

**BHARAT HEAVY ELECTRICALS LIMITED**

CORPORATE RESEARCH & DEVELOPMENT DIVISION

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ENQUIRY

To - Enquiry No: 620901241 Enq Date: 24-JUN-09 Due Date: 18-JUL-09 Delivery By:

Pin - 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

Email :

Attn. .

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	SUPPLY, INSTALLATION, TESTING & COMMISSIOING OF GAS DISTRIBUTION SYSTEM AT FUEL CELLS & RENEWABLE ENERGY GROUP, BHEL R&D, HYDERABAD AS PER TECHNICAL SPECIFICATION CONTAINED IN ANNEXURES 1,2,3 & 4	LOT	1
NOTE:VENDOR MAY PLEASE NOTE THAT, ONLY THOSE OFFERS WHICH SATISFY THE PRE-QUALIFICATION CONDITION WOULD BE CONSIDERED FOR FURTHER SCRUNITY. (PLEASE SEE ANNEXURE 2)			

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. GUARANTEE CERTIFICATE : RQUIRED

4. MANUFACTURER'S TEST CERTIFICATE : REQUIRED

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.

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

Yours faithfully

for

BHARAT HEAVY ELECTRICALS LTD

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)

SRIDHAR S

Sr Dy Gen Manager

Email: sridhar@bhelrnd.co.in

**Technical specifications
for
Supply, Installation, Testing & Commissioning
of
Gas Distribution System
at
Fuel Cells & Renewable Energy Group,
BHEL R&D, Hyderabad**

Ref: Indent no: QYM 08 977 RD 62/E1-08/001 dated 02/06/2009

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Scope of work

The proposed Gas Distribution System would make three types of Gases (Hydrogen, Oxygen & Nitrogen) available at 13 different locations. Different colour codes (red for Hydrogen, blue for Nitrogen & black for Oxygen) have been used to show different gases in the attached figures.

Figure 1: 3D view of proposed Gas Distribution System

Figure 2: Line diagram of Gas Distribution System

Figure 3: Top view of Gas Distribution System

The Gas Distribution System would consist of three different gas manifolds. Gas manifold #1 should have a provision to connect 1–6 Hydrogen gas cylinders. Similarly Gas manifold # 2 & 3 should have provision for connecting 1–4 Oxygen gas cylinders & 1–2 Nitrogen gas cylinders respectively (Figures 1, 2 & 3).

All the gas manifolds should have a suitable pressure gauge to indicate gas pressure in the respective manifolds (Figure 2). The pressure gauge should preferably be visible from inside the lab area.

One pressure regulator each would be connected to each of the three gas manifolds to reduce the typical gas pressure from cylinders ($10\text{--}150\text{ kg/cm}^2$) to the required pressure of $0\text{--}10\text{ kg/cm}^2$. A filter would be placed between the gas manifold and the respective pressure regulator (Figure 2).

$\frac{1}{2}$ " SS tubes should be used to connect outlets of all the pressure regulators & the inlet of purging panel, containing a flash back arrestor & a vent valve each (Figure 2).

The purging arrangement would consist of 4 solenoid valves & 4 N/R valves. For normal Shut down & start up of fuel cells stacks and in case of emergencies, Nitrogen would be available at all the three outlets of purging arrangement for flushing the respective down stream gas distribution network (Figure 2).

The set of $\frac{1}{2}$ " SS tubes originating from the purging panel would enter into the lab area, where it would split in to left and right sets – the left set would cater to the gas needs of 7 locations (Line '1'), while the right set (Line '2') would supply the gases to 6 locations. Both the sets of $\frac{1}{2}$ " SS tubes would be fitted with solenoid valves at their ends shown as 'E1' & 'E2' in Figures 1, & 3.

Line '1' & Line '2' would act as low pressure manifolds from which, all the three gases would be tapped at 12 of the 13 locations using $\frac{1}{4}$ " SS tubes (Locations 2 to 13, as shown in figures 1 & 3). All the 12 locations would have isolation valves for each of the three gases, at the beginning of the $\frac{1}{4}$ " SS tubes itself (i.e. a total of 36 isolation valves, 12 each for H_2 , O_2 , & N_2 , respectively). The $\frac{1}{2}$ " SS tubes would terminate at location 1 with suitable isolation valves (i.e. a total of 3 isolation valves, 1 each for H_2 , O_2 , & N_2 , respectively).

A total 10 numbers of flow panels (3 for low flow, 5 for medium, 2 for high flow) would be provided at different locations as shown below:

1. Low flow ($\text{H}_2 = 0\text{--}2\text{ lpm}$, $\text{O}_2 = 0\text{--}1\text{ lpm}$) panels at Locations # 2, 3 & 4
2. Medium flow ($\text{H}_2 = 0\text{--}20\text{ lpm}$, $\text{O}_2 = 0\text{--}10\text{ lpm}$) panels at Locations # 5, 6, 9, 10 & 11
3. High flow panels ($\text{H}_2 = 0\text{--}60\text{ lpm}$, $\text{O}_2 = 0\text{--}30\text{ lpm}$) at Locations # 12 & 13

A typical flow panel would consist of 2 each of 3-way valves, low pressure regulators, N/R valves & rotameters. Push-in fittings must be provided at the outlets of all the rotameters & isolation valves at location 1, 7 & 8 (These three location doesn't have flow panels).

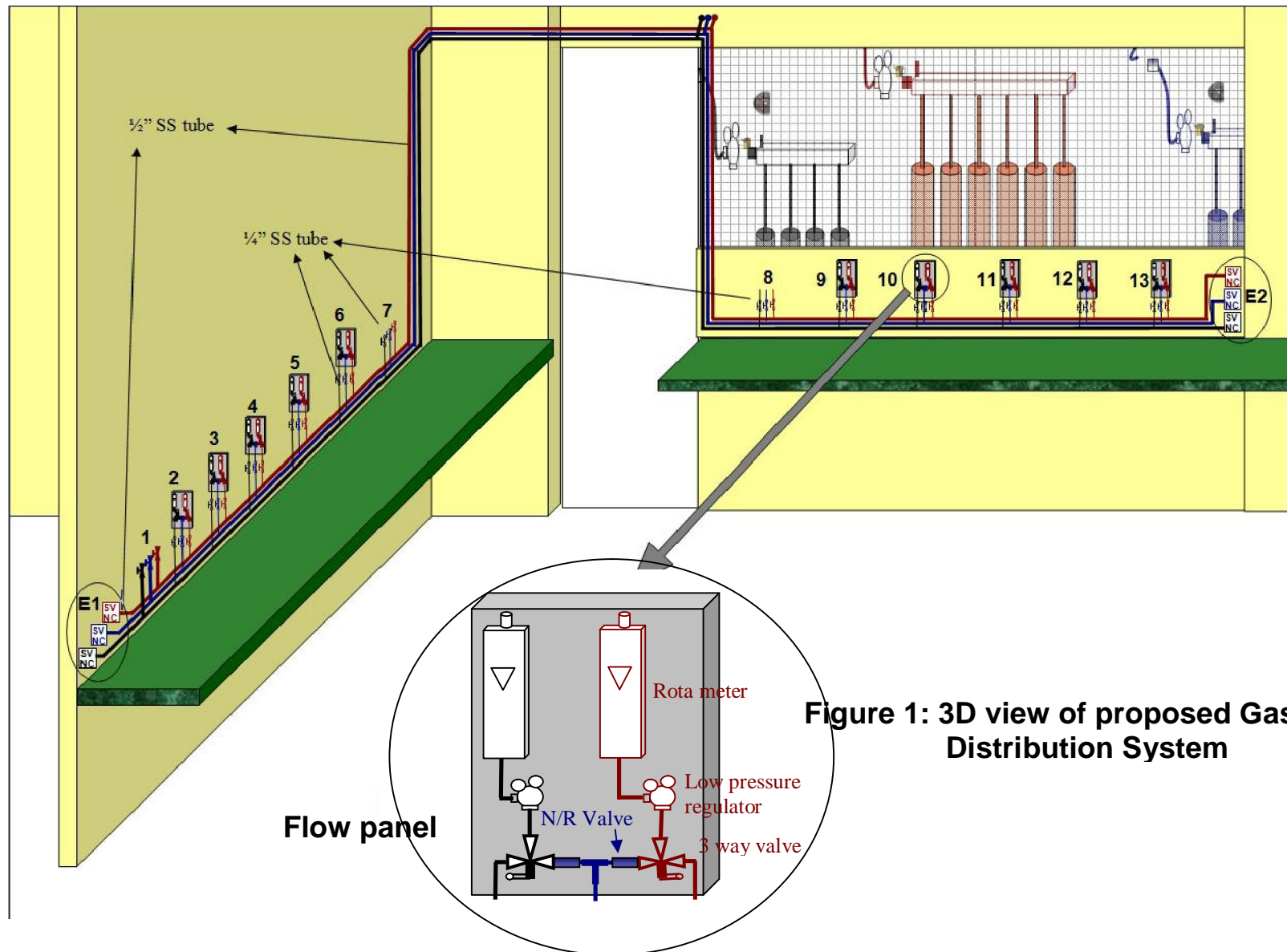


Figure 1: 3D view of proposed Gas Distribution System

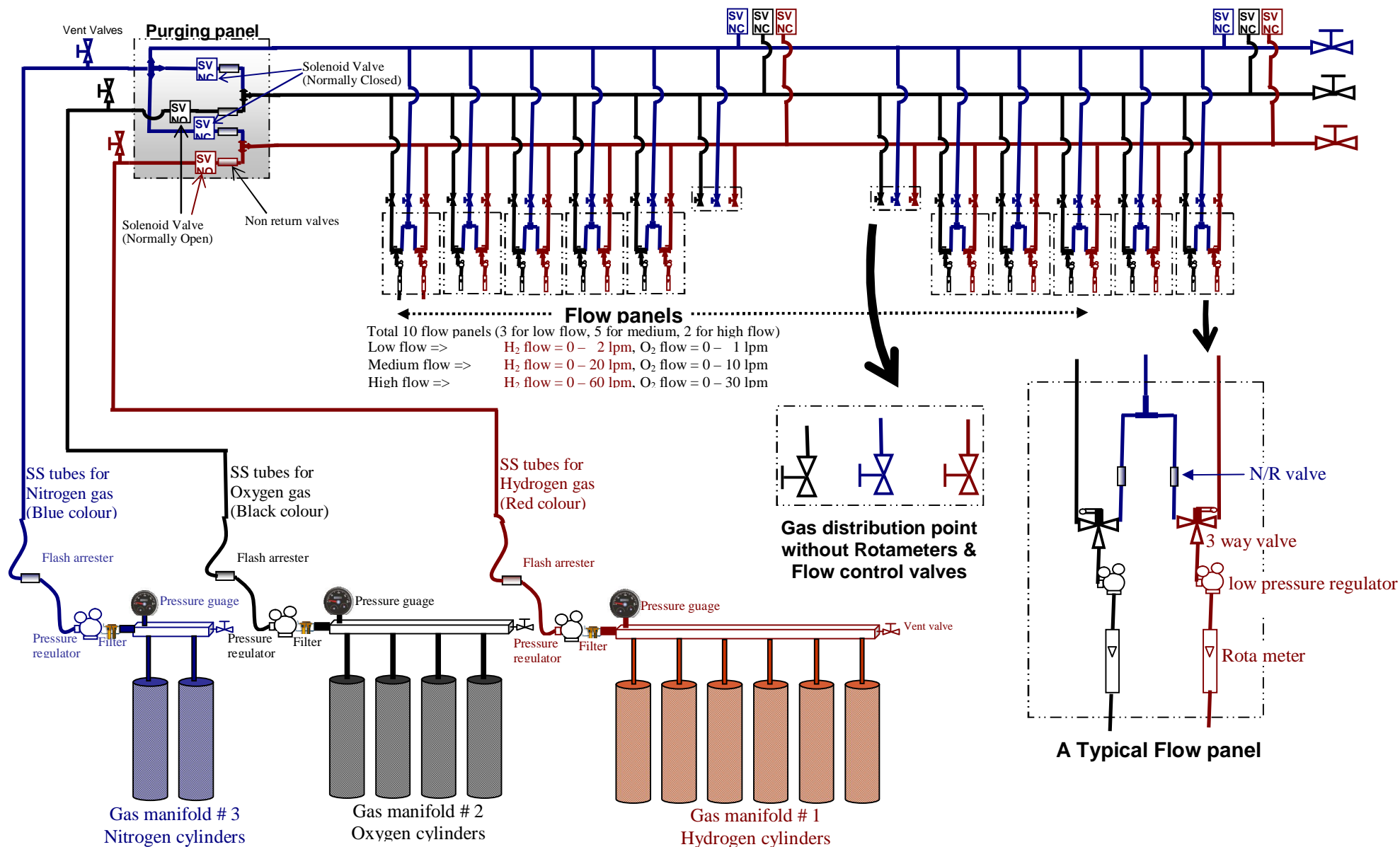


Figure 2: Line diagram of Gas Distribution System
(For actual position of cylinders, please see figure 3, for tubes layout, please see figure 1)

Pre-Qualification Criterion

To qualify, the following requirements are to be met by the Vendor failing which their offer will NOT be considered.

1. Vendor should quote for the Entire Scope, a part offer will NOT be considered.
2. Only those vendors, who have executed an order with similar scope during the last 3 – 5 years, are eligible to quote. Vendor should enclose a list of such order(s) / work(s) executed in India / abroad containing the following details. BHEL reserves the right to contact any or all of the parties to confirm the information provided by the vendor.
 - i) Customer's / Company's name along with complete postal address, where a similar order(s) / work(s) was executed by the vendor.
 - ii) Month & Year of execution of order(s) / work(s), as above.
 - iii) Name and designation of the contact person of the customer along with Phone #, Fax #, e-mail etc.
 - iv) Performance certificate/s, if provided by the customer/s, regarding satisfactory performance of similar system, may be provided.

Terms and conditions

1. Vendor / Bidder should carry out the installation, testing & commissioning of Gas Distribution System as described in the 'Scope of work' (Annexure 1). The technical specifications along with quantity of all the major components / sub systems should be as per Annexure 4. Vendor may note that the actual quantity of components may vary.
2. The vendor must ensure that all the critical parts / components / instruments / gauges / regulators, including bought out items, if any used in Gas Distribution System are either ISO 9001 compliant or are as per ISI or any other relevant International Standard. Test / Calibration certificate(s) should be submitted, wherever applicable. Vendor to indicate BHEL Corp. R&D as End User, wherever needed.
3. **Vendor may note that the figures 1, 2 & 3 (please see Annexure1, Scope of work) are for reference only. Exact dimension may vary. Vendors may contact the indentor for seeking any technical clarifications or may visit the lab to see the site, if they so desire.**
4. All fittings / joints (between components / Tubes etc) for Hydrogen, Oxygen & Nitrogen should have following specification:
 - i) The manufacturers of the above items should have ISO 9001 certification and / or relevant product approvals from TUV, ASME, BSI, DNV.
 - ii) All the fittings connecting the tubes (See Annexure 4, component # 18 & 19) & components (Annexure 4, Component # 1 to 16) shall consist of four machined pieces, i.e. body, front ferrule, back ferrule and nut, also known as double ferrule compression fittings. These fittings should meet either ASTM A 276 / ASME SA479 or ASTM A182 / ASME SA182 standards or any other relevant Indian / International standards.
 - iii) All fittings / joints should be ASTM F 1387 compliant. The vendor must enclose the following test reports:
 - § Hydrostatic pressure test / pneumatically tested: up to 3 times of working pressure with out leakage
 - § Helium leak test: 1.0×10^{-5} atm-cc/sec for double ferrule fitting at a differential pressure of 1atm.
5. Minor civil work such as chipping / cutting of floors (for installing cylinder holding mechanism) and drilling walls for clamping of SS tubes etc. would be in the scope of the vendor / bidder.
6. Vendor should supply all relevant documents / drawings / test certificates and manuals (hardcopy as well as on CD)
7. Vendor must ensure that all gas containing components shall be properly anchored on walls / floor etc. with suitable supports to ensure safety of operations.

Note:

- a) **The contract shall be treated as completed in all respects only if, Vendor / Bidder completes work as per BHEL specifications / Scope of work (Annexure 1) & Detailed technical specifications (Annexure 4) to the satisfaction of BHEL.**
- b) **Vendor / Bidder must bring all tools and tackles, consumables needed for the Erection & Installation Work and Testing at BHEL, Corp. R&D, Hyderabad.**
- c) Only grid power supply (1 or 3) would be made available at site by BHEL. If any other utility is needed, the vendor must include the same in it's offer.
- d) Vendor / Bidder to clearly give their compliance / remarks against each of the 21 clauses in Annexure 4. Deviations, if any, may be mentioned by the vendor in column 6.
- e) Drawings / Figures included in this document are proprietary in nature and are to be used by the Vendor/ Bidder for this contract only.
- f) All applicable Indian standards, especially related to safety in handling / storing of compressed gas cylinders (like IS 15201, 8198 etc) should be followed by Vendors.

Detailed technical specifications

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Clause #	Components	Quantity	Specification required by BHEL	Vendor's Compliance (please tick or write 'yes' if 'offered' specification is same or better as in Column # 4)	Additional Information (Vendors may use this column for providing additional information, if any)
1	<u>Gas manifold #1:</u> Gas Manifold for Hydrogen gas (Figures 1, 2 & 3)	1	Gas manifold #1 should have a provision to connect 1–6 Hydrogen gas cylinders. Similarly Gas manifold # 2 & 3 should have provision for connecting 1–4 Oxygen gas cylinders & 1–2 Nitrogen gas cylinders, respectively (Figures 1, 2 & 3).		
2	<u>Gas manifold #2:</u> Gas Manifold for Oxygen gas (Figures 1, 2 & 3)	1	Copper / SS tubes (Swagelok / Sandvik / Valex make) along with safety rope should be used to connect the cylinders with the respective manifolds. One end of each copper tube should have bull nose (to connect to cylinder) and the other end should have one isolation valve just before gas manifold to help isolate / change empty cylinders.		
3	<u>Gas manifold #3:</u> Gas Manifold for Nitrogen gas (Figures 1, 2 & 3)	1	Each manifold should have a suitable pressure gauge, a pressure release valve & provision to connect pressure regulator. The pressure gauge would be used to indicate gas pressure in the respective manifolds (Figure 2). The pressure gauge should preferably be visible from inside the lab area. The manifold up to primary regulator should be cleaned for oxygen service. Each gas manifold should be free standing type with suitable stand having provision for grouting, if needed. Each manifold should also have arrangements to firmly hold / secure the cylinders in upright position. All the connections in manifolds should be as per S. no 4, Annexure 3)		
4	Filters	3 (One each for H ₂ , O ₂ & N ₂)	A suitable filter would be placed between the gas manifold and the respective pressure regulator (Figure 2). The specification for filter are as follows: i) Inline Filter with Inlet Body made of SS316L ii) Spring of 302SS iii) Filter element of S316L iv) outlet body SS316L v) Maximum pressure rating of 200 bar or more vi) Inlet and outlet connections of 1/2" OD double compression ferrule fittings. vii) The filter manufacturer should have ISO 9001 certification		

Column 1 Clause #	Column 2 Components	Column 3 Quantity	Column 4 Specification required by BHEL	Column 5 Vendor's Compliance (please tick or write 'yes' if 'offered' specification is same or better as in Column # 4)	Column 6 Additional Information (Vendors may use this column for providing additional information, if any)
5	Pressure Regulators	3 (One each for H ₂ , O ₂ & N ₂)	<p>One pressure regulator each would be connected to each of the three gas manifolds to reduce the typical gas pressure from cylinders (10-150 kg/cm²) to the required pressure of 0 – 10 kg/cm².</p> <p>The specifications for pressure regulator are as follows:</p> <ul style="list-style-type: none"> i) Maximum Inlet Pressure: 200 bar or more ii) Pressure control range : 0 – 15 bar or more iii) Diaphragm should be convoluted & non perforated & It should have metal to metal diaphragm seal iv) Flow Coefficient : 0.06 (Cv) v) Body Material : SS 316, ASTM G93 Level E cleaned vi) Seat Material : PCTFE vii) Pressure Gauge : Suitable Inlet & Outlet Gauge (Please refer sl# i & ii) viii) Scale : Primary scale – bar, Secondary scale – psig ix) Regulator should be supplied with High flow dual gauge type filter positively retained in the inlet port x) The oxygen pressure regulator should be cleaned as per SC-11 or CFOS (cleaned for oxygen service) or ASTM G93 level C. xi) The pressure regulator manufacturer should have ISO 9001 certification 		
6	Flash back arrestor	3 (One each for H ₂ , O ₂ & N ₂)	<p>One flash back arrestor each would be introduced between the pressure regulator & purging panel of the three ½" SS tubes of different gases (Figure 2). Specifications for Flash back arrestor:</p> <ul style="list-style-type: none"> i) Operating pressure of flash back arrestor should be 0 – 15 bar or more ii) The Flash back arrestor manufacturer should have ISO 9001 certification 		
7	Non return valves for ½" SS tube	4	<p>Non return (N/R) valves (1 for Hydrogen gas line, 1 for Oxygen gas line & 2 for Nitrogen gas line) would be used in purging panel as shown in figure 2.</p> <p>Specifications for N/R valves:</p> <ul style="list-style-type: none"> i) Body material: SS 316 ii) End connection size ½" iii) Working pressure of 0 – 15 Bar or more iv) The N/R valve manufacturer should have ISO 9001 certification 		

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Clause #	Components	Quantity	Specification required by BHEL	Vendor's Compliance (Please tick or write 'yes' if 'offered' specification is same or better as in Column # 4)	Additional Information (Vendors may use this column for providing additional information, if any)
8	Vent valves for ½" SS tube	3	<p>3 #s of Vent valves with tube size ½" are required just before the purging panel</p> <p>Specifications for Vent valves:</p> <ul style="list-style-type: none"> i) Body material: SS 316 ii) Handle: Nylon iii) PTFE packing iv) Steel set screw v) Gland nut of 300 series SS vi) Working pressure of 0 – 15 Bar or more <p>The vent valve manufacturer should have ISO 9001 certification.</p>		
9	Solenoid Valves	10	<p>Solenoid valves would be used in purging panel and location E1 & E2 (Picture 1 & 2) as follows:</p> <ul style="list-style-type: none"> a) Solenoid Valves for H₂ gas (Normally closed) – 2nos b) Solenoid Valves for H₂ gas (Normally open) – 1no c) Solenoid Valves for O₂ gas (Normally closed) – 2nos d) Solenoid Valves for O₂ gas (Normally open) – 1no e) Solenoid Valves for N₂ gas (Normally closed) – 4nos <p>Specifications for Solenoid valves:</p> <ul style="list-style-type: none"> i) Tube Size: ½" ii) Brass / stainless steel body iii) Integrated explosion and weather proof housing iv) Differential operating pressure: 0 – 15bar or more v) The Solenoid valve manufacturer should have ISO 9001 certification. 		

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Clause #	Components	Quantity	Specification required by BHEL	Vendor's Compliance (Please tick or write 'yes' if 'offered' specification is same or better as in Column # 4)	Additional Information (Vendors may use this column for providing additional information, if any)
10	Isolation valve	39 (3#s for ½" tube size & 36#s for ¼" tube size)	3 #s of isolation valves with tube size ½" are required at location 1, while 36 #s with tube size ¼" are required at 12 locations (location 2 to 13). Specifications for isolation valves: i) Body material: SS 316 ii) Handle: Nylon iii) PTFE packing iv) Steel set screw v) Gland nut of 300 series SS vi) Working pressure of 0 – 15 Bar or more vii) The isolation valve manufacturer should have ISO 9001 certification.		
11	Non return valves for ¼" SS tube	20	Specifications for N/R valves: i) Body material: SS 316 ii) End connection size ¼" iii) Working pressure of 0 – 15 Bar or more iv) The N/R valve manufacturer should have ISO 9001 certification		
12	3 – way valve	20	Specifications for 3 – way valves: i) Body material: SS 316 ii) Handle: Nylon iii) PTFE packing iv) Steel set screw v) Gland nut of 300 series SS vi) Tube size: ¼" vii) Working pressure of 0 – 15 Bar or more viii) The 3 – way valve manufacturer should have ISO 9001 certification		

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Clause #	Components	Quantity	Specification required by BHEL	Vendor's Compliance (Please tick or write 'yes' if 'offered' specification is same or better as in Column # 4)	Additional Information (Vendors may use this column for providing additional information, if any)
13	Low pressure Regulators	20 (10 #s for H ₂ & 10 #s for O ₂)	Two pressure regulators (one each for H ₂ & O ₂) in each flow panel (total 10 flow panel) would be connected to as shown in figures. The specifications for pressure regulator are as follows: i) Maximum Inlet Pressure: 15 bar or more ii) Pressure control range : 0 – 2 bar or more iii) Pressure Gauge : Suitable Outlet Gauge (Please refer sl# ii) iv) Scale : Primary scale – bar, Secondary scale – psig v) The Body material should be ISI certified or pressure regulator manufacturer should have ISO certification		
14	Rota meters / Flow meters	20	A total 20 numbers of 'Rotameters / Flow meters' are required for 10 flow panels as follows: i) Hydrogen gas flow meter (Flow range 0 – 2lpm) - 3nos ii) Hydrogen gas flow meter (Flow range 0 – 20lpm) - 5nos iii) Hydrogen gas flow meter (Flow range 0 – 60lpm) - 2nos iv) Oxygen gas flow meter (Flow range 0 – 1lpm) - 3nos v) Oxygen gas flow meter (Flow range 0 – 10lpm) - 5nos vi) Oxygen gas flow meter (Flow range 0 – 30lpm) - 2nos The rotameter manufacturer should have ISO 9001 certification.		
15	Push in fittings ½"	3	Would be used at location 1 (figure 1). One end of the push in fitting would be connected to the isolation valve (½" matching thread), while the other end will have the provision to connect the 10mm OD PU tube. The Push-in fitting should be of Legris / Festo make.		
16	Push in fittings ¼"	26	Would be used at locations 2 – 13 (figure 1). One end of the push in fitting would be connected to the isolation valve / outlet of rotameter (¼" matching thread), while the other end will have the provision to connect the 8mm OD PU tube. The Push-in fitting should be of Legris / Festo make.		

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Clause #	Components	Quantity	Specification required by BHEL	Vendor's Compliance (Please tick or write 'yes' if 'offered' specification is same or better as in Column # 4)	Additional Information (Vendors may use this column for providing additional information, if any)
17	Unions	58	A total 58 numbers of 'Unions' would be used in gas distribution network at different places as follows: i) 11 #s: ½" Union tee's ii) 36 #s: ½" to ¼" Reducing Union tee's iii) 10 #s: ¼" Union tee's iv) 1 #: ½" Union cross 'Unions' shall be weld type suitable for orbital welding. Working pressure 0 – 20bar or more.		
18	SS tube ½"	75m	The specifications for SS tubes are as follows: i) Working pressure 0 – 20 bar or more ii) Tubing manufacturer should have ISO 9001/9002 certification and as well as product approvals from TUV and JIS. iii) Quality system of the tubing manufacturer should have approval from ASME quality system certificate as material organization. iv) Tubing should be certified as TP 316 / 316L. Also, tubing should be clearly marked with heat code, lot code, outer diameter and wall thickness as in the inspection certificate. v) Testing of the tubing should be in accordance with SS 219711, SS219713, DIN 17458, NFA 49 – 117, ASTM A213, ASTM A269, ASTM A789 & ASTM B667. vi) Tube should have a minimum of 2.5% molybdenum so as to ensure high resistance to corrosion. vii) Tube should have carbon content 0.030%. viii) Tube supplier should furnish an "INSPECTION CERTIFICATE" indicating material description, steel making process, heat code, LOT code, Eddy current leak test according to ASTM A-450, test result of chemical composition, tensile test, hardness test, flaring test and flattening test.		
19	SS tube ¼"	25m			
20	Others (as per column 4)	lot	All items, which are required for Gas Distribution System and not covered under clause# 1 – 19 like Clamps, nuts, bolts, tags, flow panel etc.		
21	Spares	lot	Vendor should indicate / recommend spares, tools and tackles if any, including bought-out items, and separately quote for them as "OEM RECOMMENDED SPARES" for trouble free operation of the GDS for a period of 2 – 3 years. These items shall be treated as Optional Items and BHEL would decide, whether to procure all or part or none of these spares.		

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	
8	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



RD:MPX:F-20

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

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

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



RD:MPX:F-18

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

IMPORTED

Suppliers' compliance statement to basic conditions of enquiry (to be submitted along with Technical & Commercial bid)
Enquiry number: **Enquiry dt:**

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

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

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

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

(Signature and Stamp/ Seal of Vendor)



RD:MPX:F-17

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

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

Enquiry number::

Enquiry date::

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

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

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

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

(Signature and Stamp/Seal of Vendor)



RD:DP:MPX:F-14

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

SUPPLIER REGISTRATION FORM

(FOREIGN SUPPLIER)

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

1.0 GENERAL INFORMATION:

1.1NAME OF COMPANY

1.2DETAILS OF HEAD OFFICE:

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

1.3DETAILS OF FACTORY/WORKS:

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

1.4DETAILS OF MARKETING AGENT

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

1.5 CHIEF EXECUTIVE

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

1.7 YEAR OF ESTABLISHMENT

1.8 PRODUCTION CAPACITY PER ANNUM

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

1.10 NAME(S) OF BANKERS

1.11 BANKER'S CERTIFICATE

1.12 PORT OF LOADING

1.13 NEAREST AIRPORT

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

2.0 FINANCIAL INFORMATION

2.1 ...TOTAL CAPACITY

2.2 ...ANNUAL TURN OVER FOR LAST 3 YEARS

2.3 ...WHEHER CREDIT LICENSE ACCEPTABLE YES/NO

3.0 QUALITY MANAGEMENT SYSTEMS
ENCLOSED FORMAT PART-B

3.1 EXPERIENCE LIST FOR SAME/SIMILAR ITEMS
TO BE ENCLOSED

4.0FUTURE EXPANSION PLANS:
(GIVE DETAILS)

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

6.0 ANY OTHER INFORMATION

SIGNATURE OF SUPPLIER (AUTHORIZED SIGNATORY)

NAME

DESIGNATION

DATE

.....OFFICIAL SEAL

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



BHARAT HEAVY ELECTRICALS LTD.

Corp. R&D DIVISION

VIKAS NAGAR,

HYDERABAD- 500 093 (INDIA)

Ph: 040 – 23778474, Fax: 040 – 23770698, email: mpx@bhelrnd.co.in

RD:DP:MPX:F-13

VENDOR REGISTRATION FORM

(Indigenous supplier)

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

Before filling, please refer to instructions on page-4

1.0 VENDOR PROFILE:

1.1 Name and address of the vendor:

Phone Nos.:

Fax No.:

Email: 1.

2.

1.2 Local representative name & address in Hyderabad/ Secunderabad:

Phone Nos.:

Fax No.:

Email:

Contact person:

Mobile No.:

2.0. TYPE OF ORGANIZATION:

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

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

3.0 ANNUAL TURN OVER:

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

4.0 NAME AND ADDRESS OF THE BANKER:

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

Blank cheque, duly cancelled, to be enclosed.

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

5.0 REGISTRATION PARTICULARS (relevant copies to be enclosed)

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

6.0 CONTACT PERSON: S/Sri

Designation:::

Phone/ Mobile No. :

7.0 TOTAL NUMBER OF EMPLOYEES:

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

8.0 WISH TO REGISTER FOR SUPPLIES/SERVICES:

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

9.0 REFERENCE LIST :

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

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

10.0 INFRASTRUCTURE / FACILITIES:

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

11.0 REGISTRATION WITH OTHER BHEL UNIT/UNITS:

#	Unit	Registration No.	Year
1			
2			
3			
4			

12.0 ANY OTHER INFORMATION :

DECLARATION:

The information furnished above is true and authentic.

(CEO / PROPRIETOR)

SEAL:

DATE:

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

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

Instructions

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

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