing covers shall be fitted with gear box casing by hex. screws. All shafts shall be fitted with SRDG ball bearings and shall be 63xx series. All bearings shall be SKF/NBC/FAG/NTN make. Before manufacture drawing shall be submitted for our approval.	

PART-B		
SUPPLY OF TROLLEY ASSEMBLY WITH HOIST & CT MECHANISM AND LT MECHANISM COMPONENTS FOR 5T GANTRY CRANE		
SPECIFICATION & SCOPE OF WORK		
Sl. No.	Description	Vendor to specify details
3.2.6	LT motor: Power: 3.3 kW (Minimum) Frame Size: 132M, Power supply: 415V, 3 Phase, 50 Hz No of poles- 6 poles Crane Duty -S4 Duty Type: Slip Ring Induction Motor 300 Starts/hour, Class F insulation, 40% CDF, IP55 Coupling – Full gear coupling 102 size	
3.2.7	Brake Units- A.C. ELECTRO HYDRAULIC DOUBLE SHOE, SPRING LOADED THRUSTOR BRAKE UNIT suitable for diameter 160mm brake drum (suitable for 400/440 Volts, 3 Phase AC Supply) with thruster and 2 spare tie-rods. THRUSTOR CAPACITY- 18 kg.	
3.3	COUPLINGS:	
3.3.1	Between motor & gearbox: Full gear coupling 101 / 102.	
3.3.2	Between wheel & gearbox: Full gear coupling size 103.	
3.3.3	Brake unit: 160 mm dia 18 KG thruster brake.	
3.4	Motor make:GEC/Bharat Bijlee/Siemens/KEC/MARATHAN	
3.6	Note: No electrical control panel required.	
3.7	Stand ard to be followed: IS 3177 / 1999.	
3.8	Drawing to be submitted for approval before manufacture.	
3.9	Pre-dispatch Inspection shall be offered before despatch.	

CAUTION: THIS DRAWING IS OUR SOLE PROPERTY AND SHOULD NOT BE USED IN ANY FORM FOR ANY PURPOSE WITHOUT THE WRITTEN PERMISSION OF BHARAT HEAVY ELECTRICALS LIMITED TRICHIRAPPALLI - 620 014.

ALL DIMENSIONS ARE IN MM

SL. No.	O.D. (WHEEL DIA) IN MM	RAIL SIZE	A	B	D	E	F	ØG	H	ØJ	K	L	Ød	M (KEY)	N	P	Q	S	R	COUPLING No.	SKF BRG No. & BRG. SIZE	TOTAL WEIGHT IN Kg. FOR DRIVE & IDLE
16	800/850	CR-100 CR-120	190	450	80	210	150	152	140	130	212	255	32	32x18x130	687	588	20	150	80	107	22330 150x320x108	870.00 845.00
15		CR-80	168	420	80	180	110	152	125	110	212	255	32	28x16x115	687	588	20	150	80	106	22330 150x320x108	796.00 775.00
14	710/750	CR-100 CR-120	190	450	80	210	150	152	140	130	212	255	32	32x18x130	642	588	20	150	80	107	22330 150x320x108	808.00 784.00
13		CR-100 CR-120	180	420	71	210	150	132	125	110	180	224	32	28x16x115	607	517	20	130	80	106	22326 130x280x93	728.50 711.50
12	630/680	CR-80	180	400	71	180	110	132	125	110	180	224	32	28x16x115	607	517	20	130	80	106	22326 130x280x93	653.00 636.00
11		CR-80/CR-100 & CR-120	180	420	71	210	150	132	125	110	180	224	32	28x16x115	567	517	20	130	80	106	22326 130x280x93	629.00 611.50
10	500/550	90-105 Lbs/Yd CR-80	150	365	60	180	105	111	110	90	160	190	26	25x14x100	547	462	20	120	60	105	22322 110x240x80	448.00 434.50
9		CR-80 CR-100	160	375	60	180	125	111	110	90	160	190	26	22x14x100	482	462	20	120	60	105	22322 110x240x80	253.00 245.50
8	400/450	CR-80	150	360	50	180	125	91	105	80	125	160	26	22x14x90	445	395	20	100	50	104	22318 90x190x64	389.00 378.00
7		60/75/90 & 105 Lbs/Yd	150	360	50	180	105	91	105	80	125	160	26	22x14x90	445	395	20	100	50	104	22318 90x190x64	301.00 294.00
6	320/370	CR-80 CR-100	150	360	50	180	125	91	105	80	125	160	26	22x14x90	395	395	20	100	50	104	22318 90x190x64	253.00 245.50
5		90 Lbs/Yd 105 Lbs/Yd	145	315	40	180	105	76	85	70	112	140	22	20x12x75	375	345	16	90	50	103	22315 75x160x55	197.00 192.00
4	250/280	75 / 90 & 105 Lbs/Yd CR-80	145	315	40	180	105	76	85	70	112	140	22	20x12x75	345	345	16	90	50	103	22315 75x160x55	162.00 157.00
3		50 SQ.BAR 60 Lbs/Yd 75 Lbs/Yd	112.5	260	40	125	85	61	65	55	85	112	17	16x10x55	312	287	16	80	50	102	22312 60x130x46	118.50 118.00
2	200/230	50 SQ.BAR 60 / 90 & 105 Lbs/Yd	105	250	32	125	85	61	65	55	76	100	17	16x10x55	254	249	12	60	40	102	22212 60x110x28	66.00 63.00
1		30 Lbs/Yd 50 SQ.BAR 60 Lbs/Yd	95	220	32	100	67	46	55	40	71	95	17	12x8x45	239	232	12	65	40	101	22309 45x100x36	51.00 50.00



MATERIAL :- SHAFT - 45CB/IS:7283.
 WHEEL - 55CB/IS:5517.
 FORGED.
 TREAD PORTION WHEEL HARDNESS 300 TO 350 (BHN)

No. of Pieces	DESCRIPTION	MATERIAL	STANDARD	NET.WT.IN KGS.	DRAWING No.	ITEM No.
REFERENCE:				COMPONENT CODE: 29	EQUIPMENT CODE: 00	
SCALE	DRAWN			ALTERATIONS:	DCN REF	DATE
	CHECKED					SIGN.
	APPROVED					INDEX
	DATE	20-10-2000				
MACHINE: CRANE WHEEL ASSY				TYPE: GENERAL		
TITLE: STANDARD CRANE WHEEL ASSY				DRAWING No: 3-M-02R-11993		REV.
No. of Sheets				Sheet No:		

BHARAT HEAVY ELECTRICALS LIMITED TIRUCHIRAPALLI
CAPITAL PURCHASE

Annexure-A

ACCEPTANCE OF COMMERCIAL TERMS AND CONDITIONS BY THE VENDORS.

(This should be essentially filled in and sent along with the techno-commercial offer without fail. If this check list is not filled and submitted along with techno-commercial offer (Part I) or if the vendor does not confirm acceptance to the terms and conditions proposed herein, BHEL reserves the right to reject such offers)

CHECK-LIST FOR VENDORS

SI No	DESCRIPTION
1.	<p>The Bidders shall submit their offer in TWO INNER ENVELOPES as indicated below which shall be sealed in one outer envelope.</p> <ul style="list-style-type: none">❖ Envelope I: This sealed envelope should contain all the copies of technical bid together with un-priced commercial bid. This envelope should be clearly marked "Part I - Technical and commercial bid", indicating Enquiry No., Due Date and Address & Reference of the Bidder.❖ Envelope II: This sealed envelope should contain price details. This envelope should be clearly marked "Part II - Price bid", indicating Enquiry No., Due Date and Address & Reference of the Bidder. This part should contain the schedule of price particulars and must be co-related to the technical details provided in Part I. <p>All the two envelopes (Part I&II) shall be put in one cover, duly sealed, super scribing as "Part I and Part II of Enquiry No., due date of opening" and the address and reference of the Bidder. The offer received without the above guidelines, will not be considered for opening.</p> <p>The above offer should reach this office on or before the due date by 14.00 Hrs (IST). Late offers will not be considered. Tender should not be addressed to any Individual's name but only by designation to:</p> <p style="text-align: center;">DGM / CAPITAL PURCHASE / MFG 24 BUILDING, 4TH FLOOR BHARAT HEAVY ELECTRICALS LIMITED HIGH PRESSURE BOILER PLANT TIRUCHIRAPALLI - 620 014 TAMIL NADU, INDIA</p> <p>Tenders should be free from CORRECTIONS AND ERASURES. Corrections if any, must be attested. All amounts shall be indicated both in words as well as in figures. In case of any difference between amount quoted in words and figures, amount quoted in words shall prevail.</p> <p>Offers should be in ENGLISH and accompanied by detailed technical literature, catalogue and detailed dimensional drawings in ENGLISH or otherwise, the offers will not be considered.</p>
2.	<p><u>OPENING OF TENDERS</u></p> <p>The Part I- Technical & commercial bid would be opened on the Tender opening date.</p> <p>Part-II, Price bid of technically suitable Bidders alone would be opened after complete evaluation of Part-I. Hence the Bidders are required to submit their best competitive price in the price bid in a sealed cover (Part-II). In case of necessity BHEL reserves the right to go for a reverse auction (RA) instead of opening the submitted sealed bid, which will be decided after technical evaluation. Information and general terms and conditions covering RA are given in this Annexure- I (Point no.15).</p> <p>Date and time of Price Bid (Part-II) opening / RA conducting date shall be intimated to the technically and commercially acceptable bidders only. Clarifications if any required by BHEL for Technical evaluation would be sought from bidders before opening of Part II - Price Bid/ RA</p>
3.	<p><u>TAXES AND DUTIES :</u></p> <p>All Taxes and Duties payable as extra to the quoted price should be specifically stated in offers along with CST & TIN No / Tariff No. etc., failing which the purchaser will not be liable for payment of such Taxes and Duties. Our TIN No. 33243560005, TNGST No. 3560005, CST. No. 239383 Dt. 11-06-1991 & BHEL ECC No. AAACB4146PXM012, Service Tax Reg No (STC)- AAACB4146PST006. Assessment circle Tiruverambur.</p> <p>Cenvat credit & VAT credit (for Indian Bidders only): If any Excise Duty is payable, the chapter head / sub-head reference and the rate of the duty should be quoted. If the tenderer is availing CENVAT credit for his input materials, the effect of proforma credit should be passed on to the purchaser</p> <p>Income Tax applicable Any service charges payable towards supervision of E&C, training, performance prove-out etc., will be released after deduction of Income Tax as per Indian Income Tax Act / as per the Govt. of India rules and TDS certificate will be issued by BHEL for such deductions. Applicable service tax on E&C charges will be payable extra. The liability of depositing the same to the Govt. will be of the supplier</p>

No row shall be left blank. Please indicate NA, in case the item is “not applicable”		Vendor's confirmation
	Validity: Validity of the offer should be 120 days from the date of tender opening.	
4.	<p>Payment terms for Supply Portion Orders will be placed respective L1 vendor for each line items. 100% Payment after receipt and acceptance of material within 45-90 days against submission of 10%PBG for total order value.</p> <p style="color: red;">Any deviation in the above payment term will attract loading as mentioned below. “Base rate of SBI (as applicable on the date of bid opening. Techno-commercial bid opening in case of two part bids) + 6% shall be considered for loading for the period of relaxation sought by bidders.</p>	
5.	<p>Performance Bank Guarantee (PBG): The Bidder, in the event of an order, should furnish a Bank Guarantee from an Indian Bank approved by BHEL, at no extra cost in a format prescribed by BHEL, along with the order, for an amount equivalent to 10% (Ten percent) of the value of the contract. The PBG shall be valid for a period of 18 months from the date of dispatch or 12 months from the date of receipt / acceptance / commissioning of the equipment at BHEL, Tiruchi whichever is more, with a claim period of two months.</p> <p>The Performance Bank Guarantee shall be obtained from any one of the following banks which is a member bank in our consortium of banks.</p> <p>LIST OF CONSORTIUM BANKS 1.DEUTSCHE BANK 2.HDFC BANK 3.ANZ GRINDLAYS BANK 4.CITI BANK 5.STANDARD CHARTERED BANK 6.BANK OF AMERICA 7.ABN AMRO BANK 8.IDBI LTD 9.ICICI BANK LTD 10.THE HONGKONG AND SHANGHAI BANKING .CORPORATION LTD.</p> <p>LIST OF NATIONALISED BANKS 1.ALLAHABAD BANK 2.ANDHRA BANK 3.BANK OF INDIA 4.BANK OF BARODA 5.BANK OF MAHARASTRA 6.BHARATH OVERSEAS BANK 7.CANARA BANK 8.CENTRAL BANK OF INDIA 9.CORPORATION BANK 10.DENA BANK 11.INDIAN BANK 12.INDIAN OVERSEAS BANK 13.OREINTAL BANK OF COMMERCE 14.PUNJAB NATIONAL BANK 15.PUNJAB & SIND BANK 16.STATE BANK OF INDIA 17.STATE BANK OF TRAVANCORE 18.STATE BANK OF MYSORE 19.STATE BANK OF BIKANER & JAIPUR 20.STATE BANK OF HYDERABAD 21.STATE BANK OF PATIALA 22.STATE BANK OF MAHARASTRA 23.STATE BANK OF SOURASTRA(SBI-13.09.08) 24.SYNDICATE BANK 25.UCO BANK 26.UNION BANK OF INDIA 27.UNITED BANK OF INDIA 28.VIJAYA BANK</p> <p><u>If PBG is issued by a Foreign counter part of the BHEL consortium Indian Bank, in case of claim against the PBG , it will be lodged in any one of the Indian counters of the Foreign Bank which issued the PBG.</u></p>	
6.	<p>Liquidated damages (LD): The delivery of the goods specified in the purchase order should be made within the time prescribed. LD for delay in ‘Supply’ and/or ‘I&C’ will be applicable to the delays attributed to vendor. LD will be considered separately for ‘Delivery’ and ‘I &C’. Where the seller supplies or dispatches the goods, beyond the delivery period Liquidated damages shall be applicable 0.5% of the total order value per week or part thereof subject to a maximum of 10% of the total order value.</p> <p>The rate of LD for delayed E&C shall be @ 0.5% per week of delay of total PO value (Supply + I &C) in I &C subject to a maximum of 10% of total PO value (Supply + I&C).</p> <p>For staggered delivery schedule, LD shall be 0.5% of the undelivered portion per week of the delay or part thereof subject to a maximum of 10% of the total order value.</p> <p>Any deviation from the above LD clause, loading will be applied to the extent to which it is not agreed by the bidder (at offered value).</p>	
7.	<p>Risk Purchase: Alternatively the purchaser at his option will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or dispatch within the time stipulated as aforesaid or if the same were not available from the best and the nearest available substitute. The supplier shall be liable for any loss which the Purchaser may sustain by reason of such risk purchases.</p>	
8.	<p>Delivery terms and evaluation process: Indian Bidders should submit their offer on FOR BHEL, Tiruchy basis. Packing & Forwarding and Freight & Insurance charges from works to BHEL, Tiruchy to be indicated separately if extra from basic rate. Applicable % of ED & Sales Tax , Commissioning Charges should be clearly indicated.</p> <p style="background-color: yellow;">Evaluation of offers shall be on the basis of delivered cost (Net cash outflow to BHEL)</p>	
9.	<p>Guarantee: Vendors shall provide a guarantee for a period of 12 months from the date of commissioning of the equipment or 18 months from date of supply, whichever is earlier. The date of B/L or AWB shall be taken as the date of supply. Also, a PBG has to be given which shall cover the guarantee period (with additional 2 months as claim period). Normally No deviation permitted and the deviated offers are liable for rejection.</p>	
10.	<p>Short shipment / Warranty replacement: In case of any short shipment in the main equipment / spares, Customs Duty levied on such supplies, shall be borne by the supplier. Any warranty replacement during the warrantee period shall be on FOR, BHEL, Tiruchirappalli, basis.</p>	
11.	<p>Inspection & Testing: All goods shall be subject to inspection by BHEL or its authorized representatives at supplier’s works or at BHEL stores or at any other place in India indicated by BHEL as the case may be. The supplier will not charge for the facilities provided for inspection of goods. In case of machine tools, the machine would be inspected and proved at</p>	

	supplier's works prior to dispatch however, final inspection and acceptance of the machine will be carried after installation of the machine at BHEL, Tiruchirappalli.	
12.	Test certificates / Operating and Maintenance manuals: The Bidders shall clearly mention in their offer, that Test Certificates and Operating Maintenance Manuals, etc., as called for in the Technical Specification, in the required number of copies will be provided at no extra cost.	
13.	Payment through Bank is not preferred. In case of Payment through Bank is opted by Supplier, BHEL prefers documents submission through bank with copy of LR and door delivery of Goods to Site/Stores with Consignee copy attached. In this case Loading will be 3% on the offered value. Offers of indigenous Suppliers with payment terms as LC/Advance Payment are liable for rejection.	
14.	BHEL will consider the ranking after the loading is applied as referred above wherever deviations are observed.	
15.	Reverse Auction (RA): BHEL reserves the right to conduct on-line internet Reverse Auction ie. ONLINE BIDDING (THROUGH A SERVICE PROVIDER) for finalizing the Tender. This decision will be communicated to the technically qualified vendors after technical evaluation. Details / General terms / guidelines for conduct of RA are shown below Vendors are requested to confirm their acceptance for BHEL proceeding with RA route for finalization of the enquiry. <ol style="list-style-type: none"> 1. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate. 2. BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet. 3. BHEL will inform the vendor in writing in case of reverse auction, the details of Service Provider to enable them to contact & get trained. 4. Business rules like event date, time, start price, bid decrement, extensions etc. also will be communicated through service provider for compliance. 5. Vendors have to fax the Compliance form in the prescribed format (provided by Service provider) before start of Reverse auction. Without this, the vendor will not be eligible to participate in the event. 6. BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at "Total Cost to BHEL" like Packing & forwarding charges, Taxes and Duties, Freight charges, Insurance, Service Tax for Services and loading factors (for non-compliance to BHEL standard Commercial terms & conditions) for each of the vendor to enable them to fill-in the price and keep it ready for keying in during the Auction 7. Reverse auction will be conducted on scheduled date & time. 8. At the end of Reverse Auction event, the lowest bidder value will be known on the network. 9. The lowest bidder has to Fax/e-mail the duly signed Filled-in prescribed format as provided on case-to-case basis to BHEL through Service provider within 24 hours of Auction without fail. 10. Any variation between the on-line bid value and the signed document will be considered as sabotaging the tender process and will invite disqualification of vendor to conduct business with BHEL as per prevailing procedure. 11. In case BHEL decides not to go for Reverse Auction procedure for this tender enquiry, the Price Bids and price impacts, if any, already submitted and available with BHEL shall be opened as per BHEL's standard practice. 12. BHEL reserves the right to negotiate if need be, with the "L1" vendor of the Reverse Auction 13. <u>BHEL reserves the right not to consider offers from vendors not complying with the RA process for finalization of the enquiry.</u> 14. If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, action as per extant BHEL guidelines, shall be initiated by BHEL and the results of the RA scrapped/ aborted. <p>In case BHEL decides to go for reverse auction, the H1 bidder(s) (whose quote is highest in online sealed bid) may not be allowed to participate in further RA process.</p>	
16.	<u>Special Provisions for Micro and Small Enterprises (MSE)</u> MSE suppliers can avail the intended benefits only if they submit along with offer, attested copies of either EM II certificate having deemed validity (Two years from the date of issue of acknowledgement in EM II) or valid NSIC certificate or EM II certificate along with CA certificate (Format enclosed Annexure - III) applicable for the year, certifying quantum of investment in plant and machinery within the permissible limit as per the act for relevant status (Micro or small) where the deemed validity of EM II is over. Date to be reckoned for determining the deemed validity will be the last date of technical bid submission. Offer/s received without these documents will lead to consideration of their offer at par with other bidders and MSE status of such suppliers shall be shifted to Non MSE supplier	

17.	<ul style="list-style-type: none"> ➤ Point to point confirmation for the Technical Specification enclosed to be provided. If there are any deviations, the same should be clearly specified. Offers received without confirmation to our specifications will be liable for rejection. If needed additional sheets shall be used. ➤ Equipment offered shall be "New". Re-built / Re-conditioned / Used equipment's will not be accepted. Incomplete offers will not be considered for further processing Fixed price: ➤ BHEL reserves its right to reject a tender due to unsatisfactory past performance in the execution of a contract at any of BHEL projects / units. ➤ BHEL shall be at liberty to reject or accept any tender, part or in full, at their own discretion and any such action is not liable for any question or claim against BHEL. ➤ The vendor shall provide necessary drawings, Test Certificates and Operating Maintenance Manuals etc., as called for in the Technical Specification, in the required number of copies at no extra cost ➤ The Supplier shall arrange for securely protecting and packing the stores to avoid loss or damages during transit. 	
18.	Company Details & Contact	
	Full Address of the company for future correspondence. (Copy of address proof & PAN card shall be attached along with Part-I)	
	Company Email ID:	Phone No.:
	Fax No	PAN No
	CST /TIN No	Service Tax No.
	Name of the contact person:	Mobile No.:
	e-mail ID	
19.	TO BE CONFIRMED BY VENDOR	
	Country of origin:	
	Station of dispatch/Port of Shipment	
	Delivery Terms (For destination or Ex-works)	
20.	Packing & Forwarding Charges, if any (in % or Lumpsum) ie. extra from basic rate	
	% of Excise Duty with cess	
	% of TAX (CST/VAT) (TNGST with FORM-17 or CST with C-FORM)	
	Freight & Transit Insurance charges (if any, in Lumpsum (or) percentage) from Dispatching station to BHEL Tiruchirappalli, (Note:If the delivery terms is Ex Works the materials has to be sent through BHEL approved carrier only, in this case the Freight & Insurance will be borne by BHEL)	
21.	Delivery from the date of Letter of Intent / Purchase Order. (This should be inclusive of Order acceptance, drawing approval and time period required for receiving goods at BHEL Trichy etc.,	
22.	Weight & Cubage of package: Approximate Net weight of the total consignment: Approximate Gross weight of the total consignment: Approximate volume of the total consignment:	
For any queries / clarifications the bidders may contact us through our FAX NO. +91 431 2520719 or through e-mail <pgavictor@bheltry.co.in>		

NOTE

- a) Your specific acceptance to our Payment terms, LD, Risk Purchase Clause & Submission of PBG for 10% of the order value are essential for consideration of your offer. Otherwise your offer is liable for rejection.
- b) No row shall be left blank. Please indicate NA, in case the item is "not applicable"

Declaration:-

I/We have gone through and understood the 'General guidelines & instructions to bidders for submitting offer' enclosed as a part of the Tender and confirm that our offer has been made in line with the same.

Name: _____ Signature with date: _____ (AFFIX OFFICIAL SEAL HERE)
 Designation: _____
 (PLEASE AFFIX YOUR SIGNATURE WITH SEAL ON EACH PAGE)

MODEL PRICE BID FORMAT FOR INDIAN BIDDERS

Enquiry No. & Date:

Bidder's Offer No. & Date:

Sl No	Description of item	Unit (SET/ No)	QTY	Rate /Qty in Rs. (excluding of all taxes)	VAT/CST in % (TNGST with FORM-17 or CST with C-FORM)	ED in %	Total Value in Rs. (inclusive of all taxes)
	Packing & Forwarding charges (if any) in percentage (or) Lumpsum						
	FOR Dispatching station value in Rs.						
	Percentage of Freight & transit insurance charges, if any (Lumpsum or %) Freight & Insurance charges from Dispatching station to BHEL, Tiruchirappalli (Note:If the delivery terms is Ex Works the materials has to be sent through BHEL approved carrier only, in this case the freight & Insurane will be borne by BHEL)						
	Approximate Net weight of the total consignment						
	Approximate Gross weight of the total consignment						
	Approximate Dimensions of the Consignment						

Signature & Seal of Vendor

The price bid should be submitted only as per the above format. No row shall be left blank. Please indicate NA, in case the item is "not applicable"

Certificate by Chartered Accountant on letter head

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

Further verified from the Books of Accounts that the investment of the company as on
date..... as per MSMED Act 2006 is as follows:

1. **For Manufacturing Enterprises:** Investment in plant and machinery (i.e. original cost excluding land and building and the items specified by the Ministry of Small Scale Industries vide its notification No.S.O.1722(E) dated October 5, 2006 :
Rs.....Lacs
2. **For Service Enterprises:** Investment in equipment (original cost excluding land and building and furniture, fittings and other items not directly related to the service rendered or as may be notified under the MSMED Act, 2006:
Rs.....Lacs

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

Date:

(Signature)

Name -

Membership number -

Seal of Chartered Accountant