

Ref No IKGPTU/CE/2038

Dated 4/6/20

To
Incharge (ITS)
IKGPTU
For upload on Website.

Subject: Quotation for the Transportation Lab Equipments for Department of Civil Engineering, Main Campus, IKGPTU.

You are requested to kindly send us the sealed quotation for the below mentioned Transportation Lab Equipments. The specification of the Lab Equipment is as below:-

Sr. No.	Items	Specifications	Quantity
1.	Complete Absolute and kinematic Viscosity Testing Equipment conforming to IS: 1206 (Part II) and (Part III). (ASTM D 2171 and 2170) Method for Testing Tar and Bitumen Materials	<p>Complete Absolute and kinematic Viscosity Testing Equipment conforming to IS: 1206 (Part II) and (Part III), (ASTM D 2171 and 2170) Method for Testing Tar and Bitumen Materials</p> <p>Cannon-manning is used for the measurement of absolute viscosity of highly viscous materials. Cannon-Manning capillary tubes of sizes 12 & 13. Cannon-Fenske capillary tubes of sizes 6 & 7. Kinematic viscometer bath with a provision for 4 tests, Vacuum System</p> <p>Technical Data:-</p> <ul style="list-style-type: none"> Bath Temperature range : Ambient + 5 °C to 150°C · Temperature controller : Microprocessor based PID Auto tune Digital Controller · Power rating : 230 volt, 50 HZ, AC Supply · Resolution : ± 0.1°C · Silicone bath oil suitable up to 150°C - 25 Liters Vacuum System - The system will consist of vacuum pump, moisture trap, vacuum regulator, bleed valve, all interconnecting tubing / piping, and any other accessories as needed to complete the vacuum system Inner chamber is equipped with slow speed vibration free FHP motorized stirrer 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 Bath Volume : 14 - 16 Liters Thermometer for Bath - IP 93C for Kinematic Viscosity (Range -133.6 to -136.4, Division 0.05, Length 300mm) and IP 35C for Absolute Viscosity (Range - 58.6 to -61.4, Division 0.05, Length 300mm) with complete accessories. 	01

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2.	<p>Manual CBR Apparatus Ref. Standards IS:9669, IS : 2720 (Part XVI), BS 1377: 1924 The equipment consist of the following replaceable parts :</p>	<ul style="list-style-type: none"> • Load Frame, 50 kN Capacity, Three Speed 1.5, 1.25 & 2.5 mm/min -1 no • Complete Mould with Extension collar and base plate - Metal 150 mm (4 nos) • Penetration Piston 50 mm face dia – 1 no • Circular Metal Spacer Disc, with detachable handle, 148 mm dia x 47.7 mm high – 3nos • Annular Metal Weight 2.5 kg, 147 mm dia with 53 mm dia central hole - 3 nos • Slotted Metal Weight 2.5 kg, 147 mm dia, with 53 mm dia slot – 3 nos • Perforated Plate 148 mm dia, with adjustable stem and lock nut – 3 nos • Metal Tripod for Dial Gauge - 3 nos • Dial gauges 25 X 0.01 mm – 3 nos • Cutting Collar – 3 nos • Filter papers – 100 nos • Rammer 2.6 kg, 310 mm controlled drop - 1 no • Rammer 4.9 kg, 450 mm controlled drop – 1no • Spatula-1no. <p>Proving ring capacity 50 KN and dial gauge 25X0.01 mm with complete accessories.</p>	01
3.	<p>Aggregate Impact Tester with Blow Counter</p>	<p>In accordance with IS:2386 (Part 4), IS:9377. Should consists of – Cylindrical cup, Metal Measure of 75 mm ID x 50 mm deep, Tamping Rod, Blow Counter, Free fall hammer with locking arrangement. Free Fall height: 380 ± 5 mm with Brass sieves of of 12.5mm, 10mm, 2.36mm size.</p>	01
4.	<p>CLEVELAND FLASH POINT APPARATUS WITH ENERGY REGULATOR</p>	<p>Compliance with following International Standards ASTM D92, IP - 36/57 ; IS 1448 (P:69) 1469 For finding Flash Point of petroleum products except fuel oil with open flash 80°C as per specification IP 36/57, IS 1448 (P:69) 1969 and ASTM-D-92. The apparatus should consists of a cup heating plate to specific dimensions, thermometer clip and test flame applicator with swivel joint for passing over liquid surface in the prescribed manner. Heater controlled by energy regulator fitted to the apparatus. Suitable for operation on 220 Volts, 50 cycles, AC mains. Digital indicator cum controller with Motorized stirrer instead of Energy Regulator Thermometer (-6 to 400 °C) (IP - 28C)</p>	01
5.	<p>Digital MARSHAL STABILITY</p>	<p>Complies with following International Standards ASTM D6927, ASTM D1559 ; As per MORTH specifications.</p>	01

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	TESTING MACHINE - 4" DIA	<p>Application It is used to measure the resistance to plastic flow of cylindrical specimens of bituminous mixture loaded on the lateral surface</p> <p>Marshal Stability Test Apparatus should consist of following parts & accessories:</p> <ul style="list-style-type: none"> · Five specimen moulds, cylindrical 4" diameter · Three base plate. · Three collars 4" 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. · water bath with Temperature Control <p>Suitable for operation on 230 Volts, 50 Hz, AC supply. With limit switch to restrict over travel. Laser Gun for Temperature Measurement upto 500°c</p> <ul style="list-style-type: none"> · One Digital Indicator with Load Cell & LVDT 	
6.	Compaction Test Apparatus for light compaction	<p>Ref. Standard IS:10074 (Part VII) for Light Compaction Test</p> <p>Compaction mould, complete with Collar and Base Plate, made of Mild Steel, 100 mm ID, 127.3 mm height, 1,000 ml volume</p> <p>Rammer, 2.6 kg x 310 mm fall as per IS: 9198</p>	01
7.	Compaction Test Apparatus for Heavy compaction	<p>Ref. Standard IS:10074 (Part VII) for Heavy Compaction Test</p> <p>Compaction mould, complete with Collar and Base Plate, made of Mild Steel, 150 mm ID, 127.3 mm height, 2,250 ml volume</p> <p>Rammer, 4.9 kg x 450 mm fall as per IS: 9198</p>	01

Terms and Conditions:

1. The vendor should have the experience of atleast 3 years.
2. The vendor should have supplied equipment at IIT's / NIT's and the copy of Supply Order to be send along with quotations.
3. The quotations to be sent in the sealed envelope as per the given specifications.
4. The quotations to be reached at IKGPTU, Kapurthala till 22.06.2020.
5. FOR at Department of Civil Engineering, I.K.Gujral Punjab Technical University (Main Camus), Jalandhar-Kapurthala Highway, Kapurthala-144603, Punjab, India.


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