

Transportation Engineering Laboratory, Department of Civil Engineering, IIT Delhi

Date:18-10-2012

Sealed quotations are invited for the purchase of the following item by Transportation Engineering Laboratory, Department of Civil Engineering, IIT Delhi confirming to the technical specifications given below:

Item: Total no. intended to be purchased = 01

Important Technical Features:

Wheel Rut Shaper

1. The wheel rut shaper part of the equipment should be pneumatically operated and capable to produce compacted slabs from loose asphalt concrete mixture of specified target density (or height),
2. Rolling wheel radius: 500 mm,
3. Rolling wheel width: 300 mm,
4. Should be able to control the temperature of mold between ambient and 200°C (Accuracy $\pm 0.5^\circ\text{C}$) during compaction using suitable electronic control system,
5. Compaction pressure: up to 18 bar,
6. Bearing car speed: 6 rpm,
7. Distance in & out: 300 mm ,
8. Timer: 0-999 rounds [Should be able to change this setting using user interface],
9. Should be supplied with three molds of following size:
 - a. 300x300x50 mm (1 No)
 - b. 300x300x75 mm (1 No)
 - c. 300x300x100 mm (1 No)

Wheel Rut Tester

1. This part of the equipment must be suitable for determining the resistance of compacted asphalt concrete mixture to load applied using a rolling wheel at constant temperature.
2. Test wheel speed: 42 ± 1 rpm,
3. Moving distance of sample table: 230 ± 10 mm,
4. Hardness of rubber wheel: 78 ± 2 at 60°C ,
5. Specimen sizes to be tested :
 - a. 300x300x50 mm
 - b. 300x300x75 mm
 - c. 300x300x100 mm
6. LVDT's with displacement measuring range of 0-50 mm (with least count 0.1 mm),
7. Wheel pressure applied on specimen: 0.5 MPa -1.0 MPa [Should have suitable mechanism to change and set applied pressure within $\pm 1\%$],
8. Operating temperature of cabinet: 5°C to 80°C (Accuracy $\pm 0.2^\circ\text{C}$) [Should be provided with suitable electronic control system],
9. Capacity of load cell: 100 kgf (1kN) ,
10. The test should be automatically controlled by a data acquisition and processing system with following requirements
 - a. Data acquisition software (user interface) should be installed on the computer (operating system will be windows XP, Windows 7 or any later versions available during time of installation) provided by the institute,
 - b. Data acquisition system should be able to acquire and store data to a computer during the testing time upto 4 hours,
 - c. Data acquisition system should acquire data like applied load, deformation in specimen, and temperature of cabinet,
 - d. Data acquisition system should store data in such a format that can be opened by MS Excel, or Notepad, or Wordpad,
 - e. User interface of data acquisition system should provide options to adjust the duration of data acquisition, sampling frequency, and sampling speed of the test.

Terms and Conditions:

1. Sealed **technical** and **commercial** quotations should be submitted in separate envelopes.
2. The cost should include delivery (CIF Delhi), installation and training at IIT Delhi.
3. The supplier shall submit the technical compliance statement along with their technical quotation else they would be rejected.
4. If the items are proprietary product of the company, a proprietary certificate stating the same may be provided.
5. If the bidder is not a manufacturer, authorization from the manufacturer/developer needs to be enclosed. **However preference shall be given for original manufacturer/developer.**
6. The bidder should furnish detailed technical description and original literature of the instrument.
7. Manufacturer should have qualified and trained technical support staff with ample experience in the required field. Details of technical support staff should be attached.
8. Bidder should give an undertaking that they will modify the equipment (if any) including hardware and software supplied to suit the research needs of the department upto one year after delivery/installation (whichever is later).
9. Bidders should give an undertaking regarding installation/commissioning, and training and after sales service of the instruments within 3 months of award of contract.
10. The supplier shall submit the sales tax registration certificate along with his offer.
11. **Bidder who has supplied/installed similar equipment or R&D related equipment/items (in the area of pavement materials/engineering) to other central govt. funded educational institutions, CSIR labs; organizations in last 10 years shall be given preference.** If the binder claims that they have supplied such items, the bidder should submit details like purchase order copy, name of purchaser, address, phone number; e-mail ID etc. as a proof for the same.
12. The validity of the offer should be for 4 months.
13. Delivery period should be mentioned.
14. Details on installation, commissioning and training must be specified.
15. Preferred method of payment will be through Letter of Credit (LC) or Electronic Fund Transfer (EFT) / Wire Transfer (WT).
16. The details of recipient of payment LC / EFT/WT should be given clearly.
17. **Discount/Rebates:** A special discount/rebate wherever admissible keeping in view that supplies are being made for educational and research purpose in respect of public institution of national importance should be clearly mentioned.
18. **Rejection:**
 - (a) Quotations not conforming to the set procedure as above will be rejected.
 - (b) Incomplete and conditional submitted tenders would be summarily rejected.
 - (c) IIT Delhi reserves the rights of acceptance or rejection of any or all quotations without assigning any reason thereof.
19. The last date for receipt of the quotations is **2nd November 2012, 5 pm**

Sealed quotations shall be submitted to:

Dr. Aravind K. Swamy

Assistant Professor

Department of Civil Engineering

Indian Institute of Technology Delhi

Hauz Khas, New Delhi – 110016, India.