



क्रय कार्यालय  
मोतीलाल नेहरू राष्ट्रीय प्रौद्योगिकी संस्थान इलाहाबाद, प्रयागराज-211004  
Purchase Office  
Motilal Nehru National Institute of Technology Allahabad, Prayagraj-211004  
Tele : 91-532-227+1057, 1030; Email : purchase@mnnit.ac.in



No: 959/Purchase Office/OT-06/2020-21

Dated: 24.02.2021

**REFERENCE:** Tender# OT-09/PO/CED/Soil Static Cyclic Triaxial Testing System/2020-21 dated 20.11.2020

(A.) List of Bidder(s) found as NON-RESPONSIVE In Technical Evaluation

तकनीकी मूल्यांकन में अनुत्तरदायी पाए गए बोलीदाताओं की सूची

| Sl. | Name of Bidder | Status |
|-----|----------------|--------|
|     | NIL            |        |


(B.) List of Bidders found as RESPONSIVE in Technical Evaluation

तकनीकी मूल्यांकन में उत्तरदायी पाए गए बोलीदाता की सूची

| Sl. | Name of Bidder                                   | Status     |
|-----|--|------------|
| 1.  | M/s Aimil Limited, New Delhi                     | Responsive |
| 2.  | M/d Hydraulic Engineering Instruments, New Delhi | Responsive |

### **Price Bid Opening**

| Date       | Time      | Venue  |
|------------|-----------|--|
| 26.02.2021 | 1530 Hrs. | Room # 205, Purchase Office<br>Administrative Building,<br>MNNIT Allahabad |

 24/2/2021





**TECHNO-COMMERCIAL COMPLIANCE STATEMENT**

Open Tender #: **OT-09/PO/CED/Soil Static Cyclic Triaxial/2020-21** dated 20.11.2020  
For : Procurement of Soil Static Cyclic Triaxial  
Date of Technical Bid Opening: 18.01.2021 at 1530 Hrs.  
Venue: Room No. 203 (Conference Hall, Purchase office)

| Eligibility Criteria under GCC (Page # 07/20)  | Title/Requirement  | [1/2]   | [2/2]  |
|--|--|---|--|
|  |  | M/s Aimil Limited, New Delhi  | M/s Hydraulic & Engineering Instruments, New Delhi       |
| Clause 4(i)  | The Bidder must be a legally valid entity i.e. a Proprietary/Partnership Firm/Limited Company/Society Legally constituted or registered under the relevant act   | Complied<br>(Registration # 55-6093 dt. 23.08.2001)<br>(Pg. no. 17) | Complied<br>(Pg. no. 45 to 52)                           |
| Clause 4(ii)   | Bidder must have an annual average turnover of <b>Rs. 135.00</b> lakhs during the past three financial years i.e. 2017-18, 2018-19 and 2019-20.  | ₹ 25297.87 lakh<br>(Pg. # 21)                                       | ₹ 978.69 lakh<br>(Pg. # 40)                              |
| Clause 4(iii)  | Must have supplied the same equipments with same set of accessories to reputed Indian organizations especially NITS/IITs/IIITs/Central Universities/IISERs/CSIR/Labs etc. during the last three financial years i.e. 2017-18, 2018-19 and 2019-20. | Complied<br>(Pg. no. 13)  | Complied<br>(Pg. # 69 to 71, 76 to 81)                   |
| Clause 4(iv)   | Duly filled in format 'A' to 'F'.  |   |  |
|  | Annexure-A: Bid Proposal Sheet   | Complied<br>(Pg. no. 14)  | Complied<br>(Pg. # 23 & 24)                              |
|  | Format – B : Technical Compliance of Goods   | Complied<br>(Pg. no. 15 & 16)                                       | Complied<br>(Pg. # 18 & 19)                              |
|  | Format – C : Price Reasonability Certificate   | Complied<br>(Pg. no. 16)  | Complied<br>(Pg. # 38)                                   |
|  | Format – D : Manufacturers' Authorization Form (MAF)   | Complied<br>(Pg. no. 17)  | Complied<br>(Pg. # 22)                                   |
|  | Format – E : Affidavit Regarding Blacklisting/ Non-Blacklisting Firm   | Complied<br>(Pg. no. 18)  | Complied<br>(Pg. # 31)                                   |
| Format – F : Proforma for Direct Payment/Transfer to Bank Account by MNNIT Allahabad | Complied<br>(Pg. no. 19)   | Complied<br>(Pg. # 39)  |  |
| Clause 4(vi)   | Must have submitted the EMD required unless exempted   | MSE Exempted<br>(Pg. no. 03)  | Not Applicable<br>(Pg. no. 2)                            |
| <b>Criteria for Technical Assessment under GCC (Page # 10/20)</b>                    |  |   |  |
| Clause 10(1)   | Preference will be given to ISO 9001:2000 certified Manufacturer/suppliers, who can ensure the manufacturing of the machine as per the required testing standards IS/BS/BIS/ASTM standards and within the specified tolerance limits.              | Complied<br>(Pg. # 25)  | Complied<br>(Pg. # 53)                                   |
| Clause 10(2)   | Should have NABL accredited testing and calibration facility from minimum last five years.   | Complied<br>(Pg. # 26 to 35)  | Complied<br>Certificates attached at<br>(Pg. # 26 to 29) |
| Clause 10(3)   | Bidders should provide list of plant and machineries and inspection tools along with quotation.  | Complied<br>(Pg. # 36 to 44)  | Complied<br>(Pg. # 35 to 38)                             |

*Vijay Kumar*  
19/2/21  
[Vijay Kumar]

*Anupam Rawat*  
19/2/21  
[Anupam Rawat]

*R. P. Tiwari*  
19/2/2021  
[R. P. Tiwari]

*Sunita*  
19/2/21  
[Assistant Registrar  
(Accounts-I)]

*Assistant Registrar*  
19/2/2021  
19/2/2021  
[Assistant Registrar  
(Admin-III)]

*Manisha Yadav*  
19/2/2021  
[Manisha Yadav  
(R&C Core Committee Member)]


*Dean (R&C)*  
[Dean (R&C)]




|               |   | M/s Aimil Limited,<br>New Delhi | M/s Hydraulic &<br>Engineering<br>Instruments, New Delhi |
|---------------|---|---------------------------------|--|
| Clause 10(4)  | Manufacturer should have in-house R&D center duly recognized by Department of Scientific & Industrial Research, Ministry of Science & Technology. Bidder has to provide the certificate alongwith the tender.   | Complied<br>(Pg. # 45)          | Complied<br>(Pg. # 31 to 34)                             |
| Clause 10(5)  | Manufacturer will ensure the tractability (Source of Calibration) of the calibration unit to NCCBM, NPL etc. Bidders should quote make of the quoted equipment alongwith authorized letter from manufacturer.   | Complied<br>(Pg. # 45 to 46)    | Complied<br>Certificates attached at<br>(Pg. # 54 to 57) |
| Clause 10(6)  | Before placing the orders, supplier should offer us factory visit to ensure the capability of supplier.   | Agreed<br>(Pg. # 25)            | Agreed<br>(Pg. # 21)                                     |
| Clause 10(7)  | Bidders should provide copies of original Memorandum and Articles of Association, defining the constitution or legal status, place or registration and place of business of the company.  | Complied<br>(Pg. # 46 to 49)    | Complied<br>(Pg. # 45 to 52)                             |
| Clause 10(8)  | Bidders should provide details of service centre and information on service support facilities that would be provided after the warranty period. Manufacturer should have trained and qualified customer support staff with ample experience in the required field. | Complied<br>(Pg. # 38 to 44)    | Complied<br>(Pg. # 35 to 36)                             |
| Clause 10(9)  | Offer should be submitted with Original Technical Literature by bidder.   | Complied<br>(Pg. # 7 & 9)       | Complied<br>(Pg. # 9 & 17)                               |
| Clause 10(10) | Warranty period should be two years from the date of installation.  | Complied<br>(Pg. # 04)          | Complied<br>(Pg. # 08)                                   |
|               | <b>STATUS</b>   | <b>RESPONSIVE</b>               | <b>RESPONSIVE</b>  |

**RECOMMENDATION:**

On the basis of the above, the Committee found both the bidders as RESPONSIVE, therefore the Committee recommends for cost opening of both the bidders.

  
(Vijay Kumar)


  
(Anupam Rawat)

  
(R. P. Tiwari)

  
[Manisha Yadav (R&C Core  
Committee Member)]

  
[Assistant Registrar (Accounts-I)]

  
[Assistant Registrar (Admin-III)]

  
[Dean (R&C)]



### TECHNICAL COMPLIANCE STATEMENT

Tender #: OT-09/PO/CED/Soil Static Cyclic Triaxial/2020-21 dated 20.11.2020  
For : Procurement of Soil Static Cyclic Triaxial  
Date & Time of Opening of Bid: 18.01.2021 at 1530 Hrs.

| Sl. | Item Details  | Qty. | M/s AIMIL Ltd.<br>New Delhi | M/s Hydraulic and<br>Engineering<br>Instrument New Delhi |
|-----|---|------|-----------------------------|--|
| 1.  | <p><b>Soil Static Cyclic Triaxial Testing System 10kN/10Hz</b></p> <p>1. It should have a computer-controlled servo-hydraulic system, design to perform static as well as cyclic loading stage of triaxial test. The data acquisition &amp; control system should be provide to perform with the same which is used for controlling hydraulic actuator together with a hydraulic power pack for applying dynamic pressure to perform close loop vertical load and displacement, to measure load, displacement and also pore water pressure. Pressure volume controller system should be control cell pressure and back pressure of system.</p> <p>2. <b>Features of Servo-hydraulic dynamic (cyclic) triaxial Apparatus:</b></p> <ul style="list-style-type: none"><li>• PID vertical load/ displacement closed loop loading. The system should manage three loop axis.</li><li>• Vertical load/displacement: up to 10kN / <math>\pm 25</math>mm</li><li>• Cell pressure up to 1000 kPa</li><li>• Back pressure up to 1000 kPa</li><li>• Online Monitoring with measurement through graph</li><li>• Suitable for Specimen's size upto 100mm</li></ul> <p><b>Technical Specification:</b></p> <ul style="list-style-type: none"><li>• Maximum frequency: 0.01 Hz to 10Hz</li><li>• Maximum Dynamic Load: 10kN</li><li>• Waveform: Sine, Triangular, Square</li><li>• No. of control points: 1 kHz</li><li>• Control: Servo hydraulic</li><li>• Back pressure controller: 1000 kPa</li><li>• Cell pressure controller: 1000 kPa</li><li>• Triaxial load frame: 100 kN</li><li>• Transducers: Loadcell (type submersible)- up to 10 kN Displacement- 50mm Pore Pressure 2 mpa</li></ul> <p>3. <b>Technical Specification of Load Frame:</b></p> <ul style="list-style-type: none"><li>• Capacity: 100kN</li><li>• Max. Horizontal Clearance: 364mm</li><li>• Max. Vertical Clearance: 910mm</li><li>• Specimen's Size up to 100</li></ul> <p>4. <b>Hydraulic Power Pack Specifications:</b></p> <ul style="list-style-type: none"><li>• Max. Working pressure: 300 bars or better</li><li>• Oil tank delivery: 10-70 LPM</li></ul> | 01   | 1/2<br><br>Yes              | 2/2<br><br>Yes   |

*Vijay Kumar*  
11/2/21  
[Vijay Kumar]

*Anupam*  
[Anupam Rawat]

*R. P. Tiwari*  
11/2/2021  
[R. P. Tiwari]





|   |  |         |
|---|--|---------|
| <ul style="list-style-type: none"><li>Oil Tank delivery: 100-500 ltrs</li><li>Hydraulic ports for connection of test frames</li><li>Oil flow control via servo/proportional valve</li><li>Oil water cooling system with forced ventilation</li><li>Operating temperature range for servo valve- 29°C to 135°C</li></ul> <p><b>Burst pressure: 250% max. supply pressure</b></p> <ul style="list-style-type: none"><li>Vibration: 30g, 3axes or better</li><li>Power Supply : 220VAC, 3 phase</li></ul> <p><b>5. Actuator Specifications:</b><br/>Double acting hydraulic actuators have digitally controlled and include an external LVDT displacement transducer to control the position and the displacement of the position during the test.</p> <ul style="list-style-type: none"><li>Dynamic loading capacity : up to 10kN</li><li>Dynamic vertical displacement : <math>\pm 25</math>mm</li><li>Nominal Operating Frequency : up to 10Hz</li></ul> <p><b>6. Triaxial Cell Details:</b><br/>Triaxial Cell of size 38mm, 50mm and 100mm dia have suitable for both static and dynamic test (compression and extension), Seal Friction less cell with submersible load cell is connected to transfer bar, Sensor connectivity from bottom of cell like pore pressure, cell pressure etc.<br/>Specimen's size range from 38mm dia to 100mm dia. Should be supplied along with standard Accessories. Must be supplied along with the essential accessories as following:</p> <ul style="list-style-type: none"><li>De-airing apparatus should be supply along with system</li><li>Vacuum Pump should be supply along with system</li></ul> <p><b>7. Transducer Specifications:</b><br/>Submersible load cell available in various ranges such as 2kN, 5kN, 10kN or better as per ASTM standard.<br/>Displacement transducer <math>\pm 25</math>mm.<br/>Pore Pressure transducer 2Mpa</p> <p><b>8. Data Acquisition &amp; Control system Details:</b><br/>The unit manages the three-closed loop axis (vertical load/displacement, cell and back pressure) with a control loop rate of 10 kHz. It Should provide the automatic control of the system and dives the servo-valve units of the three axis and two on/off valves, one connected to the drainage line and one connected to the air main supply of the triaxial cell</p> <p><b>9. Software Details:</b><br/>Multitasking, User-friendly window-based software pre-installed on the computer should be provide with the system. The software should be provided controls the following utilities and stages of a static &amp; cyclic triaxial test:</p> <ul style="list-style-type: none"><li>Specimen in put parameter</li><li>Type of control and it range</li></ul> |  | Yes Yes |
|---|--|---------|

Vijay Kumar  
11/2/21  
[Vijay Kumar]

Anupam Rawat  
[Anupam Rawat]

R. P. Tiwari  
11/2/2021  
[R. P. Tiwari]





|   |  |     |     |
|---|--|-----|-----|
| <p><b>C. Static Triaxial Testing:</b><br/>The analysis and reporting of following test should be perform on</p> <ul style="list-style-type: none"><li>• Unconsolidated Undrained Triaxial Test</li><li>• Consolidated Undrained Triaxial Test</li><li>• Consolidated drained test</li></ul> <p><b>D. Cyclic Triaxial Testing:</b><br/>This test should have the following features</p> <ul style="list-style-type: none"><li>• Dynamic cyclic loading tests at required frequency</li><li>• Provided sinusoidal cyclic control of axial displacement or axial force.</li><li>• Plotting saved results gives cyclic stress paths based on average cross-sectional area i.e. the area of the volumetrically equipment right cylinder</li><li>• A complete cycle of data saved every N cycle where the value of N is defined by the user.</li></ul> <p><b>10. Laptop/Desktop and coloured printer with latest configuration.</b><br/>Standards: As per IS: 2720 (Part 12), ASTM D 5311/ASTM D 3999</p> |  | Yes | Yes |
|---|--|-----|-----|

**Recommendation:**

On the basis of the above Comparative Statement, the Committee found 02 n/No. of bidders  $\frac{1}{2}$  as Technically Qualified for the items as mentioned against each. Therefore, the Committee recommends the commercial evaluation of  $\frac{1}{2}$  the technical qualified bidders.

*Vijay Kumar*  
[Vijay Kumar] 11/2/21

*Anup*  
[Anupam Rawat]

*R. P. Tiwari*  
[R. P. Tiwari] 11/2/2021