

BHARAT HEAVY ELECTRICALS LIMITED

(A Government of India Undertaking)

HIGH PRESSURE BOILER PLANT
PURCHASE DEPARTMENT - FOSSIL BOILERS
THIRUCHIRAPALLI - 620014
TAMILNADU (INDIA)

2577152

Page
1/2

PHONE : ~~2524383XXXX~~
GRAMS : BHARATELEC
FAX NO: 2520696
E-mail: ssraj@bheltry.co.in
Web:



429-002/A

Enquiry No	Enquiry Date	Due Date for Quotation
2821600001 - CR	26.02.2016	29.03.2016

Please quote Enquiry No, Date and due date in all correspondences. This is only a request for quotation and not an order.
Bid should be submitted in two parts. 1.Techno-commercial bid (Part-I) and 2.Price bid(Part-II) in a separate sealed cover and both covers must be placed in a third cover and sealed. Our Enquiry No., Enq. date & Enq. Due date must be written on all three covers.

Item	Description	Unit	Quantity	Delivery Quantity	Schedule Date
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10	Syn gas analyzer as per the enclosed specification	NO	1.000	1.00	30.06.16
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General Note:

NOTE :

- 1) Offer will be invited in TWO PART BID only
(Technical bid and Price bid - Two separate covers- "TECHNICAL BID" Cover and "PRICE BID" Cover).
- 2) If regretted make mention on the top of the reply cover as "REGRETTED".
- 3) LD Clause for delivery has to be confirmed without fail. Otherwise we would assume that you have accepted our LD Clause.
- 4) BHEL preferred payment term is "100% direct Payment after 45 days from the date of receipt and acceptance of the material". This payment term acceptance is essential for consideration of your offer. Offer with advance payment or proforma invoice will not be considered.
- 5) Transport and Delivery at BHEL - shall be Vendor's scope.
- 6) Tender details are also hosted in BHEL Web : www.bhel.com.
- 7) No Revision of prices will be entertained after the tenders are opened.
- 8) Offer validity should be minimum 90 days from the date of opening, otherwise we are not in a position to consider your offer.
- 9) Kindly submit point wise compliance to our Terms & Condition. Otherwise it will be presumed that you are accepting BHEL's terms and conditions.
- 10) Guarantee certificate and test certificates is required.

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


Yours faithfully,
For BHARAT HEAVY ELECTRICALS LIMITED

S. SUBBURAJ
Senior Manager

Purchase / R&D and CR

Bharat Heavy Electricals Limited

Thiruchirappalli - 620 014.


MANAGER / PURCHASE
(FOSSIL BOILERS)

Yours faithfully,



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2/2

2821600001 / 26.02.2016

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11) Technical specification is enclosed. Copy of filled and signed technical specification confirmations is to be submitted. Without this offer will not be considered.

12) Qualifying criteria format is enclosed. Copy of filled and signed Qualifying criteria format is to be submitted. Without this offer will not be considered.

13) Since the quantity is less, special provision for MSE is not applicable.

14) Since R and D dept. of BHEL is registered with Govt of India in the department of scientific and industrial research for availing excise duty exemption, confirm to supply Syn Gas Analyzer without paying excise duty. (Excise duty exemption certificate will be provided by BHEL prior to despatch)

The bidder along with its associate/ collaborators/ sub-contractors/ sub-vendors/ consultants/ service providers shall strictly adhere to BHEL fraud prevention policy displayed on BHEL website <http://www.bhel.com> and shall immediately bring to the notice of BHEL management about any fraud or suspected fraud as soon as it comes to their notice.

Enclosures:

"LD clause has to be confirmed without fail."


OFFER IS TO BE SENT TO THE
FOLLOWING ADDRESS

AGM / CCDP & MM
Purchase / R&D and CR
CCDP, BHEL
TIRUCHIRAPALLI - 620 014
TAMIL NADU, INDIA

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Bharat Heavy Electricals Limited
Tiruchirappalli - 620 014.


MANAGER / PURCHASE
(FOSSIL BOILERS)
Yours faithfully,

Bharat Heavy Electricals Limited – Tiruchirapalli

COAL RESEARCH CENTRE

Qualifying Criteria for Syngas Analyzers

Ref : BHE:CRC:CLC08

Dt : 25-02-2016.

QUALIFYING CRITERIA

The BIDDER / VENDOR have to necessarily provide the following details, for making an assessment of the firm's capability and competency in the technical bid.

BHEL will study both the Qualifying Criteria and Response for Technical Specifications. The Price bid will be opened only if both the Qualifying Criteria and Response for Technical Specifications are found acceptable otherwise the offer will be rejected.

The BIDDER is expected to give complete details against each clause in the table given below and wherever necessary an additional sheet may be attached giving clear reference number to cover the required details. Bidders not meeting / filling the "Qualifying criteria" sheet are liable for rejection.

Name of the product: Syngas analyzer

The BIDDER has to meet the following requirements to get qualified for considering the technical offer

S.No	Requirements	Vendor's Response
1	The BIDDER / VENDOR or their Principal shall have a minimum of FIVE Years of Continuous Experience in the Design, Manufacture & Supply of " Syngas Analyzer ". The Combustion Gas analyzer should be a Standard Product in the manufacturer's range of products. Please indicate the actual experience and supply product catalogue.	
2	Latest copy of certificate of ' Distributor Authentication Certificate ' given by principle should be produced.	
3	Number of " Syngas analyzer " supplied till date in India/Abroad.	
4	Enclose Performance Certificate from at least two customers for satisfactory performance of similar product offered.	

**Bharat Heavy Electricals Limited – Tiruchirapalli
COAL RESEARCH CENTRE**

Technical Specifications for Syngas Analyzers

Ref No: BHE: CRC: CLC08

Date: 24/02/2016

Note :

The following is meant for the **Syngas Analyzer** which can measure syngas sample composed of Carbon Monoxide (CO), Carbon dioxide (CO₂), Hydrogen (H₂), Oxygen (O₂) and Hydrocarbons (HCs). The “Technical Bid” shall have vendor’s responses along with Product Catalogue, Data Sheets in ORIGINAL and complete technical details.

All Technical terms can be here. **NO PRICE DETAIL IS ENTERTAINED HERE.**

Any deviation from the specifications may be brought-out clearly by the supplier in the technical bid

Sl.No	Description	BHEL's Specification/requirement	Supplier's Offer (With complete details)
1	Item	Syngas analyzer	
2	Measuring Medium	Suitable to measure the composition of Syngas	
3	Measurable gases	Range	Specify the range other wise
4	Carbon monoxide(CO)	0 - 10%	
5	Carbon dioxide (CO ₂)	0 - 90%	
6	Hydrogen (H ₂)	0 - 10%	
7	Oxygen	0-21%	
8	Hydrocarbons (CH ₄ , etc)	0-10%	
9	Syngas temperature	60 °C	
10	Syngas pressure	1.1 bar (absolute)	
11	Sample Drawing	To be built in pump, continuously operable for >4 hours, sufficient to suck the sample syngas.	
		Sampling gas temperature measuring facility to be provided	
		Sampling gas pressure measuring facility to be provided.	

**Bharat Heavy Electricals Limited – Tiruchirapalli
COAL RESEARCH CENTRE**

Technical Specifications for Syngas Analyzers

		Stainless Steel sampling probe with suitable connector to syngas analyzer of length 2 m has to be provided	
12	Measurement of CO ₂	CO ₂ must be measured rather than calculated value.	
13	Filters	Dust pre-filter to be provided at inlet of Water catch pot and at outlet of pump/inlet of sensors	
14	Resolution	0.1% for all gases	
15	Accuracy & Repeatability	± 1.0 % of reading for all gases	
16	Drift	Less than 2% of full scale per month	
17	Response Time (T-90)	20 seconds to 90% step change	
18	Sensor Type	Vendor to specify	
19	Sensor Mounting	Vendor To Specify	
20	Sensor Life	Instrument should have self-diagnosed program for sensor emf / value of all sensors.	
		At least 2 years warranty for sensor life must be provided	
21	Calibration	Self-calibration on ambient air for O ₂ .	
		User friendly manual calibration facility to be provided for O ₂ , CO, NO & SO ₂ (by software using calibration gas).	
22	Data Storage and Acquisition	Instrument should have data storing and acquisition facility	
23	Display	LCD/LED programmable display with backlight. In single window minimum four gases measurement should be displayed	
24	Measurement Output	Programmable display printout	
25	Communication Port	USB communication port, USB card and software protocol to be provided	

**Bharat Heavy Electricals Limited – Tiruchirapalli
COAL RESEARCH CENTRE**

Technical Specifications for Syngas Analyzers

26	Process Connection	Lay-out should be given	
27	Water Catch Pot	Water catch pot to be provided at gas inlet point.	
28	Ambient Temperature Range	4 to 50°C	
29	Power	220 VAC 50 Hz	
		Direct operation on 230VAC power supply and also with re-chargeable battery.	
		Machine should have provision for on-line battery re-charging i.e while on recharging, measurement/instrument should not be affected.	
		Indicator for Battery potential level/value and for charging, when unit is under charging.	
		Indicator for charging, when unit is under charging.	
		Capable of continuous operation on battery (without direct power supply) for a minimum of 3 hours with pump in service.	
30	Output Options	Isolated 4-20 mA standard RS485, MODBUS & Ethernet as option	
31	Spares	10 nos. of gas pre-filters to be provided with equipment	
32	Portability	Equipment must be portable. Specify the weight of equipment	
33	Extra O ₂ sensor (as a spare)	Measuring range = 0-21%	
		Quantity = 1	
34	Documents to be furnished to BHEL along with the offer.	Scope of supply – 2 signed copies	
		Catalogs of models quoted	
		Dimensional drawing	

**Bharat Heavy Electricals Limited – Tiruchirapalli
COAL RESEARCH CENTRE**

Technical Specifications for Syngas Analyzers

		Detailed Operation & Maintenance manual	
35	Onsite performance guarantee	The supplied items are to be guaranteed for its performance for a minimum period of 1 year from the date of performance acceptance at BHEL works.	
		Demonstration of performance at BHEL premises.	
36	The total cost should be inclusive of the syngas analyzer and all essential accessories.		



Bharat Heavy Electricals Limited
Purchase Department / R&D and CR
CCDP, Tiruchirappalli – 620 014
Tamil Nadu, India

COMMERCIAL TERMS AND CONDITIONS FOR SUBMISSION OF OFFER

1.0 QUOTATIONS

Bidders shall submit the offer in **TWO INNER ENVELOPS** as indicated below which shall be sealed in one outer envelope.

Envelope I This sealed envelope should contain all the copies of technical bid together with un-priced commercial bid. This envelope should be clearly marked "**Part I – Technical and Commercial bid**", indicating enquiry no., due date and address & reference of the bidder.

Envelope II This sealed envelope should contain **price details**. This envelope should be clearly marked "**Part II – Price bid**", indicating enquiry no., due date and address & reference of the bidder.

Both the envelopes (part I & part II) shall be put in one cover, duly sealed, super scribing as part I and part II of enquiry no., due date of opening and the address and reference of the bidder.

The above offer should reach this office on or before the due date by 14.00 hrs (IST). Late offers will not be considered. We suggest you to send the offer by SPPED POST.

Tender should not be addressed any individual's name but only by designation to:

AGM / CCDP & MM
Purchase Department / R&D and CR
Combined Cycle Demonstration Plant
BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPLLI – 620 014
TAMIL NADU, INDIA

Tender should be free from **CORRECTION AND ERASURES**, Corrections if any, must be attested. The following guidelines are applicable for price bid

- a) If, in the price structure quoted for the required material, there is discrepancy between the unit price and the total price (total price is obtained by multiplying the unit price by the quantity), the unit price shall prevail and the total price corrected accordingly, unless in the opinion of the purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price corrected accordingly
- b) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected
- c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject of (a) and (b) above

- d) If there is such discrepancy in an offer, the same shall be conveyed to the bidder with target date upto which the bidder has to send his acceptance on the above lines and if the bidder does not agree to the decision of the purchaser, the bid is liable to be ignored.

Offers should be in **ENGLISH** and accompanied by detailed technical literature, catalogue and details of process facility in **ENGLISH**.

2.0 PART I (TECHNICAL & UNPRICED COMMERCIAL BID)

2.1 Technical

This part shall include / indicate the following:

Offer should contain complete scope of supply with all technical details, specification, delivery and other commercial terms and conditions.

2.2 Commercial

This part shall include / indicate the following;

2.2.1 Part of shipment / station of dispatch

2.2.2 Terms of payment

2.2.3 Taxes & duties applicable

2.2.4 Delivery schedule

2.2.5 Offer validity

2.2.6 Country of origin

2.2.7 A copy of "Un-Priced Part II" i.e., a copy of the price bid without **the price details** to be enclosed.

3.0 PART II (PRICE – BID)

This part should contain the schedule of price particulars and to be co – related to the technical details provided in part wherever required / possible break up price details are to be furnished. (Bidders shall quote only fixed rate / price only and not subject to any escalation whatsoever during the period of bid validity and execution of purchase order. Any bid with adjustable or price variation clause shall be treated as "non-responsive" and liable for rejection).

4.0 OPENING OF TENDERS

The part I – Technical & commercial bid alone would be opened on the tender opening date at the pre-fixed time in presence of responded tenderers / authorized representative, who may like to be present for tender opening.

The part II – Price bid of technically suitable bidders alone would be opened. The technically suitable bidders would be informed about the price bid opening date. Clarifications if any required by BHEL for technical evaluation would be sought from bidders before opening of part II – price bid.

5.0 GENERAL

5.1 Incomplete offers will not be considered.

5.2 Terms of Delivery: Bidders are required to quote their best delivery period. Delivery shall be counted from the date of letter of intent.

5.3 Taxes and Duties: All taxes and duties if any payable extra over and above the quoted price should be specifically indicated in the un-priced bid along with CST & TIN No etc., failing which the purchaser will not be liable for payment of such taxes and duties.(the quoted rates shall be considered as "all inclusive"

5.4 validity of offer: Offer shall be kept valid for acceptance for a period of 90 days (ninety days) from the date of bid opening.

5.5 Payment terms: Payment term is 100% direct payment after 45 days from the date of receipt and acceptance of materials (Any deviation in the above payment term will attract loading as mentioned below) "Base rate of SBI (as applicable on the date of Techno-commercial bid opening + 6% will be loaded for the period of relaxation sought by bidders).

Payment through bank is not preferred. In case of payment through bank is opted by the supplier, BHEL prefers documents submission through bank with copy of LR and door delivery of Goods to stores with consignee copy attached. In this case loading will be 3% on the offered value.

5.6 Liquidated Damages: It is clearly understood among the parties to the contract the "**Time is the essence of the contract**". Therefore, the delivery of the goods specified in the purchase order should be made within the time prescribed. Failure to dispatch the materials in the time as per the delivery quoted in our purchase order would make the supplier liable to an un-conditional penalty as below.

a. Liquidated damages shall be 0.5% of the total order value per week or part there of subject to a maximum of 10% of the total order value

b. For staggered delivery schedule, LD shall be 0.5% of the undelivered portion per week of the delay or part there of subject to a maximum of 10% of the total order value.

c. Any deviation from the above LD clause, loading will be applied to the extent to which it is not agreed by the bidder (at offered value)

5.7 Risk Purchase: Alternately the purchaser at his option will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or dispatch within the time stipulated as aforesaid or if the same were not available, the best and the nearest available substitute therefore. The supplier shall be liable for any loss, which the purchaser may sustain by reason of such risk purchases.

5.8 Test Certificates: The bidders shall clearly mention in their offer that test certificate as called for in the technical specification, in the required number of copies will be provided at no extra cost.

5.9 Evaluation of the offers shall be on the basis of "to-Door cost at BHEL, Trichy" (Net cash outflow to BHEL). BHEL will consider the ranking after the loading is applied as offered above wherever deviations are observed.



BHARAT HEAVY ELECTRICALS LIMITED

Tiruchirapalli - 620 014

Purchase / R&D and CR

Enquiry No:

date :

COMMERCIAL TERMS CONFIRMATION

Sl No	Description	BHEL Requirement	Supplier Confirmation
01	OFFER VALIDITY	90 days from the date of tender opening	YES
02	PRICE QUOTED	FOR Destination, BHEL Stores	YES / NO
03	PACKING & FORWARDING (Inclusive or extra. If extra clearly mention in % or lumpsum amount)	Supplier Option	Included / Extra
		% / Rs
04	EXCISE DUTY	R&D department of BHEL is exempted from paying ED	Accepted
05	VAT or CST (clearly mention in %)	Supplier Option	VAT %
			CST % (with C form)
			CST % (without C form)
06	FREIGHT & INSURANCE (Inclusive or extra. If extra clearly mention in % or lumpsum amount)	Supplier Option	Included / Extra
		% / Rs
07	DELIVERY SCHEDULE	Supplier Option	
08	PAYMENT TERM	100% direct payment after 45 days from the receipt and acceptance of materials at BHEL, Trichy	Accepted
09	LD CLAUSE	0.5% per week to a maximum of 10%	Accepted
10	GUARANTEE / TEST CERTIFICATE	Supplier Option	
11	MSME CERTIFICATE	To be attached (if available)	
12	CONTACT PERSON DETAILS	Name	
		Mobile Number	
		Email id	

Date :

Signature of Supplier with Seal