

213, Hydroturbomachines Lab Department of Mechanical Engineering Indian Institute of Technology Madras Chennai – 600 036, INDIA

## Form for Inviting Quotations

Reference No. AS/RFTP/ACPA/2016

Date: 10-08-2016

Subject: Supply and Installation of equipment for lab use by Indian Institute of Technology Madras

Quotation Due Date: 31-08-2016

Dear Sirs:

Dr. Ashis Kumar Sen

Associate Professor

Quotations are invited for supply and installation of the equipment as per details in Annexure-I under the following terms and conditions.

### Terms and Conditions (Foreign Vendors/Suppliers):

- 1. The total amount indicated is Ex. Works / FOB / CIF. Madras Value.
- 2. The consignment to be addressed to Dr. Ashis Kumar Sen, 213 Hydroturbomachines Lab, Department of Mechanical Engineering, I.I.T. Madras, Chennai 600 036, India.
- 3. The consignment to be dispatched by surface / Air Post Parcel / Ocean Freight / Air Freight.
- 4. Please send three advance copies of Invoice direct to us immediately after dispatch to avoid delay in clearance. DEMURRAGE CHARGES, IF ANY, PAYABLE ON ACCOUNT OF DELAY IN RECEIPT OF ADVANCE COPIES OF INVOICE WILL BE DEBITED TO YOUR ACCOUNT.
- 5. The following set of documents is required in all cases:
- a. Complete set of Clean Bill of Lading / Airway Bill / Air or surface Parcel Receipt, showing that the goods have been shipped and freight prepaid.
- b. Insurance Policies / Certificates in duplicate covering Marine Insurance as per Institute Cargo Clauses (All risks) and perils as per Institute Strikes, Riots and Civil Commotion Clauses, War risks as per Institute, Clauses. Cover for CIF value plus 10 percent.

### **General Terms and Conditions:**

- 1. The Quotations duly sealed (2-bid system) and superscribed on the envelope with the reference No. and due date, should be addressed to the undersigned so as to reach him on or before the due date stipulated above.
- 2. The Quotations should be valid for sixty days from the due date and the period of delivery required should also be clearly indicated.
- 3. If the item is under DGS&D Rate contract No. and the price must be mentioned. It may also please be indicated whether the supply can be made direct to us at the Rate contract price (Please note that we are not Direct Demanding Officers). If so please send copy of the RC.
- 4. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable. Samples if called for, should be submitted free of charges, and collected back at the supplier's expense.
- 5. Local Firms: Quotations should be for free delivery to this Institute. If Quotations for Ex-Godown delivery charges should be indicated separately.



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- 6. Firms outside Madras: Quotations should be for F.O.R. Madras. If F.O.R. consignor station, freight charges by passenger train / lorry transport must be indicated. If Ex-Godown, packing, forwarding and freight charges must be indicated.
- 7. The rate of sales / General Taxes and the percentage of such other taxes legally leviable and intended to be claimed should be distinctly shown along with the price quoted. Where this is not done, no claim for Sales / General Taxes will be admitted at any stage and on any ground whatsoever The taxes leviable should take into consideration that we are entitled to have concessional Sales Tax applicable to non Government Educational Institutions run with no profit motive for which a concession. Sales Tax Certificate will be issued at the time of final settlement of the bill.
- 8. Goods should be supplied carriage paid and insured.
- 9. Goods shall not be supplied without an official supply order.
- 10. Payment : Every attempt will be made to make payment within 30 days from the date of receipt of bill / acceptance of goods, whichever is later

#### Dr. Ashis Kumar Sen Associate Professor



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# ANNEXURE-I

Sl. No.	Name of Equipment	Minimum Requirements	Quantity
		Application:	
		To amplify given AC input power in radio frequency range.	
		To generate required signal for acoustophoresis and	
		dielectrophoresis applications.	
		The amplifier quoted should meet the minimum	
		specifications given below.	
		Specifications:	
		Minimum Power output CW: 75watts	
		Minimum Linear Power output @ 1dB compression: 55 watts	
		Flatness: ±1.5 dB maximum	
		Frequency response range: Atleast 50kHz-200MHz	
		Gain (at maximum setting) : 49dB minimum	
		Gain adjustment: 18dB minimum	
01	AC Power Amplifier	Input impedance: 50 ohms, VSWR 1.2:1 maximum	1
		Output impedance: 50 ohms, VSWR 1.4:1 maximum	
		Mismatch tolerance: 100% of rated power without foldback. It	
		should operate without any damage or oscillation with any	
		magnitude and phase of source and load impedance.	
		Noise figure(above 1.0 MHz): 15 dB	
		Third order intercept point: 60 dBm	
		Primary power: 200-230 VAC at around 50 Hz	
		Warranty: 3 years minimum	
		Delivery: within three months from the date of purchase order	
		Other requirements:	
		Specifications data sheet of the amplifier along with the model number should be attached.	
		Real images of the offered model must be provided.	
		Demo of the actual product in our lab is required.	

Thank you.

Sincerely,

Dr. Ashis Kumar Sen 213, Hydro Turbo Machines Lab Department of Mechanical Engineering Indian Institute of Technology Madras, Chennai - 600036, Tamilnadu, India E-mail: <u>ashis@iitm.ac.in</u>