INVITATION FOR QUOTATION

TEQIP-III/2018/btec/Shopping/42 **30-Jul-2018**

To,

Sub: Invitation for Quotations for supply of Goods

Dear Sir,

1. You are invited to submit your most competitive quotation for the following goods with item wise detailed specifications given at Annexure I,

Sr. No	**Brief Description**	**Quantity**	**Delivery Period(In days)**	**Place of Delivery**	**Installation Requirement (if any)**
1	Transporation Engineering Lab Equipments	1	60	BTKIT, Dwarahat	Yes

2. Government of India has received a credit from the International Development Association (IDA) towards the cost of the **Technical Education Quality Improvement Programme[TEQIP]-Phase III** Project and intends to apply part of the proceeds of this credit to eligible payments under the contract for which this invitation for quotations is issued.
3. Quotation,

   3.1 The contract shall be for the full quantity as described above.

   3.2 Corrections, if any, shall be made by crossing out, initialing, dating and re writing.

   3.3 All duties and other levies payable by the supplier under the contract shall be included in the unit price.

3.4 Applicable taxes shall be quoted separately for all items.

3.5 The prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.

3.6 The Prices should be quoted in Indian Rupees only.

4. Each bidder shall submit only one quotation.
5. Quotation shall remain valid for a period not less than **55** days after the last date of quotation submission.
6. Evaluation of Quotations,

   The Purchaser will evaluate and compare the quotations determined to be substantially responsive i.e. which

   6.1 are properly signed ; and

   6.2 confirm to the terms and conditions, and specifications.
7. The Quotations would be evaluated for all items together.
8. Award of contract:

   The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.

   8.1 Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of contract.

   8.2 The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be incorporated in the purchase order.
9. Payment shall be made in Indian Rupees as follows:

   Delivery and Installation - 100% of total cost

   Satisfactory Acceptance - 0% of total cost

10. All supplied items are under warranty of **12** months from the date of successful acceptance of items.

11. You are requested to provide your offer latest by **10:00** hours on **13-Aug-2018 .**
12. Detailed specifications of the items are at Annexure I.
13. Training Clause (if any) **Yes**
14. Testing/Installation Clause (if any) **Yes**
15. Information brochures/ Product catalogue, if any must be accompanied with the quotation clearly indicating the model quoted for.
16. Sealed quotation to be submitted/ delivered at the address mentioned below,

    Dwarahat Almora Pin-263653 Uttarakhand
17. We look forward to receiving your quotation and thank you for your interest in this project.

(Authorized Signatory)

Name & Designation

Annexure I

S. No.	ITEMS	QTY.
1	Thickness gauge with ISI certification mark, IS 2386, (part I)	01
2	Length gauge with ISI certification mark, IS 2386, (part I)	01
3	Universal Penetrometer	01
4	Penetrometer Cone	01
5	Bitumen Penetration Kit	01
6	Digital Marshal Apparatus, 50KN Single Speed, New Model For 4" Dia Sample	01
7	Ductility Testing Machine With Digital Display	01
8	Laboratory electronic oven, thermostatically controlled	01
9	Redwood NO. 2 viscometer, electric heated with dimmer stat	01
10	a) Thermometer IP8C, (Range $0^{U} - 45^{U}$) b) Thermometer IP9C, (Range $40^{U} - 85^{U}$)	01

	c) Thermometer IP15, (Range 5^{U} – 110^{U}) d) Thermometer IP16C, (Range 90^{U} – 370^{U})	
11	Flash point (closed) pensky -martens apparatus, electric heating but without NPL certificate	01
12	Ring & ball apparatus , electric heating new design	01
13	Electronic balance 3200gms x0.01gms CBL-3200,pan size 164 x 124mm	01
14	Electrical heater (hot plate)	01
15	California Bearing Ratio apparatus	01
16	Benkleman Beam	01
17	Flexural Testing Machine	01
18	Centrifuge Execrator	01
19	Los Angles Abrasion Test	01
20	DEGCHI W/O Handle 12”	01
21	DEGCHI W/O Handle 09”	01
22	Trawl (Iron) Medium	04
23	Trawl (Iron) Small	04
24	Tong	02
25	Knife Steel	02
26	Gas Stove	01
27	Gas Cylinder	5 Kg
28	Gas Lighter	01
29	Glass Jar (1000ml)	01
30	Beaker	01
31	Standard Penetrometer (Automatic with Digital Timer), IS 1448	01
32	Ring and Ball Apparatus (Electrically Operated with AC Motor), IS 1205	01

33	Ring and Ball Apparatus (Electrically Operated with DTC), IS 1205	01
34	Kinematic Viscosity Bath , ASTM D446	01
35	Mould Elastic Recovery , IRC-SP-53-2002	03
36	Ductility Testing Machine, IS 1208	01
37	Marshal Stability Testing Machine-4'' Dia with Proving ring and Dial gauge, ASTM D6927	01
38	Hardness Tester for Bitumen Mastic Asphalt, IS 1195-1968	01
39	Bitumen extractor	01
40	Kinematic viscosity bath	01
41	Sieve IS 460 Nominal Aperture Size (mm)	02
	125	01
	106	01
	100	01
	90	01
	80	01
	75	01
	63	01
	53	01
	50	01
	45	01
	40	01
	37.5	01
	31.5	01
	26.5	01
	25	01

	22.4	01
	20	01
	19	01
	16	01
	13.2	01
	12.5	01
	11.2	01
	10	01
	9.5	01
	8	01
	6.7	01
	6.3	01
	5.6	01
	4.75	01
	4	01
	3.35	01
	2.6	01
	2.36	01
	2	01
	1.7	01
	1.4	01
	1.18	01
	1	01
	850 µm	01
	710	01
	600	01
	500	01

	425	01
	355	01
	300	01
	250	01
	212	01
	180	01
	150	01
	125	01
	106	01
	90	01
	75	01
	63	01
	53	01
	45	01
	38	01
	32	01
43.	Sieve Shaker IS 460	01
44.	Aggregate Steel Trolley Capacity 200-1000 kg	01

1. BITUMEN EXTRACTOR - MOTORISED WITH VARIABLE SPEED

SPECIAL MODEL WITH DC MOTOR DRIVE AND ELECTRONIC SPEED CONTROL
This model facilitates precise speed control and vibration free smooth operation. Speed variation up to 3600 RPM

Complies with following International Standards
ASTM D 2172, AASHTO T 58, T 164

Application

This is used for a quantitative determination of bitumen in hot mix paving mixtures and pavement samples.

Construction Details

The centrifuge extractor is a safe, portable model of sufficient size for quick and accurate determination of bitumen, corrosion-resistant model which can be used both in the field and the laboratory. It consists of removable cast aluminium rotor bowl mounted on a vertical shaft. A filter paper disc is pressed in between the nut. The bowl assembly is enclosed in a housing mounted on a cast aluminium body. The gears operate in oil bath with splash lubrication. Complete with 25 filter discs.

Essential Accessories At Extra Cost

1) Filter paper - Box of 100

2) Electronic Balance (Capacity : 6000 gms, Accuracy : 0.1 gm)

3) Benzene - Price per liters

2. STANDARD PENETROMETER - AUTOMATIC WITH DIGITAL TIMER

As per IP-49 and IS-1448

This apparatus is used for penetration test on a wide variety of materials such as grease, petroleum, Bitumen, Tar, Wax, polish, foodstuff, rubber asphalts and Pharmaceutical creams. A depression is made in the sample by a needle of definite weights which is measured in tenths of a millimetre and expressed as penetration number. The apparatus consist of a cast aluminium base with an iron stand on which moves an aluminium arm. A 6" dial is fixed on this arm and a brass chromium plated rod slide through the lower portion of the arm. A needle with weights is fitted

to this rod. The dial is graduated from 0-400 in one tenth millimetre sub division. Supplied complete with adjustable needle holder, penetration needle sample container, transfer dish and weight of 50 gms. With automatic DIGITAL timer with electrical arrangement.

3. RING AND BALL APP. - ELEC. OPERATED WITH AC MOTOR

Also called Softening Point Apparatus.

This apparatus is meant for determination of softening point of bituminous materials according to IP 58 and IS 1205. Softening point is that temp. at which the specimen under test becomes soft enough to allow a steel ball of specific dimension to fall a required distance under test condition. The apparatus consist of Glass beaker of heat resistant glass of internal dia 8.5 cm X 12 cm depth (approx.), Two steel balls each of 9.5mm dia, Two tapered brass rings, Two ball guides, ring stand and a hand stirrer. Available in following options

Electrical motorized with heater and temp. regulator - with AC Motor

4. RING AND BALL APP. - ELEC. OPERATED WITH PROGRAMMABLE

DTC Compliance with Following International Standards

EN 1427 | ASTM D36 | AASHTO T53 | IP 58 | IS 1205

Introduction

Also called Softening Point Apparatus. This apparatus is meant for determination of softening point of bituminous materials according to listed ASTM & IP Standards.

Construction Details

The apparatus consist of a Glass beaker made up of heat resistant glass having internal diameter of 8.5 cm and 12 cm depth (approximately). The heater is controlled by a programmable Digital Auto-tune PID Temperature Controller Cum Indicator to ensure rise of temperature at 5° C as per the guidelines of ASTM/ISO/AASTHO/IS Standards.

Electrical Motorized with DC Magnetic drive concealed heating and programmable DIGITAL PID temperature indicator cum controller to ensure rise of temperature @ 5 °C as per IS, IP and ASTM Requirements.

Softening Point apparatus

Following Accessories will be included in the standard supply

1) Complete Heating & Stirring assembly

2) Glass Beaker with Cover

3) Ring & Ball Stand

4) Cork for Thermometer

5) Two steel balls - each of 9.5 mm diameter

6) Two tapered brass rings

7) Two ball guides

8) Test Certificate for Stirring & Heating Unit

9) Glass Thermometer (IP - 61C) with Calibration Certificate

5. KINEMATIC VISCOSITY BATH (ABOVE AMBIENT) - FOR 2 VISCOMETERS

Compliance with Following International Standards

IP 71, ASTM D445, ASTM D446

Purpose

Used to determine the viscosity of oils and fuel, above room temperature up to a maximum of 120°C. Generally used @ 40°C but can also be used at any other temperature between measuring range. Can also be used for other application where full visibility of sample and constant temp. is important for the test.

Technical data

· Temperature range**:** Ambient + 5 ℃ to 120 ℃

· Temperature fluctuation (Accuracy)**:** @ 40° C ± 0.1 °C

· Temperature controller**:** Microprocessor based PID Auto tune Digital Controller

· Power rating**:** 230 volt, 50 HZ, AC Supply

· Test Method**:** ASTM D445

· Resolution**:** 0.1° C

· Display**:** LED digital display

· Sensor**:** Pt - 100 sensor

· Heater**:** 1500 Watts

· Temp. Range**:** Ambient +5 °C to 120 °C

· Size of Holder**:** 65 mm diameter

Construction

· Compact and self-contained unit

· Rectangular shape

· Double walled unit with Glass wool insulation

· Inner Chamber is made of stainless steel (SS - 304)

· Outer body made of G.I. Powder Coated

· With toughened glass window panel / Heat resistant

· Window from both sides (Front & Rear)

· Inner chamber is equipped with slow speed vibration free FHP motorized stirrer

· Accommodation of Two (2) viscometers is possible.

· Work space illuminated brilliantly without glare

· Temperature controlled by digital dual set-point Microprocessor based PID Controller with certificate of calibration

· All electrical controls are mounted on a drawer chassis in the side part of the case of the bath.

· DIGITAL STOP WATCH is mounted on the control panel to precisely observe the elapsed time for oil passing from viscometer lower mark to upper mark or vice versa.

· Designed for easy cleaning and simple maintenance

· Built-in boost for initial fast heating

· Working size **:** 110mm L x 180mm W x 350mm D

· Bath Volume **:** 12 Liters

· Rating **:** 1.5 KW

· Glass U Tube Viscometers of various size and shapes.

· Digital temperature controller with resolution of 0.01 °C.

7. MOULD ELASTIC RECOVERY - SET OF 3 NOS.

Introduction

A set of three moulds as per **IRC-SP-53-2002**

Construction Details

· Made of brass /Gunmetal material

· The shape, dimensions and tolerances as shown in fig 1 of IRC-SP-53-2002 Standard

· The ends b & b` are known as clips, and the parts a & a' are known as sides of the mould.

· The dimensions of the mould will be such that, when it is properly assembled, it will form a briquette specimen having the following dimensions.

Total Length : 75 ± 0.5 mm

A = 36.5 ± 0.1 mm

B = 30.0 ± 0.1 mm

C = 17.0 ± 0.1 mm

D = 10.0 ± 0.1 mm

E = 10.0 ± 0.1 mm

8. DUCTILITY TESTING MACHINE. Compliance with Following International Standards

As per IS**:** 1208

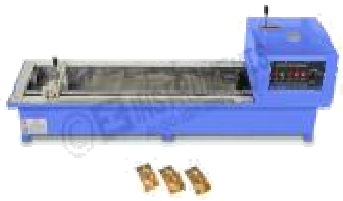
Application and principle

Ductility is defined as distance in cms to which a standard briquette of bitumen can be stretched before the thread breaks. The briquette is stretched at a rate of 50 mm/min. ± 2.5mm per minute at a temperature of 27°C ± 2°C

Apparatus Description

The apparatus consists of water bath with a thermostatic heater, and a circulating pump to maintain uniform water temperature. One half of the briquette moulds is fixed in a fixed plate in the water bath, the other half of the briquette mould is fixed to a carrier, which slides over a rotating threaded shaft with a clutch. The motor and gears to rotate the shaft are housed in a cabinet fixed above the other end of the bath. A pointer fixed to the carrier moves over a scale graduated from 0-100 cm x 1mm fixed on the bath with "0" (Zero) of the scale towards the fixed plates side. The rotating shaft has 2 speeds of travel for the bracket, 5 cm/min and 1cm/min - selected by a clutch. Water bath inside is of stainless steel with insulation and water drain cock . A heater with thermostatic control is fitted inside the water bath. Control switches for motor, stirrer, heater and indicator lamps are fixed at a convenient place on the water bath. Complete with three briquette moulds and one base plate,

All supply single phase.



9. MARSHAL STABILITY TESTING MACHINE - 4" DIA WITH PROVING RING AND DIAL GAUGE

Complies with following International Standards

ASTM D6927, ASTM D1559

Application

It is used to measure the resistance to plastic flow of cylindrical specimens of bituminous mixture loaded on the lateral surface.

EIE Marshal Stability Test Apparatus is supplied with following parts & accessories

· Three specimen moulds, cylindrical 4" diameter

· Three base plate.

· Three collars 4.1/8" diameter

· Two compactions hammers, 4.5kg weight and 47.7cm drop.

· One specimen extractor.

· One compaction pedestal complete with specimen holder

· One breaking head assembly, complete with gauge disc and flow meter pedestal.

· One loading transfer bar.

·50 KN capacity Loading unit motorized, with uniform vertical movement of 5.08 cm/min.

Suitable for operation on 230 Volts, 50 Hz, AC supply. With limit switch to restrict over travel.

· One PROVING RING 3000 kg (30 KN) capacity fitted with calibration report

· One dial gauge 0.01mm x 25 mm travel

10. HARDNESS TESTER FOR BITUMEN MASTIC ASPHALT

Compliance with Following Standards

IS: 1195-1968

Purpose

Hardness tester for Mastic Asphalt has been fabricated to meet the essential requirements

of IS 1195 - 1968 in finding out the Hardness Number of mastic asphalt.

Definition of Hardness Number

Hardness Number is defined as the figure denoting the depth in hundreds of a centimeter, to which a flat ended indentation pin in the form of a steel rod 6.35 mm in diameter will penetrate the mastic under a load of 31.7 kg applied for 60 seconds, the temperature being maintained at 35' +/- 0.5' C or 45' +/- 0.5' C. The unit is complete with load release mechanism.

Construction Details

The apparatus consist of a frame supported by means of four levelling screws. On the bottom of the top plate, a lever with a counter balance weight and a load hanger is fixed. The ratio of the lever is such that when the weight is kept on the hanger, the ultimate load acting on the penetration pin is 31.7 kg. A thermometer is fixed by clip, which records the temperature of the water in the container.

11. LOS ANGELES ABRASION TESTING MACHINE

Consists of a hollow steel cylinder, closed at both ends, having an inside diameter of 700 mm and inside length of 500 mm. The cylinder mounted on a sturdy frame on ball bearings. The opening will be closed dust tight with a removable bolted cover in place. A detachable shelf which extends throughout the drum catches the abrasive charge and does not allow it to fall on the cover. The drum is rotated at a speed of 30-33 RPM by an electric motor through a heavy duty reduction gear. Fitted with counter and ON/OFF button. Supplied complete with a tray for collection of the material.

Abrasive Charge:

Consists of set of 12 Nos. cast iron spheres or steel spheres (Hardened steel balls) approximately 48 mm diameter each weigh between 390-445 gram. Complete as above.

FORMAT FOR QUOTATION SUBMISSION

(In letterhead of the supplier with seal)

Date: _____

To:

_____

_____

Sl. No.	Description of goods (with full Specifications)	Qty.	Unit	Quoted Unit rate in Rs. (Including Ex Factory price, excise duty, packing and forwarding, transportation, insurance, other local costs incidental to delivery and warranty/ guaranty commitments)	Total Price (A)	Sales tax and other taxes payable	
						In %	In figures (B)
Total Cost							

Gross Total Cost (A+B): Rs. _____

We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs. ———————— (Amount in figures) (Rupees ————————amount in words) within the period specified in the Invitation for Quotations.

We confirm that the normal commercial warranty/ guarantee of ——————— months shall apply to the offered items and we also confirm to agree with terms and conditions as mentioned in the Invitation Letter.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Signature of Supplier

Name: _____

Address: _____

Contact No: _____