

# Center for Rural Development and Technology

Date: 7<sup>th</sup> December 2011

Due Date: 22<sup>nd</sup> December 2011

## Notice Invitation Quotations

On behalf of the PFC (purchase Finance committee) of CRDT IIT Delhi, sealed quotations are invited for the following item as per the technical specifications mentioned below.

**Table 1: Specifications**

<b>Equipment</b>	Portable Exhaust Gas Analyzer for Automotive Engine		
<b>Application</b>	Measurement of Exhaust gases HC, CO, CO <sub>2</sub> , O <sub>2</sub> and NO <sub>x</sub>		
	Engine Speed		
	Oil temperature		
	Lambda		
<b>Display</b>	LCD		
<b>Interface and additional monitoring</b>	RS 232 cable and necessary software		
<b>Operating Voltage</b>	100 ...300V AC, 50-60 Hz		
	11 ...12V DC		
<b>Power Consumption</b>	Max. 25 W		
<b>Analyzer Dimensions (width x height x length)</b>	< (280x360x330) mm		
<b>Measurement Data</b>	<b>Parameters</b>	<b>Measurement</b>	<b>Resolution</b>
	<b>CO</b>	0 ... 1.2% Vol.	0.01% Vol.
	<b>HC</b>	0 ...25000 ppm Vol.	1 ppm/ 10 ppm (0-2000 ppm)/(>2000ppm)
	<b>CO<sub>2</sub></b>	0 ...21% Vol.	0.1% Vol.
	<b>O<sub>2</sub></b>	0 ...10% Vol.	0.01% Vol.
	<b>NO</b>	0 ...6000ppm Vol.	1 ppm Vol.
	<b>Engine Speed</b>	300 ... 7000 rpm	1 rpm
	<b>Oil Temperature</b>	-35 °C ...150°C	1°C
	<b>Lambda (λ)</b>	0 ... 9.999	0.001
<b>Sampling system</b>	Probe , Gas hose (Max. 6 mm. dia., 10 meter length), Filters with casing (20 No.s) etc.		
<b>Sampling gas temperature</b>	200°C to 500°C		
<b>Standard Accessories</b>	Power supply adapter for connecting to vehicles battery		
	Mains cord		
<b>Approvals : The analyzers should be certified by -</b>	<b>Indian agency</b>		
	<b>International agency</b>		

The Portable Exhaust Gas Analyzer has to be fitted inside the vehicle (Maruti Wagon R) to record the online emission data while the vehicle is running. All emission data generated has to be recorded simultaneously. The Portable gas analyzer is to be installed in such a manner that it can operate under varying ambient temperature conditions from 2°C to 50°C without being affected by the vibrations created due to vehicles motion. The software for the recording the online data into a computer must be provided by the supplier.

**General Term & Conditions:** as per rules of IIT Delhi

1. Please submit the TECHNICAL and FINANCIAL bids in two separate sealed envelopes. Mark the two envelopes clearly as “Technical Bid” and “Financial Bid”. Both the sealed envelopes should be sent in a single sealed envelope, with clearly marked as “**Quotation for Portable Exhaust Gas Analyzer for automotive engines**”. The quotations should reach the following address on or before **22<sup>nd</sup> December 2011** up to **5 pm.** :

**Prof. V. K. Vijay, Center for Rural Development and Technology, Room no. 375, Block III, I.I.T. Delhi, Hauz Kaus, New Delhi - 110016. (Phone: 011-26596351), Email – [vkvijay@rdat.iitd.ernet.in](mailto:vkvijay@rdat.iitd.ernet.in).**

2. **Price quoted:** The rates quoted must be at CIF Delhi price, inclusive of taxes and overheads.
3. Quote should be in Indian rupee (INR) and to be valid for at least three months.
4. All technical specification should be attached along with quotation.
5. If the quote is being submitted by the representative of the principal/manufacture themselves, a valid Agency ship/Dealership Certificate authorizing the agent to quote to IIT Delhi on behalf of the principals should be enclosed.
6. Complete set of manuals for the operation of the equipment should be given.
7. Please produce compliance certificate for the specification.
8. **Principal Investigator/PFC** reserves the rights of acceptance or rejection of any or all quotations. The discretion for increasing of quantities demanded also vest with him.
9. **Validity of quotation:** Quotation will be considered valid for 3 months from the date of receipt unless otherwise stated.
10. **Correspondence:** No correspondence regarding acceptance or rejection of a quotation will be entertained.
11. **Method of submission of quotation:** Quotation should be sent in a sealed envelope indicating our N.I.Q, REFERENCE NUMBER AND DUE DATE FOR OPENING as otherwise these dates will not be considered.

**The envelopes must contain two separate bids:**

- (i) Commercial
- (ii) Technical

12. **Rejection:** The quotation not conforming to the set procedures above will be rejected.
13. **Discounts/Rebates:** Special discount/ rebates wherever admissible keeping in view that the items are being supplied to an educational institution of national importance may be indicated.
14. **Warranty:** At least 3 years or specify the maximum period of warranty.

