



for web

Indian Institute of Technology Madras
I.I.T.P.O., MADRAS-600 036
DEPARTMENT OF CIVIL ENGINEERING

Form for Inviting Quotations

Ref. No. CIE/KRAG/2017/Thermal Expansion Measurement System for Concrete

Date: 03.4.2017
SPEED POST

Dear Sirs,

DUE DATE: 24.4.2017

1. Quotations are invited in duplicate (**Two bidding covers**) for the **item/s shown as per enclosed Specifications.**
2. The Quotations duly sealed and superscribed on the envelope with the reference No. and due date, should be addressed **to the Head of the Department and contain in 2 bid system i.e. Technical bid and Commercial bid in two separate envelopes should be enclosed in a single envelope only so as to reach on or before the due date stipulated above.**
3. The Quotations should be valid for **(60) sixty days from the due date and the period of delivery** required should also be clearly indicated.
4. 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.
5. 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 expenses.
6. Local Firms : Quotations should be for free delivery to this Institute. If Quotations for Ex-Godown delivery charges should be indicated separately.
7. 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.
8. 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.
9. Goods should be supplied carriage paid and insured.
10. Goods shall not be supplied without an official supply order.
11. 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.

Yours faithfully


[PROF. K. RAJAGOPAL]

Note: (i) Quotation should be sent by SPEED POST only or to be delivered directly to the concerned.
(ii) Firms are requested to submit the specifications of their product along with supporting technical Documentation / brochure instead of reproducing the specifications sent by us.

Department of Civil Engineering, IIT Madras

Technical specifications—cum-compliance table for

Coefficient of Thermal Expansion Measurement System for Concrete

This system is used for determination of the coefficient of thermal expansion (CTE) of hydraulic cement concrete cores and cylinders as per AASHTO T336-11.

NOTE: For each specification, please enter "YES" or "NO" in the second column of this table. If a cell in the second column is left blank, then it will be assumed that the quotation does not comply with the respective specification/requirement. Provide catalogues, data sheets and/or other documentation to support the compliance of your equipment to the given specifications

Required Specification	Can the quoted system meet the required specification? If "YES", then provide attach the proof of manufacturer specification [YES / NO]	REMARKS (If the answer in the 2 nd column is "NO", then provide the available specifications and other remarks etc.)
1. The system should be in compliance with AASHTO T336-11		
2. System should be suitable for operation on single phase, 220 Volts AC, 5 Amps power supply.		
3. All the metallic parts of the system should be non-corrosive and made of SS 316 steel.		
4. The test frame should be designed to accommodate concrete specimens with diameter ranging from of 100 to 150 mm and length ranging from 170 to 200 mm.		
5. Submersible digital temperature measuring devices capable of operating under temperature ranges (0-100°C) with minimum resolution of 0.1°C and accuracy of 0.2°C to be supplied with the system. The minimum frequency of measurement possible should be about 1 hz.		

6.	The length change measurement device should be an LVDT having minimum resolution of 0.00025 mm and a measurement range of ± 5 mm		
7.	The system should use a standalone solid state, temperature conditioning system and should not require a separate heating/chilling unit.		
8.	The DAQ should be compatible with all the measuring devices used with the required number of ports to accommodate all digital measuring devices.		
9.	User interface for the DAQ should be a licensed software and should be provided with the system. All measurements, calculations and data storage functions should be automatic and controlled with a laptop having minimal operator involvement.		
10.	A compatible UPS capable of one hour backup should be provided with the system.		
11.	A laptop with configuration capable of operating the software should be provided with the system.		
12.	The Calibration specimen as per Section 5.4 and the Verification specimen as per Section 5.9 of AASHTO T 336, of known coefficient of thermal expansion should be provided.		
13.	The software installation and working demonstration should be provided. Required calibrations of all measuring devices for the accurate measurement using the DAQ should be done at the time of installation.		

