Indian Institute of Science Bangalore
The Chairperson
Department of Civil Engineering Indian
Institute of Science (IISc) Bangalore
560012, Karnataka, India
Email: chair.civil@iisc.ac.in
(Attn: Dr. Satyavati Komaragiri; skomaragiri@iisc.ac.in)

Date: 15 January 2026

Ref: CiE/2025-2026/SK/Tenders/Global/DSR-2

Global Tender Notification for the Procurement of a Dynamic Shear Rheometer for Characterizing Bitumen and Similar Materials

This is a Request for Quote (RFQ) from the Indian Institute of Science (IISc), Bangalore, for the supply and installation of a "Dynamic Shear Rheometer" at the Civil Engineering department, IISc Bangalore.

Contents:

1 Section 1: Bid Schedule

1	Tender No.	CiE/2025-2026/SK/Tenders/Global/DSR-2
2	Tender Date	15 January 2026
3	Item Description	Dynamic Shear Rheometer
4	Tender Type	Two bid system (i) Technical Bid (Part A) (ii) Commercial Bid (Part B)
5	Place of tender submission	Chairperson's Office C/O -The Chairperson, Department of Civil Engineering Indian Institute of Science, CV Raman Road, Bangalore, Karnataka 560012, India
6	Last date and time for submission of tender	05 February 2026, 4:00 PM
7	For further clarification	Dr. Satyavati Komaragiri Room No. 107, Annex Building, Department of Civil Engineering Indian Institute of Science, Bangalore, Karnataka 560012, India Phone no.: +91 80 2293 2814 Email: skomaragiri@iisc.ac.in

2 Section 2: Eligibility Criteria

Prequalification criteria:

1) The Bidder's firm should have existence for a minimum of 5 years. (Enclose Company Registration Certificate)
2) The Bidder should have qualified technical service personnel for the instrument(s) based in India.
3) If the Bidder is a local distributor/dealer/Agent, it is mandatory to attach an authorization certificate along with the technical bid from the original equipment manufacturer.
4) The bidder should sign and submit the declaration for Acceptance of Terms and Conditions as per Annexure 4 in Section 5.
5) The Bidder must not be blacklisted/banned/suspended or have a record of any service-related dispute with any organization in India or elsewhere. A declaration to this effect must be given as per Annexure 3 in Section 5.
6) The order will be placed only on the bidder who participated in the bid.

3 Section 3: Terms and Conditions

3.1 Submission of Tender

1. All documentations in the tender should be in English.
2. The quote should come only from Foreign/ International Original Equipment Manufacturer (OEM) or their Indian authorized distributor.
3. The tender should be submitted in two envelopes (two bid system). The tenderer should submit the technical and financial bids separately in sealed envelopes superscribing the envelopes as 'Technical bid' and 'Financial bid'.
    a. Technical Bid (Part A): Technical bid consisting of all technical details and check list for conformance to technical specifications. The technical proposal should contain a technical compliance table with 5 columns:
        i. The first column must list the technical requirements, in the order that they are given in the technical requirement below.
        ii. The second column should provide specifications of the instrument against the requirement. Please provide quantitative responses wherever possible.
        iii. The third column should describe your compliance with a "Yes" or "No" only. Ensure that the entries in column two (2) and column three (3) are consistent.
        iv. The fourth column should state the reasons/explanations/context for deviations, if any.
        v. The fifth column can contain additional remarks. Vendors can use this opportunity to highlight technical features, qualify response of previous columns, or provide additional details. Vendors can also use this opportunity to compare your solution with that of your competitors or provide details as requested in the technical requirements table below.
    b. Commercial Bid (Part-B) – Indicating item wise price for the items mentioned in the technical bid, as per the format of quotation provided in tender, and other commercial terms and conditions.
    c. Both these envelopes must be put into a single envelope, superscribed 'TENDER FOR: DYNAMIC SHEAR RHEOMETER". This should reach the following address by 4 PM on 5th February 2026:

Chairperson's Office, C/O
The Chairperson,
Department of Civil Engineering, Indian
Institute of Science, Bengaluru,
Karnataka -560 012 Contact:
+91(80)2293 2323
chair.civil@iisc.ac.in
Attn: Dr. Satyavati Komaragiri

4. The technical bid and price bid should each be placed in separate sealed covers, superscripting on both the envelopes the tender no. and the due date. Both these sealed covers are to be placed in a bigger cover which should also be sealed and duly superscripted with the Tender No., Tender Description and Due Date.
5. The SEALED COVER superscripting tender number (CiE/2025-2026/SK/Tenders/Global/DSR-2) and due date should reach Chairperson's Office, Department of Civil Engineering, Indian Institute of Science, Bangalore – 560012, India on or before due date mentioned in the tender notice. In case the due date happens to be a holiday the tender will be accepted and opened on the next working day. If the quotation cover is not sealed, it will be rejected.
6. All queries are to be addressed to the person identified in "Section 1 – Bid Schedule" of the tender notice.
7. GST/other taxes, levies etc., are to be indicated separately. The BIDDER should mention GST Registration and PAN in the tender document (Indian Bidders only).
8. If price is not quoted in Commercial Bid as per the format provided in tender document the bid is liable to be rejected.
9. The Institute reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time prior to the award of contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders.
10. Incomplete bids will be summarily rejected.

3.2 Cancellation of the Tender

Notwithstanding anything specified in this tender document, the purchase committee, IISc Bangalore, in its sole discretion, unconditionally and without having to assign any reason, reserves the rights:

a. To accept OR reject lowest tender or any other tender or all the tenders.
b. To accept any tender in full or in part.

c. To reject the tender, offer not confirming to the tender terms.

3.3 Validity of the Offer

The offer shall be valid for 90 days from the date of opening of the commercial bid.

3.4 Evaluation of the Offer

1. The technical bid (Part A) will be opened first and evaluated.
2. Bidders meeting the required eligibility criteria as stated in Section 2 of this document shall only be considered for Commercial Bid (Part B) opening. Further, agencies not furnishing the documentary evidence as required will not be considered.
3. Pre-qualification of the bidders shall not imply final acceptance of the Commercial Bid. The agency may be rejected at any point during technical evaluation or during commercial evaluation. The decision in regard to acceptance and / or rejection of any offer in part or full shall be the sole discretion of IISc Bangalore, and decision in this regard shall be binding on the bidders.
4. The award of the contract will be subject to acceptance of the terms and conditions stated in this tender.
5. Any offer which deviates from the vital conditions (as illustrated below) of the tender is liable to be rejected:
    a. Non-submission of complete offers.
    b. Receipt of bids after the due date and time and or by email / fax (unless specified otherwise).
    c. Receipt of bids in open conditions.
6. In case any bidder is silent on any clauses mentioned in these tender documents, IISc Bangalore shall construe that the bidder had accepted the clauses as of the tender and no further claim will be entertained.
7. No revision in the terms and conditions quoted in the offer will be entertained after the last date and time fixed for receipt of tenders.
8. The lowest bid will be calculated based on the total price of all items tendered for basic equipment along with accessories selected for installation, operation, preprocessing and post processing, selected optional items, recommended spares, and the selected extended warranty or annual maintenance contract, as chosen by the institute.

3.5 Prerequisites

The bidder will provide the equipment's prerequisite installation requirement and the technical bid. This will include the site preparation guide.

3.6 Warranty

The Dynamic Shear Rheometer is to be under warranty period of a minimum of three (3) years including free supply of: spare parts, data analysis software, computer and faulty consumables from the date of functional installation. If any portion of the system is found to be defective, the defective system has to be replaced or rectified at the cost of the successful bidder within 45 days from the date of receipt of written communications from IISc, Bangalore. If there is any delay in replacement or rectification, the warranty period should be correspondingly extended.

3.7 Extended Warranty and Annual Maintenance Contract

1. The cost per year for an additional two (2) years of warranty after the initial three (3) year warranty period has ended must be mentioned as an **optional add-on** in the quotation.
2. The cost per year for an annual maintenance contract after the initial three (3) year warranty period has ended must be mentioned as an **optional add-on** in the quotation.
3. The tenderer should clarify if periodic (preventive) maintenance be done by a trained on-site engineer or requires a specialist from the OEM.
4. The vendor should have qualified technical service personnel for the equipment based in India and must assure a response time of less than 3 business days after receiving a service request.

3.8 Purchase Order

1. The order will be placed on the bidder whose bid is accepted by IISc based on the terms and conditions mentioned in the tender document.
2. The quantity of the items in tender is only indicative. IISc, Bangalore reserves the right to increase /decrease the quantity of the items depending on the requirement.
3. If the quality of the product and service provided is not found satisfactory, IISc, Bangalore reserves the right to cancel or amend the contract.

3.9 Delivery, Installation and Training

1. The successful bidder shall provide the lead time to delivery, installation and made functional at IISc, Bangalore from the date of receipt of purchase order.
2. The system should be delivered, installed and made functional within 90 days from the date of receipt of the purchase order.

3. The validity of the quotation shall be 90 days.
4. The supply of the items will be considered as effective only on satisfactory installation and inspection of the system and inspection of all the items and features/capabilities tested by the IISc, Bangalore. After successful installation and inspection, the date of taking over of the entire system by the IISc, Bangalore, shall be taken as the start of the warranty period.
5. No partial shipment is allowed.
6. The bidder should also arrange for technical training for the local facility technologists and users.
7. No additional fee for installation and training will be paid. All such costs are to be considered in the base price.
8. The successful bidder must conduct post-installation acceptance tests. The successful bidder is required to carry out full testing and demonstration of the dynamic shear rheometer's performance at Indian Institute of Science, along with training the representative(s) from the institute on the operation and some sample testing for acceptance. All guaranteed specifications will have to be demonstrated, upon request, in an active installation. Failure to demonstrate any promised specifications will be deemed as technical non-compliance. The tests can be recorded in the presence of representatives of the OEM. Inability to pass these tests will be counted as technical failure and breach of contract.

    a. The successful bidder should perform tests both oscillatory and rotational tests on the standard fluids supplied with the Dynamic Shear Rheometer (DSR). The standard fluid must be supplied with the DSR.

    b. The successful bidder shall perform frequency sweep, amplitude sweep, multiple stress creep and recovery test, performance grade tests, and low temperature tests on asphalt binder samples.

    c. The successful bidder shall demonstrate the use of existing templates, and create any new templates based on the requirements.

3.10 Payment Terms

The payments to non-domestic vendors will be made through a Letter of Credit and milestone of the payment will be determined after the mutual discussions with the successful bidder. As per GFR no advance payment can be made to domestic vendors, unless an equal amount of bank guarantee is provided.

3.11 Statutory Variation:

Any statutory increase in the taxes and duties after the bidder's offer, if it takes place within the original contractual delivery date, will be borne by IISc, Bangalore subject to the claim being supported by documentary evidence. However, if any decrease takes place the advantage will have to be passed on to IISc, Bangalore.

3.12 Disputes and Jurisdiction:

Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within the city of Bangalore, India.

3.13 General

1. All amendments, time extension, clarifications etc., within the period of submission of the tender will be communicated electronically. No extension of the bid due date/time shall be considered on account of the delay in receipt of any document(s) by mail.
2. The bidder may furnish any additional information, which is necessary to establish capabilities to successfully complete the envisaged work. It is, however, advised not to provide superfluous information.
3. The bidder may visit the installation site before submission of tender, with prior intimation.
4. The decision of the purchase committee is final.
5. If any information furnished by the bidder is found to be incorrect, either immediately or later, it would render the bidder liable to be debarred from tendering and/or taking up of work in IISc, Bangalore.
6. The bidder should have a track record of supplying and installing similar equipment to at least two organizations in India within the last three years, preferably at Indian Institute of Technologies (IITs), National Institute of Technologies (NITs), Indian Institute of Science (IISc), or national labs.
    a. **Relevant documents including user testimonial** on product performance, and service and maintenance should be furnished. If similar equipment has been supplied to IISc, user testimonial on the product performance, and service and maintenance from the user at IISc should be furnished.
    b. The timeline of supply of the equipment to the organizations in India shall also be

furnished.

c. The turnaround time for services, if any were performed at the two organizations listed, shall also be provided.

7. The institute reserves the right to withhold placement of final order. The right to reject all or any of the quotations and to split up the requirements or relax any or all the above conditions without assigning any reason.

4 Section 4: Technical Specifications

1. Motor technology: Drag cup motor or EC motor
2. Motor bearing: Air bearing or Magnetic bearing
3. Minimum torque in rotation should be 5 nN.m or better.
4. Minimum torque in oscillation should be 5 nN.m or better.
5. Maximum torque should be 200 mN.m or better.
6. Torque resolution should 0.1 nN.m or better.
7. Angular velocity range: 0 to 300 rad/s or better.
8. Frequency range: 10^{-7} to 100 Hz or better.
9. Displacement resolution: 10 nrad or better
10. Normal force range: Up to 50 N or better with resolution 1 mN or better.
11. Measurement type: Rotational, Oscillatory and Transient
12. Oscillatory modes: Control stress and strain
13. Gap control: A high-resolution linear position sensor must measure and compensate for thermal expansion effects in real time, ensuring accurate gap compensation (true gap / true position) and eliminating errors caused by geometric expansion during temperature ramp/sweep measurements.
14. Optical encoder: Optical encoder for precise phase angle measurement
15. Temperature range: -40°C to 150°C or better
16. Heating rate: 50°C/min or better
17. Cooling rate: 30°C/min or better
18. Temperature control device: Stepped Peltier temperature control with upper heating device or environmental control chamber
19. Temperature controller must accommodate all the required geometries.
20. All geometries must have auto-recognition capability through the software.
21. The DSR should be upgradable to perform linear DMA measurements (bending and tension). It should be to perform linear Dynamic Mechanical Analysis (DMA) measurements to understand the E' (storage modulus) & E" (loss modulus). **The price against this upgrade should not be a part of the current supply but should be mentioned separately in the financial bid under "Future works" as "Item 1". The quoted price for future works items should be valid for at least five years from the last date of submission of the bids.**

Measuring geometries:

The DSR must be compatible and accompanied with the following geometries which has auto-recognition feature through software:

1. Parallel plates
    a. 25 mm diameter (Stainless steel) – 01 No.
    b. 8 mm diameter (Stainless steel) – 01 No.
    c. 4 mm diameter (Stainless steel) – 01 No.

Other geometries:

1. Cone and plate geometry of diameter (d): 50 mm ≥ d ≥ 20 mm.
   The price against this geometry should not be a part of the current supply but should be mentioned separately in the financial bid under "Future works" as "Item 2". The quoted price for future works items should be valid for at least five years from the last date of submission of the bids.
2. Concentric cylinder geometry of diameter (d): 50 mm ≥ d ≥ 20 mm.
   The price against this geometry should not be a part of the current supply but should be mentioned separately in the financial bid under "Future works" as "Item 3". The quoted price for future works items should be valid for at least five years from the last date of submission of the bids.

Software requirements:

1. Full-fledged software must be provided with the DSR for the operation of rheometer and data analysis.
2. The software must be programmable to conduct a variety of stress-controlled and strain-controlled experiments.
3. It must provide real-time display and storage of data that can be exported in a user-friendly format.
4. Computer system compatible with the rheometer software shall be provided by the bidder.
5. The software must offer the ability to automatically update both instrument software and firmware through the Internet using an update routine. The software must be able to automatically look for updates and inform user when available.
6. The rheometer software shall provide real-time, continuous display of both input and output signal waveforms (raw data) during oscillatory measurements.
7. The data analysis package must have the ability to run on any computer within the customer's organization without the use of a hardware key.

DSR should be able to perform following tests:

1. Performance grading according to AASHTO T315 / ASTM D7175.
2. Multiple stress creep and recovery according to AASHTO T 350 / ASTM D7405
3. Rotational tests in stress-controlled and shear rate-controlled modes.
4. Oscillatory tests in stress-controlled and strain-controlled modes.
5. Frequency sweep tests, amplitude sweep tests, temperature sweep tests, linear amplitude sweep tests, frequency-temperature sweep tests.

6. DSR must have the capability to obtain raw data of torque exerted, angular deflection and angular velocity along with the temperature at every measuring point.

Air Compressor and Other essential items

1. A suitable air compressor (moisture and oil free) which is required for the proper functioning of the DSR should be provided by the vendor.
2. All essentials required for the functioning and operation of the DSR must be provided with the equipment.
3. The DSR should include essential accessories such as flexible, tear-resistant silicone specimen moulds for preparing 8 mm and 25 mm diameter samples, with a minimum of three sets each for both sizes.
4. A metal specimen trimmer (stainless steel) with a straight edge is also required, with a total quantity of four, to facilitate accurate sample preparation and trimming.
5. A branded computer system compatible with the DSR software shall be provided by the bidder for controlling the equipment as well as data acquisition. Minimum computer specs: Intel i5 Processor, 1 TB HDD, 8GB RAM, DVD R/W drive, Keyboard, Optical Mouse, 6 USB Ports, 19" TFT Screen, UPS.
6. UPS: UPS must be provided with the equipment which will provide a power backup of a minimum of 30 minutes to the entire system.
7. All the necessary accessories to calibrate the equipment must be provided along with a calibration certificate.
8. Stabilizer and spike arrester must be provided with the equipment.

5 Section 5: Technical Bid

The technical bid should furnish all requirements of the tender along with all annexures in this Section 5 and be submitted to:

Chairperson's Office,
C/O The Chairperson,
Department of Civil Engineering,
Indian Institute of Science, Bengaluru,
Karnataka - 560 012 Contact:
+91(80)2293 2323
chair.civil@iisc.ac.in
Attn: Dr. Satyavati Komaragiri

Soft copies of the technical documentation, in addition to the hard copies in the sealed envelope, may be emailed to: Dr. Satyavati Komaragiri, skomaragiri@iisc.ac.in

5.1 Annexure 1: Details of the Bidder

The bidder must provide the following mandatory information & attach supporting documents wherever mentioned:

Details of the Bidder

Sl. No.	Items	Details
1	Name of the Bidder	
2	Nature of Bidder (Attach attested copy of Certificate of Incorporation / Partnership Deed)	
3	Registration No/ Trade License, (attach attested copy)	
4	Registered Office Address	
5	Address for communication	
6	Contact person- Name and Designation	
7	Telephone No	
8	Email ID	
9	Website	
10	PAN No. (attach copy)	
11	GST No. (attach copy)	

(Signature of the Bidder)

(Name)

(Designation and Seal) (Date)

5.2 Annexure 2: Declaration Regarding Experience

To,
The Chairperson,
Department of Civil Engineering
Indian Institute of Science
Bengaluru – 560012, India

Ref: Tender No: CiE/2025-2026/SK/Tenders/Global/DSR-2
Dated: 15th January 2026

Subject: Supply and installation of a Dynamic Shear Rheometer at the Department of Civil Engineering, IISc, Bangalore.

Sir,

I've carefully gone through the Terms & Conditions contained in the above referred tender. I hereby declare that my company / firm has _____years of experience in supplying and installing dynamic shear rheometer.

(Signature of the Bidder)

(Printed Name)

(Designation, Seal) (Date)

5.3 Annexure 3: Declaration Regarding Track Record

To,
The Chairperson,
Department of Civil Engineering
Indian Institute of Science
Bengaluru – 560012, India

Ref: Tender No: CiE/2025-2026/SK/Tenders/Global/DSR-2
Dated: 15th January 2026

Subject: Supply and installation of a Dynamic Shear Rheometer at the Department of Civil Engineering, IISc, Bangalore.

Sir,

I've carefully gone through the Terms & Conditions contained in the above-mentioned tender. I hereby declare that my company/firm is not currently debarred/blacklisted by any Government/Semi-Government organization/ institution in India or abroad. I further certify that I'm a competent officer in my company/firm to make this declaration.

(Or)

I declare the following:

Sl. No.	Country in which the company is Debarred /blacklisted / case is Pending	Blacklisted / debarred by Government / Semi Government/Organizations /Institutions	Reason	Since when and for how long

(NOTE: In case the company / firm was blacklisted previously, please provide details regarding period for which the company/firm was blacklisted and the reason/s for the same).

Yours faithfully,

(Signature of the Bidder)

(Name)

(Designation, Seal) (Date)

5.4 Annexure 4: Declaration for Acceptance of Terms and Conditions

To,
The Chairperson,
Department of Civil Engineering
Indian Institute of Science
Bengaluru – 560012, India

Ref: Tender No: CiE/2025-2026/SK/Tenders/Global/DSR-2
Dated: 15th January 2026

Subject: Supply and installation of a Dynamic Shear Rheometer at the Department of Civil Engineering, IISc, Bangalore.

Sir,

I've carefully gone through the Terms & Conditions as mentioned in the above-mentioned tender document. I declare that all the provisions of this tender document are acceptable to my company. I further certify that I'm an authorized signatory of my company and am, therefore, competent to make this declaration.

Yours faithfully,

(Signature of the Bidder)

(Name)

(Designation, Seal) (Date)

5.5 Annexure 5: Details of Items Quoted

Details of items quoted:

a. Company Name
b. Product Name
c. Part / Catalogue number
d. Product description / main features
e. Detailed technical specifications
f. Remarks

Instructions to bidders:

1. Bidder should provide technical specifications of the quoted product(s) in detail.
2. Bidder should attach product brochures along with technical bid.
3. Bidders should clearly indicate compliance or non-compliance of the technical specifications provided in the tender document. The technical proposal should contain a technical compliance table with 5 columns:
    i. The first column must list the technical requirements, in the order that they are given in the technical requirements.
    ii. The second column should provide specifications of the instrument against the requirement. Please provide quantitative responses wherever possible.
    iii. The third column should describe your compliance with a "Yes" or "No" only. Ensure that the entries in column two (2) and column three (3) are consistent.
    iv. The fourth column should state the reasons/explanations/context for deviations, if any.
    v. The fifth column can contain additional remarks. Vendors can use this opportunity to highlight technical features, qualify response of previous columns, or provide additional details. Vendors can also use this opportunity to compare your solution with that of your competitors or provide details as requested in the technical requirements.

6 Section 6: Commercial Bid

The commercial bid should be furnished with all requirements of the tender with supporting documents as shown below:

Sl. No.	Description	Cat. Number	Quantity	Unit Price	Subtotal
1.	Essential items noted in technical specification				
1. a	… (details of essential items, *e.g.* Dynamic shear rheometer)				
1. b	…				
2.	Optional items noted in the technical specification				
2. a	… (details of optional items)				
2. b	…				
3.	Accessories for operation and installation				
4.	All items, consumables, spares and software to be supplied locally				
5.	Warranty (3 years)				
6.	Extended warranty after initial 3 years (2 years; cost per year should be the unit price and number of years should be the quantity)				
7.	AMC after expiry of initial 3-year warranty period (2 years; cost per year should be the unit price and number of years should be the quantity)				

8.	Cost of insurance and airfreight				

6.1 Future Works:

Sl. No.	**Description**	**Cat. Number**	**Quantity**	**Unit Price**	**Subtotal**
Item 1	Dynamic shear rheometer upgrade				
Item 2	Cone and plate geometry				
Item 3	Concentric cylinder geometry				

Addressed to:
The Chairperson,
Department of Civil Engineering
Indian Institute of Science (IISc),
Bengaluru - 560012, Karnataka

7 Section 7: Checklist

(This should be enclosed with technical bid- Part A)

The following items must be checked before the Bid is submitted.

[1] Sealed Envelope "Part A": Technical Bid

1. Section 5- Technical Bid (each page signed by the authorized signatory and sealed) with the below annexures:
    a. Annexure 1: Bidders details
    b. Annexure 2: Declaration regarding experience
    c. Annexure 3: Declaration regarding track record
    d. Annexure 4: Declaration for acceptance of terms and conditions
    e. Annexure 5: Details of items quoted
2. Copy of this tender document duly signed by the authorized signatory on every page and sealed.

[2] Sealed Envelope "Part B": Commercial Bid

1. Section 6: Commercial Bid

Your quotation must be submitted in two envelopes: Technical Bid (Envelope A) and Commercial Bid (Envelope B) super scribing on both the envelopes with Tender No. and due date and both in sealed covers and put in a bigger cover which should also be sealed and duly super scribed with Tender No., Tender description and Due Date.