



भारतीय  
प्रौद्योगिकी  
संस्थान  
काशी हिन्दू विश्वविद्यालय



INDIAN  
INSTITUTE OF  
TECHNOLOGY  
BANARAS HINDU UNIVERSITY

O/c

**DEPARTMENT OF CIVIL ENGINEERING**

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**QUOTATION ENQUIRY**

Ref: IIT(BHU)/2018-19QTN/CE/3165

Due Date: 20-12-2018

Date: 26-11-2018

To

Dear Sir,

Please submit your lowest quotation for supplying the under mentioned item. Quotation in duplicate must reach us before the date marked above and should contain the following information:

1. Full specification and make of the item offered and its rate for F.O.R Varanasi/CIF New Delhi.
2. Concessional rate as applicable to educational institute.
3. Your GSTIN number.
4. Conditions of supply and terms of payment.
5. If you are a manufacturer of the item or if you have proprietary right over it, please mention it in the quotation and provide a certificate.
6. Please mention your agency commission in India Rs., if applicable (in case of imported item).
7. Please give undertaking as per Annexure I-B.

Quotation must be send in a **sealed envelope** with word **"QUOTATION"**, our reference number and due date as given above, clearly marked over it.

SI No	Item and Technical Specification	Approx Qty.
1	<p>Automatic semi circular bending (SCB) system-static test</p> <p><b>Specification:</b></p> <p><b><u>LOADING FRAME</u></b></p> <ul style="list-style-type: none"><li>• Universal multi-purpose touch screen frame for compression test with automatic load or displacement / deformation control</li><li>• Compression capacity: upto 50kN (or better)</li><li>• Adjustable testing speed from 0.01 to 51mm/minute (or better)</li><li>• Adjustable pace rate from 1 to 15000N/sec (or better).</li><li>• Ram travel: atleast 100 mm (or better)</li><li>• Daylight between columns: 380 mm or better</li><li>• Max. vertical daylight: 850 mm or better. Mechanical jack for load application driven by a motor brushless with closed loop through optic encoder and controlled by a microprocessor.</li><li>• Electronic control unit with Touch-Screen colour display.</li><li>• Capable of conducting test in load and displacement control</li><li>• Remote control of the digital unit through PC and appropriate software</li><li>• Availability of atleast 8 independent channels for the load cells or potentiometric transducers or strain gages for load, deformation or displacement measurements.</li><li>• Data logging alternate function installed allowing data acquisition of several signals such as load, displacement, deformation , pressure and temperature.</li><li>• Stabilized power supply of the analogical channels</li><li>• Analogue input: from +/- 20 mV to +/-5 V (or better)</li><li>• Acquisition up to 200 readings for each channel or better</li></ul>	1 No

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- Processor: 312 MHz upgradable till 520 MHz (or better)
- 1 x SD card, 2 x USB hosts available for: mouse, keyboard, pen-drive, printer, USB Hub (to expand the number of ports), other peripherals from PC.

**SEMI CIRCULAR BEND TEST SET UP**

- **SCB test kit** and system as per ASTM D8044 and AASHTO TP124
- Precision load and LVDT for load and specimen vertical displacement measurement.
- Loading sequence should be fully automated with microprocessor control of the loading ram.
- Load and displacement measured with 8 analog A/D inputs.
- Touch screen display and intuitive controls allow for rapidly setting new test parameters and monitoring test data in real time.
- The load and displacement parameters measured by the Automatic SCB system can be used to predict cracking performance of asphalt mixtures based on the Illinois Flexibility Index (I-FIT) and Critical Strain Energy Release Rate (Jc).

NEW

**Should be supplied complete with**

- SCB frame, spring, roller support,
- load cell, electric strain gauge type load cell, rated output of 2mV/V nominal (or better)
- Displacement transducer, strain gauge type, 10 mm capacity, full bridge at 350 ohms and sensitivity of 2mV/V (or better)
- Coupling hardware, software for automatic SCB test.
- Power supply: 230V 1ph 50/60Hz

The sealed quotations will be opened within one week from the due date in the office of the **Head, Department of Civil Engineering, IIT (BHU), Varanasi.**

*26-11-2018*  
**Head of the Department**

**विभागाध्यक्ष/HEAD**

**जानपद अभियांत्रिकी विभाग**

**Department of Civil Engineering**

**भारतीय प्रौद्योगिकी संस्थान (बी.एच.यू.)**

**Indian Institute of Technology (B.H.U.)**

**वाराणसी-221005/Varanasi-221005**

*Nishant Dubey*