



BHARAT HEAVY ELECTRICALS LIMITED

CORPORATE RESEARCH & DEVELOPMENT DIVISION

VIKASNAGAR, HYDERABAD - 500 093, INDIA

PHONES: 23774494 (EXCHANGE)

DIRECT: 23882104/23882204/

23778474/23776772

FAX : 91 40 23770698

RD:DP:MPX:F-04

ENQUIRY

To - Enquiry No: 500990551 Enq Date: 01-SEP-09 Due Date: 29-SEP-09 Delivery By: 31-JAN-10

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Pin -

Email :

Attn. .

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

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

SL NO	DESCRIPTION / SPECIFICATION	UNIT	QTY
1	MANUFACTURE, SHOP ASSEMBLY, SHOP TESTING AND SUPPLY OF A CENTRIFUGAL PUMP ALONG WITH BASE PLATE, FLEXIBLE COUPLING, INTEGRAL LUBE OIL SYSTEM AND RELATED ACCESSORIES, E.G. INSTRUMENTATION	NO	1
	THE ABOVE EQUIPMENT SHOULD BE SUPPLIED TO MEET THE REQUIREMENTS ENVISAGED AS PER TECHNICAL SPECIFICATION NO. COE CP 3(b,g,h) ENCLOSED.		

Please submit your offer in Two parts as per enclosed "General Terms and Conditions of enquiry & Contract for the purchase of Goods/ Services" in separate sealed covers as detailed below:

- 1) First cover shall contain a) Technical & Commercial bid, b) Compliance Statement, c) Un-priced Price bid, i.e. a copy of the Price bid with the price(s) columns left blank.
 - 2) Second Cover containing Price bid.
- If the Price bid is found to be different from the un-Priced Price bid in any way, the offer will be rejected.
- 3) Unsigned offers are liable for rejection.
 - 4) VENDORS SHALL QUOTE FOR ALL ITEMS. ALL PARTIAL / INCOMPLETE OFFERS SHALL NOT BE PROCESSED. ORDER SHALL BE PLACED ON BASIS OF TOTAL COST TO BHEL..

Note:

- 1) ALL OFFERS MUST INCLUDE NAME OF CONTACT PERSON, PHONE NO, FAX NO, EMAIL ID. UNSIGNED/INCOMPLETE OFFER(S) ARE LIABLE FOR REJECTION.

- 2) Taxes & Duties quoted will be taken for cost evaluation & order placement and no change will be entertained later except in the case of changes made by the Government.
- 3) Changes in Taxes and Duties because of the changes in Turnover etc. will be to the supplier's account.
- 4) In case any Taxes/duties exempted, a self declaration for the same may be attached to the offer.
- 5) GUARANTEE CERTIFICATE : REQUIRED
- 6) MANUFACTURER'S TEST CERTIFICATE : REQUIRED
- 7) ERECTION & COMMISSIONING : REQUIRED
- 8) ACCESSORIES : REQUIRED
- 9) SPARES : REQUIRED

REVERSE AUCTION:



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ENQUIRY

BHEL RESERVES THE RIGHT TO PROCURE ABOVE ITEMS THROUGH REVERSE AUCTION.

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

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

Yours faithfully


for

BHARAT HEAVY ELECTRICALS LTD

KAKKAR PK

Sr Manager

Email: pkkakkar@bhelrnd.co.in

	PURCHASE SPECIFICATION	Rev. 0
	BFP, Coupling and Accessories	Dt.03.8.2009
	Item Code No 3 b,g,h	Specification No. COECP 3b


TECHNICAL SPECIFICATION FOR CENTRIFUGAL PUMP FOR PUMP TEST RIG

1.0	INTENT OF SPECIFICATION:
	<p>The intent of specification is to procure SINGLE STAGE END SUCTION OVERHUNG IMPELLER CENTRIFUGAL PUMP along with accessories.</p> <p>The pump shall be with radially split volute casing in Back Pull out Design.</p>
2.0	SCOPE OF SUPPLY:
	Scope of supply shall include design, manufacture, testing, painting, despatch, Supervision of erection & commissioning and testing at BHEL R & D Hyderabad.
2.1	SCOPE OF SUPPLY SHALL INCLUDE THE FOLLOWING ITEMS: <ol style="list-style-type: none"> Single stage End Suction Overhung Impeller centrifugal pump. Common Base Frame for above Pump and its Drive Motor (Drive Motor is in BHEL'S Scope; Motor support details Clause No. 12) Integral piping along with required Valve and Fittings for cooling water line, balance return & seal water lines. Seal water lines if applicable shall be provided with SS316 pipes & fittings. Flexible Spacer type metallic coupling (between pump & motor). Coupling guards. Counter flanges with bolts, nuts & gaskets for all terminal points like suction, discharge, CW Inlet, CW Outlet etc. Holding down bolts (with nuts if required) to secure pump to the base frame and foundation bolts with nuts to secure base frame to the foundation. Suction strainer SIMPLEX BASKET TYPE of size D 300. Instrumentation mounted on local gauge board (Optional for BHEL & to be quoted separately) 1 Set of special tools & tackles (These shall be listed out in the offer). Commissioning spares as listed out at Clause no. 10.0 of this specification. Item wise price shall be quoted for these items.

NOTE:

- 1) All CW inlet, CW outlet, seal water inlet, seal water outlet, balance return & warm-up (if required) lines shall be provided with flanged joints only. Pipe unions are not acceptable.**
- 2) Recommended spare parts for 2 years of operation to be quoted separately. BHEL reserve the Right to procure a part of the spares or none at all along with Main Pump.**

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NOTE: Connecting Coupling is to be procured from Vendors listed out below.

- ❖ FLEXIBOX LTD, UK
- ❖ EUROFLEX TRANSMISSION, HYDERABAD
- ❖ TRIVENI FLEXIBOX, BANGALORE
- ❖ RATHI TURBOFLEX, PUNE
- ❖ CUBIC TRANSMISSION, HYDERABAD


3.0	DESIGN REQUIRMENTS:																								
3.1	<u>OPERATING PARAMETERS:</u> <table><tr><th>Sl. No.</th><th>Parameters</th><th>Value</th></tr><tr><td>1</td><td>Rated Flow</td><td>650 m³/hr.</td></tr><tr><td>2</td><td>Rated Head to be developed</td><td>150 m</td></tr><tr><td>3</td><td>Suction pressure available at Pump inlet</td><td>Max. 1.5 Kg/cm²</td></tr><tr><td>4</td><td>Water temperature at Pump Inlet</td><td>40⁰ C</td></tr><tr><td>5</td><td>NPSH available</td><td>16.0 m</td></tr><tr><td>6</td><td>Nominal speed</td><td>3000 rpm</td></tr><tr><td>7</td><td>Impeller Diameter (min^m/max^m)</td><td>360/400 mm</td></tr></table> <p>NOTE:Other parameters should be provided by Vendor (In Enclosed Data Sheet).</p>	Sl. No.	Parameters	Value	1	Rated Flow	650 m ³ /hr.	2	Rated Head to be developed	150 m	3	Suction pressure available at Pump inlet	Max. 1.5 Kg/cm ²	4	Water temperature at Pump Inlet	40 ⁰ C	5	NPSH available	16.0 m	6	Nominal speed	3000 rpm	7	Impeller Diameter (min ^m /max ^m)	360/400 mm
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3.2	<u>CONSTRUCTION FEATURES</u> <ul style="list-style-type: none">a) Pump shall be of horizontal construction, with radially split volute casing in back pull out designb) Pump shall be designed for continuous operation at the specified parameters.c) Pumps shall have stable performance characteristics at the operating speed and the discharge heads shall continuously increase with the decreasing flow through the points of minimum flow. The head rise from design to shut off shall be minimum 15% and maximum 25% of the TDH developed at the pump design point.d) The rotating element shall have no critical speed with in a safe margin of the operating speed. The critical speed shall not lie with in plus or minus 20% of the operating speed even with worn-out rings.e) Rotating elements shall be dynamically balanced to G 2.5 of ISO 1940f) Pump bearings shall be with ring oil lubrication (from oil sump provided on bearing housings).g) Mechanical seals [As per API 682] shall be of tungsten carbide/ carbon combination and shall be designed for zero leakage.h) Casings shall be fitted with renewable type wearing rings.																								

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3.2	<p><u>CONSTRUCTION FEATURES CONTD.</u></p> <ul style="list-style-type: none"> i) The static deflection of the rotor shall be less than minimum radial clearance at impeller wear rings/balancing device. j) Suction Booster pumps are not provided. Pump will be receiving its suction directly from reservoir. k) The Pump NPSH required shall not be more than 80% of NPSH available. l) Pumps shall be in Hydraulic balancing condition under all operating conditions from minimum flow to 120% of design flow. Thrust bearing shall be capable of taking the residual thrust under all operating conditions even with worn clearances of the pump. m) Acceptance tolerances on flow, head and efficiency shall be as per HIS 14th edition (No negative tolerance on head & efficiency is acceptable) n) Flow glass indicator shall be provided in CW outlet lines of seal and jacket (as applicable). o) Drive motor provided by BHEL is 2 Pole, 415 V, 3 Phase [Motor is in BHEL'S scope].
3.3	<p><u>CONNECTING COUPLING FEATURES:</u></p> <ul style="list-style-type: none"> a) Coupling shall be of flexible type with spacer to facilitate easy removal of mechanical seal and preferably shall not need any lubrication. b) Couplings shall be dynamically balanced as per ISO 1940, to grade G2.5. Balancing shall be done before slotting the keyways. Certificate should be provided. c) Coupling shall be suitable for following movements/ offsets: <ul style="list-style-type: none"> i. Axial movement of pump rotor due to thermal expansion: 0.25mm ii. Axial movement of motor rotor due to magnetic shift : 3.5mm iii. Parallel offset during initial alignment <ul style="list-style-type: none"> ➤ in horizontal plane 0.21 mm ➤ in vertical plane 0.30 mm d) Couplings shall be supplied with finished bore and key ways. e) Construction of the coupling shall be such that in case of membrane failure, no component of the coupling shall fly off while the equipment is in rotation. f) Membrane element shall be independently replaceable without requiring the replacement of the spacer. g) Distance between shaft ends shall be selected in such a way that it shall be possible to remove/ fit mechanical seals at DE of pump without disturbing pump and motor from their locations. Spacer shall be long enough to remove DE Mech. Seal from the gap between the shafts. h) Drive end pump shaft and coupling side hub shall be provided with taper shaft (with nut on shaft) to facilitate quick removal of pump side hub. i) Diameter of Motor Shaft is approximately 100 mm.

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3.4

SUCTION STRAINER FEATURES:

a) The Suction Strainer should be of SIMPLEX BASKET TYPE construction.
b) The Basket shall be suitable for easy replacement in case of clogging.
c) The Support Sheet and other internals not inferior than SS316 material.
d) Fine Mesh Size shall be 350 microns.
e) Outer shell shall be Carbon Steel Fabricated Construction.
f) The max^m pressure drop across Strainer in clean condition 0.1kg/cm² and 0.2 kg/cm² in clogging condition.


3.5

LOCAL INSTRUMENTATION DETAILS:

SL.No.	Instrument Description	Location	Nos./pump
1.	Pressure Gauge	Pump Suction	1
		Pump Discharge	1
2.	Pr. Transmitter (0-25 kg/cm ²)	Pump Discharge	1
3.	Diff Pressure Gauge Range: 0- 0.5 kg/cm ² Max Diff Pr.- 0.15 kg/cm ² Suitable for static pressure of 15 kg/cm ²	Suction Strainer Diff Pr.	1
4.	Diff Pressure Transmitter Range: 0- 0.5 kg/cm ² Max Diff Pr.- 0.1 kg/cm ² Set point for alarm: 0.15 kg/cm ² Suitable for static pressure of 15 kg/cm ²	-do-	1
5.	Duplex 4-wire RTDs Pt 100 ohms	Pump Suction & Discharge (with suitable thermo wells)	2
		Pump DE & NDE Bearings	2


NOTE: All the instruments shall be mounted on a Local Gauge Board and terminated at junction box, which in turn shall be mounted on the pump base plate. Itemwise Instrumentation to be quoted separately. BHEL reserve the right for procuring full or Part of the above items. Make and Model No. of the Instruments offered should be furnished alongwith Technical Bid

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4.0	<u>MATERIALS OF CONSTRUCTION:</u>												
4.1	<u>Pump:</u> Materials of construction shall not be inferior to those indicated below. <table><tr><td>Impeller</td><td>:</td><td>13% chromium steel casting – Steel – C.S C jotted</td></tr><tr><td>Wearing Rings</td><td>:</td><td>13% chromium steel with antigalling properties</td></tr><tr><td>Shaft</td><td>:</td><td>13% chromium steel forging</td></tr><tr><td>Common base frame</td><td>:</td><td>Rigid fabricated steel</td></tr></table>	Impeller	:	13% chromium steel casting – Steel – C.S C jotted	Wearing Rings	:	13% chromium steel with antigalling properties	Shaft	:	13% chromium steel forging	Common base frame	:	Rigid fabricated steel
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Common base frame	:	Rigid fabricated steel											
4.2	<u>Connecting Coupling:</u> Materials of construction shall not be inferior to those indicated below. <table><tr><td>Coupling hubs, adapters</td><td>:</td><td>BS 970 080 M40 & spacer</td></tr><tr><td>Coupling bolts & nuts</td><td>:</td><td>BS 970 817 M40 screws for adapters</td></tr><tr><td>Overload washers</td><td>:</td><td>BS 970 817 M40</td></tr><tr><td>Element blades</td><td>:</td><td>AISI 301</td></tr></table>	Coupling hubs, adapters	:	BS 970 080 M40 & spacer	Coupling bolts & nuts	:	BS 970 817 M40 screws for adapters	Overload washers	:	BS 970 817 M40	Element blades	:	AISI 301
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5.0	<u>QUALITY REQUIREMENTS:</u>												
5.1	<u>Pump:</u> a) Quality plan for material stage and in process stage shall be furnished as per the enclosed format within 2 weeks of placing the purchase order. Quality plan will be approved by R&D, BHEL. Quality plan shall cover all critical components like casing, impeller, diffuser, shaft, Impeller & casing wear rings, casing bolts, thrust bearing etc. b) Quality shall include the following tests. <table><tr><td>i.</td><td>Chemical and mechanical properties shall be checked for all the critical components.</td></tr><tr><td>ii.</td><td>Ultrasonic test shall be conducted on all shafts on 100% area in material stage and dye penetrant inspection shall be conducted after finish machining of the shafts.</td></tr><tr><td>iii.</td><td>RT & UT shall be conducted at material induction stage and Dye penetration test shall be conducted after finish machining on all impellers, casings & diffusers. RT shall be as per ASTM E 446.</td></tr><tr><td>iv.</td><td>Dynamic balancing of the rotor shall be done to grade G2.5 of ISO 1940.</td></tr><tr><td>v.</td><td>Hydraulic testing of stator assy. shall be done at 2 times the design pressure or 1.5 times the shut off pressure which ever is higher. Static suction head is 18 m.</td></tr><tr><td>vi.</td><td>Dye Penetration examination shall be done on casing bolts before threading. UT and MPI shall be conducted on Nozzle / casing weld joints (if Nozzles are welded).</td></tr></table>	i.	Chemical and mechanical properties shall be checked for all the critical components.	ii.	Ultrasonic test shall be conducted on all shafts on 100% area in material stage and dye penetrant inspection shall be conducted after finish machining of the shafts.	iii.	RT & UT shall be conducted at material induction stage and Dye penetration test shall be conducted after finish machining on all impellers, casings & diffusers. RT shall be as per ASTM E 446.	iv.	Dynamic balancing of the rotor shall be done to grade G2.5 of ISO 1940.	v.	Hydraulic testing of stator assy. shall be done at 2 times the design pressure or 1.5 times the shut off pressure which ever is higher. Static suction head is 18 m.	vi.	Dye Penetration examination shall be done on casing bolts before threading. UT and MPI shall be conducted on Nozzle / casing weld joints (if Nozzles are welded).
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5.2

Connecting Coupling:

a) Quality plan as per the format indicating following items/ assemblies and their acceptance norms at material, in-process and final assembly stages shall be furnished for BHEL approval.

i. MATERIAL:	MATL. SPECN.	TEST	QUANTUM
Coupling hubs, adapters & spacer	BS 970 080 M40	Chemical Mechanical UT	Each Melt Each HT batch 100%
Coupling Bolts & Nuts, screws for adapters	BS 970 817 M40	Chemical Mechanical UT	Each Melt Each HT batch 100%
Over load washers	BS 970 817 M40	--	--
Element Blades	AISI301	Chemical Mechanical	Each Melt Each HT batch
ii. IN- PROCESS:	-	TEST	QUANTUM
Coupling hubs, adapters & spacer	-	LPI	100%
Coupling Bolts & Nuts, screws for adapters	-	MPI	100%
Element assembly & stacking	-	LPI	100%
Coupling assembly	-	Dynamic balancing	100%

b) All major parts of each coupling assembly i.e. coupling hubs, spacer, adopters etc, shall be identified with unique SI Nos. to avoid mismatching during pump assembly and dis-assembly.

6.0


PERFORMANCE TESTING OF PUMPAT VENDOR WORKS:

Test procedure shall be submitted for approval after placing of purchase order.

A. Performance shall be carried out on the pump at rated speed to demonstrate Flow Vs head, Flow Vs Power, and Flow vs. efficiency. Measurement shall be done on at least eight (8) different points from shut off point to 120% flow. Test tolerances shall be as per HIS. No negative tolerance on head and efficiency is permitted.


B. Vibration and noise levels shall be measured during the performance testing. Vibration level shall not exceed the satisfactory limits specified for group "T" machines of VDI2056. Sound pressure level at a distance of 1.5 meters above floor level in elevation and 1 meter horizontally from the base of equipment shall not be more than 85 dba.

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6.0	<u>PERFORMANCE TESTING OF PUMP CONTD. :</u> <p>C. Bearing temperatures and mechanical seal performance shall be recorded during the performance testing.</p> <p>D. NPSH(R) test shall be carried out on the pump for 3% and 1% head drop condition to determine Flow vs. NPSH(R) curve. Measurement shall be done at least 4 different flows i.e. 60%, 80%, 100% and 120%.</p> <p>E. Strip down examination shall be carried out on the pump to check for damage/rubbing of components after carrying out performance test & NPSH (R) test.</p>
7.0	<u>PAINTING PRESERVATION & PACKING:</u>
7.1	<u>PUMP:</u> <p>a) Two coats of heat resistant air drying epoxy paint shall be applied to the external surfaces.</p> <p>b) All exposed machined surfaces shall be applied with temporary rust preventive suitable for 1-year storage.</p> <p>c) Consignment shall be properly packed to withstand the transit risks. Liberal quantities of silica gel shall be placed in the packing box to avoid corrosion due to ingress moisture.</p>
7.2	<u>Connecting Coupling:</u> <p>a) Rust preventive preservative suitable for the component protection for a period of 2 years shall be applied.</p> <p>b) Packing case shall be properly stiffened to avoid disintegration / damage during transport.</p> <p>c) Adequate quantity of indicating type silica gel in bleached and finished plain weave cloth bag each containing 0.5 kg per cubic meter volume of the case shall be placed in the packing case to avoid rusting and corrosion due to the ingress of moisture.</p>
8.0	<u>GUARANTEE AND CERTIFICATES:</u> <p>➤ <u>Pump:</u></p> <ul style="list-style-type: none"> ❖ The Pump & accessories shall be guaranteed for a period of 12 months after commissioning, or 18 month after receipt for trouble free operation. ❖ Certificates shall include the stage inspection checks at sub supplier also.

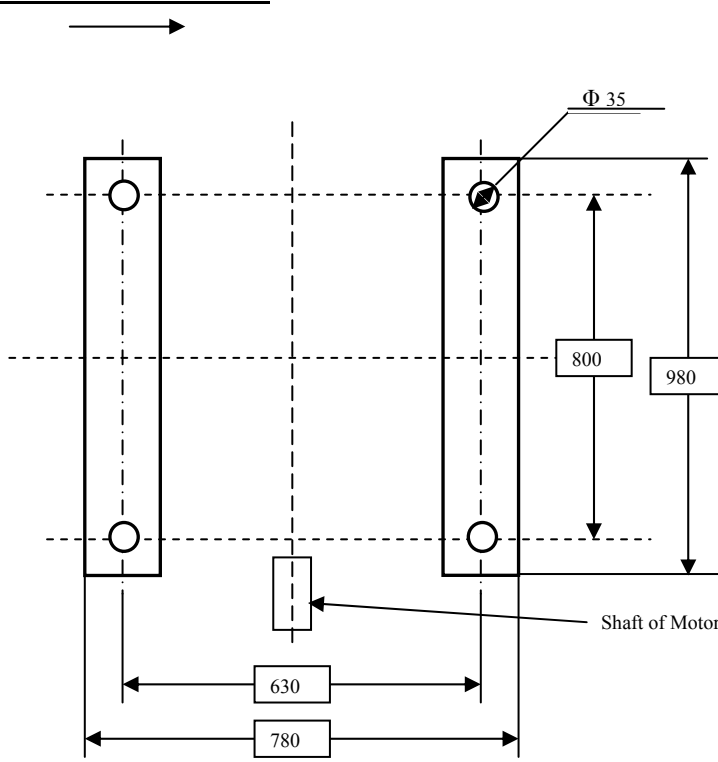
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8.0	<u>GUARANTEE AND CERTIFICATES CONTD. :</u> <ul style="list-style-type: none"> ➤ <u>Connecting Coupling:</u> Following certificates shall be furnished along with the consignment in 5 copies. <ul style="list-style-type: none"> ❖ Compliance certificate for materials of construction & dimensions as per approved drawings. ❖ Dynamic balancing certificate. ➤ Certificates shall include the stage inspection checks at sub supplier also.
9.0	<u>LIST OF COMMISSIONING SPARES:</u> One set consisting of the following: <ul style="list-style-type: none"> a) Mechanical Seal (DE) : 1 No b) Bearings incl. thrust brg of one pump : 1 set NOTE: Price shall be quoted separately item wise of commissioning spares.
10.0	<u>DRGS/DATA TO BE FURNISHED:</u> <ul style="list-style-type: none"> A. <u>Along with TECHNICAL BID</u> <ul style="list-style-type: none"> a) Outline Drawing b) Sectional assembly drawing with part list and Material of Construction c) Technical write-up giving description of pump & its salient features. d) List of instruments offered (to be quoted separately). e) Priced offer for mandatory and recommended spares in separate price bid (to be quoted separately item wise). f) Technical Data Sheet g) Estimated Performance Curve. B. <u>After the Placement of ORDER</u> <ul style="list-style-type: none"> a) General arrangement drawing showing pump, motor common base frame with over all dimensions, foundation details, suction/discharge nozzle details, weights, foundation loading, details etc. b) Design characteristic curves for Q vs. H, Q vs. P & Q vs. efficiency & Q Vs NPSH(R) c) Allowable forces & moments on suction/discharge nozzles. d) Thermal moments of suction /discharge nozzles. e) Minimum recirculation flow for the safe operation of pump. f) Lube oil Qty. required for pump & motor bearing sumps. g) List of special tools. h) OPERATION and MAINTAINCE MANUAL i) Maximum and design axial thrust, Maximum and design residual thrust coming onto thrust bearing. j) Final Data Sheet k) Test Procedure at Vendor Works

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11.0	<u>ERECTION AND COMMISSIONING</u>
11.1	<p>The following activities under erection and commissioning are in vendor scope.</p> <ul style="list-style-type: none"> ➤ Fixing of Pump and Motor in the base plate. ➤ Alignment of Pump and Motor axis and assembly of Flexible coupling and Torquemeter. ➤ Base Frame setting, alignment and securing base frame with foundation bolts. ➤ Placement of Primary Instrumentation and lead connection to junction box. ➤ Fixing of Local panel, energisation and checking of Parameters with primary Signal connection. ➤ Foundation bolts and the grounding details to be furnished by Vendor so that the same are embedded while carried out the Civil Foundation by BHEL
11.2	<p>BHEL'S SCOPE</p> <ul style="list-style-type: none"> ➤ Piping connection for inlet and Outlet nozzle. ➤ A Crane would be provided for carrying out installation. ➤ 440 V power supply connection to Power panel, VFD and Motor.
12.0	<p><u>MOTOR SUPPORT DETAIL'S</u></p>  <p style="text-align: center;"><u>MOTOR SUPPORT</u></p>

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Corporate R&D Division, BHEL, Vikasnagar, Hyderabad 500093			

		DATA SHEET										SPEC No.						
		CENTRIFUGAL PUMP										ISSUE						
												DATE						
												PAGE OF						
CLIENT:												LOCATION:						
SERVICE:												PLANT:						
SUPPLIER MFR.:												EQUIPMENT No.:						
1	No. Operating				No. Spare				Total Required				Duty <input type="checkbox"/> Intermittent <input type="checkbox"/> Continuous					
2	Type	<input type="checkbox"/> Horizontal <input type="checkbox"/> Inline <input type="checkbox"/> Vertical										Multistage No.		Stages				
3	Fluid/Service																	
4	Characteristics <input type="checkbox"/> Corrosive <input type="checkbox"/> Toxic <input type="checkbox"/> Flammable <input type="checkbox"/> Abrasive <input type="checkbox"/> Solids <input type="checkbox"/> Other, Specify:												% Solids					
5	No. of Motors Req'd				Motor No.				Provided By				Mounted By					
6	No. of Turbines Req'd								Provided By				Mounted By					
7	Multiple Units	Total Flow						Total Head										
8	CONDITIONS OF SERVICE, EACH PUMP												% Over Design		PERFORMANCE			
9	Normal Flow				Rated Flow				Disch. Press.				Curve No.					
10	Temperature				Max.				Suction Press. Max.				Rated					
11	Specific Gravity								Differential Pressure				RPM					
12	Vapour Pressure								Differential Head				NPSHR (Water)					
13	Viscosity								NPSH Available				Eff.					
14	Corr./Erosion Caused By								Corrosion Allowance				Max. BHP Rated Impeller					
15	Cold Start Temp.				@ Sp. Gr.				& Viscosity				Max. Head Rated Impeller					
16	CONSTRUCTION												Min. Continuous Flow					
17	Nozzles				Size				Rating				Rotation (Viewed from Cplg. End)					
18	Suction								Facings				Cold Start BHP					
19	Discharge								Location				INSPECTION AND TESTING					
20	Case	Mount	<input type="checkbox"/> Centre Line <input type="checkbox"/> Foot <input type="checkbox"/> Bracket <input type="checkbox"/> Other, Specify:											<input type="checkbox"/> Non Witness Perf. <input type="checkbox"/> Witness Perf.				
21		Split	<input type="checkbox"/> Axial <input type="checkbox"/> Radial				Suction Type				<input type="checkbox"/> Single <input type="checkbox"/> Double				<input type="checkbox"/> Non Witness Hydro <input type="checkbox"/> Witness Hydro			
22		Pressure	Max-Allowable				Hydro Test Pressure				<input type="checkbox"/> NPSH Required <input type="checkbox"/> Witness NPSH				<input type="checkbox"/> Shop Inspection			
23		Connect	<input type="checkbox"/> Vent <input type="checkbox"/> Drain <input type="checkbox"/> Cage											<input type="checkbox"/> Dismantle & Inspect After Test				<input type="checkbox"/> Specification (PEDS 01.04)
24	Impeller	Dia.	Rated		Max.		Min.		Type		MATERIALS							
25		Mount	<input type="checkbox"/> Between Bearings <input type="checkbox"/> Overhung											Pump Casing				
26	Bearing-Type														Wear Rings			
27	Lubrication <input type="checkbox"/> Ring Oil <input type="checkbox"/> Flood <input type="checkbox"/> Oil Mist <input type="checkbox"/> Flinger <input type="checkbox"/> Pressure <input type="checkbox"/> Grease														Impeller			
28	Coupling		Mfr.				Model				<input type="checkbox"/> Guard				Shaft			
29	Driver Half Mtd. by <input type="checkbox"/> Pump Manufacturer <input type="checkbox"/> Driver Manufacturer <input type="checkbox"/> Purchaser														Shaft Sleeves			
30	Packing				Mfr. and Type				Size/No. of Rings				Stuffing Box Bushing					
31	MECHANICAL SEAL														Glands			
32	Manufacturer								Supplied By						Gaskets			
33	Model Number														Base Plate			
34	Type	<input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Inside <input type="checkbox"/> Outside <input type="checkbox"/> Balanced <input type="checkbox"/> Unbalanced													AUXILIARIES			
35	Rotary Unit														C.W. Pipe Plan API-610			
36	Seal Ring				Shaft Packing				Throttle Bushing				<input type="checkbox"/> Cu <input type="checkbox"/> SS <input type="checkbox"/> CS <input type="checkbox"/> Tubing <input type="checkbox"/> Pipe					
37	Seal Flush Plan API-610				<input type="checkbox"/> Cu <input type="checkbox"/> SS <input type="checkbox"/> CS <input type="checkbox"/> Tubing <input type="checkbox"/> Pipe				By:				Total Cooling Water Required					
38	External Seal Flush				Flow				Press.				Flow					
39	Auxiliary Seal Plan API-610				<input type="checkbox"/> Cu <input type="checkbox"/> SS <input type="checkbox"/> CS <input type="checkbox"/> Tubing <input type="checkbox"/> Pipe				By:				Pressure Max. at °C					
40	Auxiliary Seal Quench Fluid														<input type="checkbox"/> Sight Flow Indicator Required			
41	MOTOR DRIVER														<input type="checkbox"/> Packing Cooling Injection Required			
42	Hp		RPM		Frame		Volts/Phase/Hz						Flow					
43	Mfr.		Type:		NEMA Design				Pressure Max. at °C									
44	Enclosure		Rated Ambient Temp.				Insul Class				Pump Thrust <input type="checkbox"/> Up <input type="checkbox"/> Down							
45	Elevation		Full Load Amps				Space Heaters				Length Below Mounting Flange							
46	S.F.		<input type="checkbox"/> Constant Speed <input type="checkbox"/> Variable Speed															
47	WEIGHTS														Code Requirements and Specifications			
48	Pump & Base														REMARKS			
49	Motor																	
50	Gear																	
51	Turbine																	
52																		
53													Contract No.					
54													Data Sheet No.					
55													Requisition No.					
56													Unit/Area					
57	REV	DATE	COMMENT															



BHARAT HEAVY ELECTRICALS LIMITED

CORPORATE R&D DIVISION, VIKAS NAGAR, HYDERABAD – 500 093, AP, India

Ph: 0091-40 – 23778474, FAX: 0091-40 – 23770698

General Terms and Conditions of Enquiry & Contract for the Purchase of Goods/ Services

1. The quotation and any order resulting from this enquiry shall be governed by these General Terms and Conditions of enquiry and contract for the supply of goods and the supplier quoting against this enquiry shall, unless specifically stipulates any different terms or conditions, be deemed to have read and agreed to the same.
2. Sealed quotations in double cover with tenderer's distinctive seal, superscribing enquiry number, date and due date are to be submitted so as to reach on or before due date & time, addressed to **Additional General Manager(MM), Bharat Heavy Electricals Limited, Corporate Research & Development Division, Vikasnagar, Hyderabad, Andhra Pradesh, India – PIN-500 093, India.**

In the case of **Two-part bid**, each inner cover shall clearly be labeled as a) **Technical & Commercial Bid** containing technical data/ drawings/ catalogues/ quality plans along with commercial terms and conditions & copy of the price bid with the price columns left blank (unpriced price bid), b) **Price bid** containing prices quotes. Installation and/or Commissioning charges shall be spelt out in absolutely lucid terms, taking into account total charges, rather than quoting vaguely, such as charges per man-day or charges per engineer per day etc. **If the price bid was found later to be different from the unpriced price bid in any way, the offer will be rejected summarily.**

3. **Tender/ Technical bid Opening:** Unless specified otherwise, tenders/ technical bids will be opened on appointed date and time as mentioned in the enquiry or as communicated changed date/time, if any, in the presence of such of those tenderers who may be present.
4. **Delayed/ Late Tender:** Tenders, which have been posted by registered post through the postal department in time before opening date but received after tender opening, shall be treated as regular tenders. Other tenders received after tender opening time shall be treated as late tenders and normally they may be rejected.
5. The Quotation should be free from overwriting and erasures. Corrections and additions, if any, must be attested. Supplier should indicate in the quotation dimensions (Size), weight, rate etc., in the metric system unless the enquiry calls for different unit.
6. **Validity of Quotation:** All quotations shall be kept open for acceptance for a period of ninety days from the date of opening of Tenders/ Technical bid and this shall be deemed to be an express condition of all quotations. The rate shall be quoted in both figures and in words.
7. In the case of Two-part bid, the vendor should furnish technical clarifications, if any, within stipulated time mentioned, failing which, it will be construed that the vendor is not interested in the tender and BHEL shall not consider the offer for further evaluation.
8. **Revision of Pricebid:** In the event of any bidder, after finalizing the technical specifications and scope of supply, opting to revise and submit their latest price bid, then BHEL reserves the right to open their original / previous price bid also while evaluating revised bid.
9. **Pricebid Opening:** Unless specified otherwise in the enquiry, the Price bids of technically qualified vendors shall be opened with prior intimation in the presence of such of those tenderers who may be present.
10. **Conformity to Specifications:** The material should be of the best quality and shall be conforming to our specification given in our enquiry. Unless otherwise agreed upon by BHEL, no payment shall be due by BHEL in respect of any sample. Offers without details of specifications/ applicable catalogues will not be considered and are liable to be rejected.
11. **Terms of Delivery:** All suppliers shall quote the lowest prices on ex-works and FOB/FCA basis. Foreign suppliers will also indicate their Indian agent's name and address with percentage of agency commission out of the quoted price, if any. Name and Address of the supplier's Bankers address should also be given. Indian suppliers for the indigenously manufactured/ imported stock shall quote on Ex-works /Free-on-Rail/Road /FOR-destination basis, indicating packing & forwarding charges, if any, separately.
12. **Taxes and Duties:** Unless specified otherwise in the enquiry, BHEL do not provide "C" or "D" Form as it is engaged in R&D. All Indian suppliers shall clearly mention Sales Tax/ VAT, Excise Duty, and Service Tax etc, if any, payable in addition to the quoted price and indicate applicable rates/ percentage, item-wise. It will be paid

only if Registration Number under State(TIN)/ Central Sales Tax or Service Tax is specifically mentioned in the Bill/Invoice. Vendors without a Sales Tax/VAT registration and applicable Service Tax registration will not be considered.

13. **Insurance:** Insurance will be arranged by BHEL in case of Ex-Works as well as FOB basis supplies.
14. **Terms of Payment:** Full payment will be made within 30 days after receipt, inspection and acceptance of the material (and where involved, Erection and commissioning of the material/ equipment at BHEL/Destination) by Crossed cheque and no Bank commission charges are admissible. The Cheque will be sent by registered post and BHEL is in no way responsible if loss occurs due to delay by postal authorities and cheques falling into improper hands or through forgery or fraud. Suppliers having RBI-SEFT-enabled accounts can seek payment through Electronic Fund transfer. For foreign suppliers, the preferred payment term will be on Sight Draft basis and bank charges inside India will be to BHEL account and outside India will be to supplier's account.
15. Suppliers shall quote competitive price and best delivery for all the items mentioned in the enquiry. BHEL reserves the right to reject partial quotations and to place order on overall landed cost basis. Correct date of effecting supplies in the event of an order should be indicated in the offer. If the supplier's quoted terms are different from BHEL standard payment terms, interest @10.5% per annum (or as indicated in the enquiry) will be loaded to the quoted prices for difference of payment period.
16. **Packing:** The supplier shall be responsible for the goods being properly and adequately packed so as to prevent any loss, damage or deterioration during transit and indicate packing charges, if any, separately.
17. **Part/ Split Ordering:** BHEL reserves right to Order part of the item/ quantity of the enquiry and split the order among qualified vendors.
18. In case the goods enquired are on Rate Contract basis with any other unit of BHEL, such fact should be clearly indicated in the quotation giving full particulars of Rate Contract number, validity and price and also your willingness to comply with order if placed against such Rate Contract. A true copy of Rate contract signed by the supplier should be sent with the quotation.
19. **Inspection:** On receipt, the goods shall be subjected to inspection and also test, if necessary, and our decision regarding the acceptability of the goods shall be final and binding on the suppliers.
20. **Consequences of Failure To Deliver:** The time stipulated for delivery of goods shall be deemed to be the essence of the contract and delivery must be completed within the stipulated date/s. In the event of supplier's failure to supply the goods by the stipulated date/s, BHEL shall be entitled to levy a penalty of ½% per week for the delayed no of weeks or part thereof for the undelivered portion of PO subject to a maximum of 10% total order value.
21. **Withdrawal from the Contract:** In case the supplier withdraws the quotation after its acceptance by BHEL or fails to supply the goods as per the terms and conditions of contract, or at any time repudiated the contract wholly or in part, BHEL shall be at liberty to cancel the Purchase Order and to recover from the supplier the extra cost and other loss incidental to the breach of contract on the part of the supplier.
22. **Guarantee/ Warranty certificate and Manufacturer's Test report:** Invariably in all cases where it is so stipulated, the supplier should furnish Guarantee/ Warranty certificate valid for a period of 18 months from date of supply or 1 year from the date of receipt, acceptance and commissioning(or more, if provide by oem) whichever earlier and manufacturer's Test report along with the goods, failing which, BHEL shall have the right to reject the goods.
23. All ferrous/ non-ferrous items shall be colour coded as per bureau of Indian standards/ or IS standards/ BHEL Standards.
24. **Recovery of Dues:** BHEL shall recover any amount due from the supplier or any amount outstanding to the credit of the supplier with BHEL R&D unit or any other BHEL unit(s) and/or by legal action.
25. **Arbitration & Forum for Legal Proceedings:** All disputes arising in connection with indigenous/ foreign supplies shall be settled through arbitration held at Hyderabad, AP, India and arbitration shall be appointed by Arbitration Tribunal of the Federation of Andhra Pradesh Chambers of Commerce and Industry, Hyderabad, AP, India. The Courts at Secunderabad/ Hyderabad, AP, India shall have jurisdiction in respect of any suit or other legal proceeding arising from or relating to this contract

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



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

Suppliers' compliance statement to basic conditions of enquiry

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

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

* BHEL R&D reserves the right to reject any offer due to non-compliance with the above conditions and/or non-receipt of this form in duly filled condition

* Any other elements of cost in addition to the above may please be specified in detail

(Signature and Stamp/Seal of Vendor)



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

VENDOR REGISTRATION FORM

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

Before filling please refer to instructions on page-4

1.0 VENDOR PROFILE:

1.1 & 1.2 Name and address of the vender:

Phone Nos.:

Fax No.:

Email:

1.4 Local representative of the vender in India/ Hyderabad:

Phone Nos.:

Fax No.:

Email:

Contact person:

Mobile No.:

2.0 & 2.1 Type of Organisation:

PROPRIETORSHIP	COMPANY	SISTER CONCERN	ANY OTHER (Please specify)
PARTNERSHIP	CORPORATION	Small Scale Industry	

3.0 Annual Turn Over:

Name and address of the Banker:

Sr.No.	Bank	Address

4.0 REGISTRATION PARTICULARS

4.1 IT Permanent Account No.(PAN):

4.2 & 4.3 State and central sales tax Registration No.:

4.4 ED/ Service Tax Registration No.:

PF Account No.:

Labour Licence No.:

ESI Account No.:

5.2 Contact person:

Mobile No. :

5.3 Total Number of employees:

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

6.0 Wish to register for supplies/ services other than one bidding for :

<u>Sr.No.</u>	<u>Service/Supplies</u>	<u>Capacity</u>
<u>1</u>		
<u>2</u>		
<u>3</u>		
<u>4</u>		
<u>5</u>		
<u>6</u>		
<u>7</u>		

6.1 Reference list :

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

<u>Sr.No.</u>	<u>Customer</u>	<u>Volume / Year</u>
<u>1</u>		
<u>2</u>		
<u>3</u>		
<u>4</u>		
<u>5</u>		
<u>6</u>		
<u>7</u>		

7.0 & 8.0 Infrastructure / facilities :

<u>Sr.No.</u>	<u>Facility (with specifications)</u>	<u>Age/ Year procured</u>
<u>1</u>		
<u>2</u>		
<u>3</u>		
<u>4</u>		
<u>5</u>		
<u>6</u>		
<u>7</u>		
<u>8</u>		
<u>9</u>		
<u>10</u>		

9.0 Registration with other BHEL Unit/Units:

<u>Sr.No.</u>	<u>9.1.1 Unit</u>	<u>9.1.2 Registration No.</u>
<u>1</u>		
<u>2</u>		
<u>3</u>		
<u>4</u>		

Any Other information :

Declaration:

The information furnished above is true and authentic.

(CEO / Proprietor)

SEAL:

Date:

The competent authority reserves the right to accept or reject the registration. Registered vendors will be informed by mail / email, as convenient. Contact Sr.DGM (MM) for clarification/ additional information on registration.
A separate communication will be sent to you in case of non-registration, citing reasons thereof.

Instructions

1. Answer all items, use NA for items not applicable.
2. BHEL units do not require this registration.
3. Submit the form in duplicate.
4. Use additional sheets for want of space if required.
5. Attach copies of latest documents in respect of items 4.0 (Registration no.s)
6. Photographs of registered office and the chief executive/proprietor shall be furnished.
7. Use A4 sheets for this document and the enclosures.

* REGISTERED BIDDERS, HAVING BHEL (R&D) REGISTRATION NO./ HAVE SUBMITTED THIS FORMAT EARLIER, NEED NOT FURNISH THIS INFORMATION SECOND TIME (UNLESS DESIRE TO UPDATE IT).

AUTHORISATION LETTER FOR E-PAYMENT/ NEFT / RTGS

(PLEASE FILL UP THE FORM COMPLETELY IN CAPITAL LETTERS ONLY)

1	Type of Request (Tick One)	NEW / CHANGE
2	BHEL Vendor Code	
3	Company's Name	
4	Address	
5	City with Pin Code	
6	State	
7	PAN NUMBER	
8	Name of Contact Person	
9	Phone No with STD Code	
10	Fax No with STD Code	
11	Email Id	
12	Web Site (URL)	

BANK DETAILS FOR EFT / RTGS

1	Bank Name	
2	Branch	
3	Branch Code	
4	Address	
5	PHONE No.	
6	Account No.	
7	MICR/ IFSC Code	
8	Bank Swift Code	
9	NEFT/ RTGS enabled	Yes / No
10	Cancelled Cheque	Enclosed / Not Enclosed

1. I, as representative / owner of the above named company, hereby authorise BHEL R&D Hyderabad, to electronically make payments to the designated bank account. I hereby certify that the particulars given above are true, complete and correct.
2. If the transaction is delayed or not effected at all for reasons of incomplete or incorrect information, I would not hold BHEL / transferring Bank responsible.
3. This authority remains in full force until BHEL receives and acknowledge written notification requesting a change or cancellation

Date:

Authorised Signatory
Designation :

COMPANY SEAL



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

IMPORTED

Suppliers' compliance statement to basic conditions of enquiry

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

Condition	BHEL R&D's terms	Supplier's compliance (indicate Yes/No. if 'No', state terms desired)
01) Validity of offer	90 days from the tender opening date (or as per enquiry)	
02) Delivery requirements	FCA – Nearest International Airport (or as indicated in the enquiry)	
03) Warranty	Unless specifically mentioned in the enquiry, all supplied items to be provided with warrantee for one year (or more, if provided by the OEM) from the date of acceptance/ commissioning. In case of equipment involving erection and commissioning, warrantee shall be for 18 months from the date of dispatch or 12 months from the date of commissioning, whichever is earlier	
04) Terms of payment	Sight draft. All bank charges inside India will be to BHEL R&D account and out side India will be to suppliers account. Documents through State Bank of India, HAL Complex, Balanagar, Hyderabad, AP, India-500 042.	
05) Agency commission	Pl specify percentage charges, if any. Indian agency/agent commission will be in Indian Currency only.	
06) Erection/ Commission	As per enquiry	
07) Documentation	As per enquiry	
08) Insurance	BHEL will arrange Insurance based on intimation to our Insurance agency, United India Insurance Co., DO-2, Secunderabad, AP, India.	
09) Penalty for late delivery	0.5% per week beyond the delivery date as mentioned in the Purchase order on undelivered portion subject to a maximum of 10% of the total order value	

* BHEL R&D reserves the right to reject any offer due to non-compliance with the above conditions and/or non-receipt of this form in duly filled condition

* Any other elements of cost in addition to the above may please be specified in detail

(Signature and Stamp/ Seal of Vendor)



BHEL CORPORATE R & D
VIKAS NAGAR- HYDERABAD - 500 093
ANDHRA PRADESH – INDIA
SUPPLIER REGISTRATION FORM

(FOREIGN SUPPLIER)

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

1.0 GENERAL INFORMATION:

1.1....NAME OF COMPANY

1.2....DETAILS OF HEAD OFFICE:

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

1.3....DETAILS OF FACTORY/WORKS:

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

1.4....DETAILS OF MARKETING AGENT

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

1.5 CHIEF EXECUTIVE

NOTE: PLEASE ATTACH SEPARATE SHEETS, IF SPACE FOUND IS INADEQUATE

AUTHORISED SIGNATORY



BHEL CORPORATE R & D
VIKAS NAGAR – HYDERABAD – 500 093
ANDHRA PRADESH – INDIA

SUPPLIER REGISTRATION FORM

(FOREIGN SUPPLIER)

- 1.6 CONTACT PERSON(S)
FOR PRODUCT OFFERED
NAME(S)
OFFICIAL CAPACITY
ADDRESS:
TELEPHONE
FAX
E-MAIL
- 1.7 YEAR OF ESTABLISHMENT
- 1.8 PRODUCTION CAPACITY PER ANNUM
- 1.9 PARTICULARS OF PRODUCT INCLUDING
SPECIFICATION AND RANGE OFFERED
FOR REGISTRATION
(ATTACH BROUCHERS AND CATALOGUE)
- 1.10 NAME(S) OF BANKERS
- 1.11 BANKER’S CERTIFICATE
- 1.12 PORT OF LOADING
- 1.13 NEAREST AIRPORT
- 1.14 NAME OF THE INDIAN AGENT, IF ANY
WITH AUTHORISATION LETTER
- 1.15 ANY OTHER INFORMATION:

AUTHORISED SIGNATORY



BHEL CORPORATE R & D
VIKAS NAGAR – HYDERABAD – 500 093
ANDHRA PRADESH – INDIA

SUPPLIER REGISTRATION FORM

(FOREIGN SUPPLIER)

2.0 FINANCIAL INFORMATION

2.1...TOTAL CAPACITY

2.2...ANNUAL TURN OVER FOR LAST 3 YEARS

2.3...WHEHER CREDIT LICENSE ACCEPTABLE YES/NO

3.0 QUALITY MANAGEMENT SYSTEMS
ENCLOSED FORMAT PART-B

3.1 EXPERIENCE LIST FOR SAME/SIMILAR ITEMS
TO BE ENCLOSED


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

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

6.0 ANY OTHER INFORMATION

SIGNATURE OF SUPPLIER
NAME
DESIGNATION
DATE
.....OFFICIAL SEAL

AUTHORISED SIGNATORY

BHEL R&D RD:DP:MPX:F-22		LOADING FACTORS			
NOTE : IN CASE OF DEVIATION TO BHEL TENDER SPECIFIED TERMS, LOADING FACTOR INDICATED IN FOLLOWING TABLE WILL BE APPLIED TO QUOTED PRICE WHILE EVALUATING THE LOWEST QUOTE ()					
A. FOR INDIGENOUS PURCHASES					
SLNO	SCOPE	COMMERCIAL TERMS	BHEL STANDARD TERM	AS OFFERED	LOADING FACTOR FOR NON COMPLIANCE TO BHEL STANDARD TERMS
A.1	SUPPLY OF EQUIPMENT	PAYMENT TERMS	100% PAYMENT, WITH IN 30 DAYS FROM THE DATE OF RECEIPT AND ACCEPTANCE OF MATERIAL	SAME	NIL
				PAYMENT AGAINST PROFORMA INVOICE / DESPATCH DOCUMENT OR CASH ON DELIVERY (COD) / CASH AGAINST PROOF OF DESPATCH	11% PER ANNUM INTEREST ON THE TOTAL PO VALUE FOR ONE MONTH
				ADVANCE PAYMENT WITH BANK GUARANTEE	11% PER ANNUM INTEREST ON THE TOTAL VALUE FOR OFFERED DELIVERY PERIOD (Rounded off to nearest month) + 1 MONTH
				PART ADVANCE PAYMENT WITH SUPPORTING BANK GUARANTEE AND BALANCE WITH IN 30 DAYS	11% PER ANNUM INTEREST ON ADVANCE FOR OFFERED DELIVERY PERIOD (Rounded off to nearest month) + 1 MONTH
				PART ADVANCE PAYMENT WITH SUPPORTING BANK GUARANTEE AND BALANCE ON RECEIPT OF MATERIAL	11% PER ANNUM INTEREST ON ADVANCE FOR OFFERED DELIVERY PERIOD (Rounded off to nearest month) + 1 MONTH AND 11% PER ANNUM INTEREST ON BALANCE AMOUNT FOR ONE MONTH
A.2	SUPPLY OF EQUIPMENT INCLUDING E&C	PAYMENT TERMS (THE SUPPLIER MUST SUBMITT A PERFORMANCE BANK GUARANTEE (PBG) FOR 10% OF THE BASIC VALUE OF THE ORDER VALID FOR WARRANTY PERIOD.)	90% PAYMENT, WITH IN 30 DAYS FROM THE DATE OF RECEIPTAND ACCEPTANCE OF MATERIAL . BALANCE 10% WITH IN 30 DAYS OF COMPLETION OF E&C AND ON SUBMISSION OF PERFORMANCE BANK GUARANTEE (PBG) FOR 10% OF BASIC PO VALUE.	SAME	NIL
				100% PAYMENT WITH IN 30DAYS AFTER COMPLETION OF SUPPLIES AND ERECTION AND COMMISIONING	NIL (PBG WILL NOT BE INSISTED FROM THE SUPPLIER)
				90% PAYMENT AGAINST PROFORMA INVOICE/ DESPATCH DOCUMENT OR CASH ON DELIVERY (COD) / CASH AGAINST DESPATCH AND BALANCE 10% WITH IN 30 DAYS OF E&C	11% PER ANNUM INTEREST ON 90% OF THE VALUE OF PO FOR ONE MONTH
				90% PAYMENT AGAINST PROFORMA / DESPATCH DOCUMENT OR CASH ON DESPATCH (COD) / CASH AGAINST DESPATCH AND BALANCE 10% AFTER COMPLETION OF E&C	11% PER ANNUM INTEREST ON TOTAL PO VALUE FOR ONE MONTH
				90% ADVANCE PAYMENT WITH BANK GUARANTEE AND BALANCE 10% WITH IN 30 DAYS OF E&C	11% PER ANNUM INTEREST ON 90% OF THE TOTAL VALUE FOR DELIVERY PERIOD(ROUNDED OF TO THE NEAREST MONTH) + 1 MONTH
				PART ADVANCE (x%) PAYMENT WITH SUPPORTING BANK GUARANTEE AND (90 - x) % PAYMENT ON RECEIPT OF MATERIAL AND 10% PAYMENT WITH IN 30 DAYS AFTER E&C	11% PER ANNUM INTEREST ON THE ADVANCE AMOUNT FOR THE DELIVERY PERIOD(ROUNDED OF TO THE NEAREST MONTH)+ 1 MONTH AND 11% PER ANNUM INTEREST ON (90-X)% PAYMENT FOR ONE MONTH
				PART ADVANCE (x%) PAYMENT WITH BANK GUARANTEE AND (90 - x) % PAYMENT ON RECEIPT OF MATERIAL AND 10% PAYMENT AFTER E&C	11% PER ANNUM INTEREST ON THE ADVANCE AMOUNT FOR THE DELIVERY PERIOD(ROUNDED OF TO THE NEAREST MONTH)+ 1 MONTH AND 11% PER ANNUM INTEREST ON BALANCE AMOUNT

SLNO	SCOPE	COMMERCIAL TERMS	BHEL STANDARD TERM	AS OFFERED	LOADING FACTOR FOR NON COMPLIANCE TO BHEL STANDARD TERMS
B. FOR FOREIGN PURCHASES (IMPORTED)					
B.1	SUPPLY OF EQUIPMENT	PAYMENT TERMS.	AGAINST SIGHT DRAFT ON PRESENTATION OF DESPATCH DOCUMENTS VIZ INVOICE, AWB ETC TO OUR BANKERS (ALL BANK CHARGES INSIDE INDIA TO BHEL ACCOUNT AND OUTSIDE INDIA WILL BE TO THE SUPPLIER'S ACCOUNT)	SAME	NIL
				100% PAYMENT AFTER RECEIPT AND ACCEPTANCE OF MATERIAL AT BHEL R&D BY WIRE TRANSFER. (DESPATCH DOCUMENTS WILL BE SENT TO BHEL R&D DIRECTLY ALONG WITH BANK DETAILS)	NIL
				LC PAYMENT	11% PER ANNUM INTEREST ON THE BASIC VALUE FOR ONE MONTH
				ADVANCE BY WIRE TRANSFER WITH BANK GUARANTEE	11% PER ANNUM INTEREST ON THE BASIC VALUE FOR DELIVERY PERIOD + 1 MONTH
				PART ADVANCE (x%) PAYMENT WITH SUPPORTING BANK GUARANTEE AND BALANCE PAYMENT AFTER RECEIPT OF MATL	11% PER ANNUM INTEREST ON THE ADVANCE AMOUNT FOR THE DELIVERY PERIOD+ 1 MONTH AND 11% PER ANNUM INTEREST ON BALANCE AMOUNT FOR ONE MONTH
B.2	SUPPLY OF EQUIPMENT INCLUDING E&C	PAYMENT TERMS (THE SUPPLIER MUST SUBMITT A PERFORMANCE BANK GUARANTEE (PBG) FOR 10% OF THE BASIC VALUE OF THE ORDER OF THE BASIC VALUE OF THE ORDER VALID FOR WARRANTY PERIOD.)	90% PAYMENT WILL BE MADE WITH IN 30 DAYS FROM THE DATE OF RECEIPT OF MATERIAL ON ACCEPTANCE AND BALANCE 10% WITH IN 30 DAYS OF COMPLETION OF E&C AND ON SUBMISSIONOF PERFORMANCE BANK GUARANTEE FOR 10% OF BASIC VALUE	SAME	NIL
				LC PAYMENT FOR 90% OF THE ORDER VALUE + 10% AFTER E&C WITH IN 30 DAYS	11% PER ANNUM INTEREST ON 90% OF BASIC VALUE FOR ONE MONTH
				90% OF BASIC VALUE AS ADVANCE BY WIRE TRANSFER WITH BANK GUARANTEE AND BALANCE 10% AFTER E&C BY WIRE TRANSFER WITH IN 30 DAYS	11% PER ANNUM INTEREST ON 90% OF THE BASIC VALUE FOR DELIVERY PERIOD + 1 MONTH
				x% OF TOTAL VALUE AS ADVANCE PAYMENT WITH BANK GUARANTEE AND BALANCE (I.E. 90-X)AFTER RECEIPT OF MATL BY WIRE TRANSFER AND 10% AFTER COMPLETION OF E&C	11% PER ANNUM INTEREST ON THE ADVANCE AMOUNT FOR THE DELIVERY PERIOD+ 1 MONTH AND 11% PER ANNUM INTEREST ON BALANCE AMOUNT OF 90% OF ORDER VALUE (I.E. 90-X%)
				C. PERFORMANCE BANK GUARANTEE, PBG (COMMON FOR INDIGENOUS AND IMPORTS)	
C.1		PERFORMANCE BANK GUARANTEE	PBG FOR 10% OF THE BASIC PO VALUE SHALL BE FURNISHED IN BHEL PRESCRIBED FORMAT.	IF NOT AGREED	10% OF THE BASIC MATERIAL COST
D. PENALTY (COMMON FOR INDEGENOUS & IMPORTS)					
D.1		LD CLAUSE	IN THE EVENT OF DELAY IN AGREED CONTRACTUAL DELIVERY, PENALTY OF 0.5% (HALF PERCENT) PER WEEK BUT LIMITED TO A MAX OF 10% VALUE OF UNDELIVERED PORTION OF BASIC MATERIAL COST WILL BE APPLICABLE	AGREED	NIL
				IF NOT AGREED	10% OF THE BASIC MATL COST
				IF AGREED FOR 5%	5% OF THE BASIC MATERIAL COST
				OTHER THAN THE ABOVE	10% MINUS THE AGREED MAX PERCENTAGE OF THE BASIC MATERIAL COST WILL BE LOADED.