

# **TENDER DOCUMENT**

## **SUPPLY OF**

<b>Sr. No.</b>	<b>Name of Equipment / Instrument</b>	<b>Qty.</b>
1	Journal Bearing Test Rig with Data Acquisition System (CIRCULAR & NON-CIRCULAR PROFILES)	1 set
2	Potentiostat with necessary accessories	1 set
3	Micro Hardness Tester with necessary accessories	1 set



**DEPARTMENT OF MECHANICAL ENGINEERING  
S. V. NATIONAL INSTITUTE OF TECHNOLOGY  
SURAT - 395007, GUJARAT  
(Year – 2017-18)**

## SARDAR VALLABHBHAI NATIONAL INSTITUTE OF TECHNOLOGY, SURAT

### TENDER DOCUMENT FOR JOURNAL BEARING TEST RIG WITH DATA ACQUISITION SYSTEM WITH SPECIFICATIONS AS PER TECHNICAL SPECIFICATION SHEET AT MED, SVNIT, SURAT

S. No.	Name of Equipment / Instrument	Ref. No.	Qty.
1	Journal Bearing Test Rig with Data Acquisition System (CIRCULAR & NON-CIRCULAR PROFILES)	MED/ CAD Lab/Annual Plan/2092/2017-18	1 set

#### SECTION I: PREAMBLE

- The Sardar Vallabhbhai National Institute of Technology, Ichchhanath, Surat (SVNIT, Surat) invites sealed bids from the experience & competent supplier for **Journal Bearing Test Rig with Data Acquisition System** with Specifications as per Technical Specification Sheet at MED, SVNIT, Surat.
- Eligible bidders should provide items as per technical specification and services expectations and restore functionality as defined in “**Schedule of Technical Requirements**” in this tender; at the terms and conditions specified in the section “**General Terms & Conditions**”; provided the bidder satisfies the pre-qualification requirements as listed out in “**Prequalification Requirements of the Bidder**” in the tender.
- The entire tender document comprises of various sections as listed below:
  1. Preamble (this page)
  2. Schedule of Tender
  3. Tender Form
  4. Prequalification Requirements of the Bidder
  5. Technical Requirements Sheet
  6. General Terms & Conditions
  7. Declaration
  8. Summary Sheet
- A complete set of bidding documents must be downloaded from the institute web-site <http://www.svnit.ac.in> or <http://www.svnit.edu.in>. Non-refundable tender fee as specified in the bid document by way of demand draft have to be remitted with the bid in favor of **Director, SVNIT MHRD Fund**, payable at Surat with tender documents. Without the tender fees being remitted, the tender will not be considered.
- All bids must be accompanied by a **bid security (EMD)** as specified in the bid document and must be delivered to the above office latest by the date and time indicated.
- Bids will be opened in the presence of Bidders' representatives who may choose to attend on the specified date and time.
- In the event of the date specified for the bid receipt and opening, being declared as a closed holiday for SVNIT, the due date for submission of bids and opening of bids will be the following working day at the appointed times.
- **The bid from the bidder who was found in fraud activity with SVNIT or on the name of SVNIT will not be allowed for bidding. The bid from such bidder will not be accepted and will be straight away rejected. Also the bid submitted in consortium with such bidder will be rejected and if such information is found later then the order issued will be terminated immediately without any notice.**

## SECTION II: SCHEDULE OF TENDER

1.	Last date for submission of Tender at SVNIT	<b>21/02/2018, upto 5:00 p.m.</b>
2.	Date of Opening of Tender of Pre-qualification requirements	<b>23/02/2018 at 3:00 p.m.</b>
3.	Date of opening of Techno-commercial Offer	<b>23/02/2018 at 3:00 p.m.</b>
4.	Place of opening of bids	Office of Head, Mechanical Engineering Department, SVNIT, Surat.
5.	Address for communication	Director, S V National Institute of Technology, Ichchhanath, Surat – 395007
6.	Tender fee to be remitted with tender by only Demand Draft drawn in favor of <b>“Director, SVNIT MHRD Fund” Payable at Surat</b> .	<b>Rs. 550/- (Five Hundred &amp; Fifty only)</b> DD No.: _____ & Date: _____ Name of Bank: _____ Branch : _____
7.	EMD to be remitted with tender by only Demand Draft drawn in favor of <b>“Director, SVNIT MHRD Fund” Payable at Surat</b> .	<b>Rs. 45,000/- (Forty-Five Thousand only)</b> DD No.: _____ & Date: _____ Name of Bank: _____ Branch : _____

Note:

- **Demand Draft of EMD and Tender Fee must be separate otherwise tender will be rejected.**
- Tender offer must be sent by **Registered Post A.D. / Speed Post / Hand delivery** only during office hours.
- **Price in Indian Rupees at F.O.R SVNIT, Surat.**

**SECTION III: TENDER FORM**

FROM: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

To,  
The Director,  
SVNIT, Surat

**Sub.: Tender for Journal Bearing Test Rig with Data Acquisition System with Specifications as per Technical Specification Sheet at MED, SVNIT, Surat.**

Sir,

With reference to above, we submit the following particulars of our Firm/Agency.

1. Name of the firm & address with direct :  
phone numbers
  
2. Name of the proprietor/chief of the firm :
3. Registration number & date :
4. Date of Establishment :
5. Present strength of the firm :
  - Any Certification Standards :
  - No. of Major Clients with execution of :  
work orders involving similar scope and  
magnitude of work
  - No. of sites handled :
6. Annual turnover in Rs. Lacs :  
(only in providing similar services)

**AUTHORISED SIGNATURE WITH STAMP**

## **SECTION IV: PRE-QUALIFICATION REQUIREMENTS OF THE BIDDER**

Following are the specific pre-qualification requirements which should be satisfied by the bidder (henceforth referred to as the “bidder”) for being primarily considered for bidding for Journal Bearing Test Rig with Data Acquisition System with Specifications as per Technical Specification Sheet at MED, SVNIT, Surat at the terms & conditions, mentioned in the appropriate section in this document:

Sr. No.	Details	Documentary evidence required to be attached	Compliance Yes/No	Corresponding document as proof in our prequalification requirements document set on page no.
1	The bidder must be OEM or Authorized dealer/ Authorized agent	For Authorized dealer/ authorized agent, copy of authentic authorization from OEM should be attached with this tender reference		
2	Users list and the certificates of satisfactory operation of the equipment/instrument supplied by Bidder to at least three well known Organizations preferably within Gujarat state during the last three years	Copy of Purchase Order along with satisfactory completion certificate		
3	The Bidder should have ISO 9001-2000/ ISO 9002/ ISO 14001for OEM Manufacturer for offered items.	Copy of Certificate		
4	The Bidder shall not be under a Declaration of Ineligibility for corrupt or fraudulent practices or blacklisted with any of the Central / State Government agencies / Public Sector	Declaration in this regard by the authorized signatory of the Bidder		
5	Technical specification as per requirement	Filled Technical requirement sheet attached at section: V		

If complying all of the above conditions and appearing to be qualifying to bid, the prospective bidder shall provide appropriate documents stating compliance of the above, put them in a separate envelope along with a compliance statement stating compliance to all the above requirements, superscript it with “Prequalification Requirements of the Bidder” and enclose it in the main envelope along with the commercial bid (which should be supplied in other separate envelope).

Place:

Signature of the Bidder:

Date:

Name & Address of the Bidder with office stamp

## **SECTION V: TECHNICAL REQUIREMENTS SHEET**

### **Technical Specification Sheet for Journal Bearing Test Rig with Data Acquisition System (Circular & Non-Circular Profiles)**

**(To measure the temperature and pressure of circulating oil film in circular and non-circular journal bearing)**

<b>Description</b>	<b>Working range</b>
Pneumatic loading	0.5 kN to 5.0 kN
Variable Rotational speed	6000 rpm
Shaft Diameter	100 mm fixed (provision for 75 to 150 mm shaft dia.) L/D ratio of 0.5 to 2.

- 1.) Oil film temperature : Ambient to 200° C
- 2.) Resolution of all measurement should be  $\pm 1\%$ .
- 3.) Test Rig should be equipped with oil Re-circulation system.
- 4.) The machine should be equipped with Digital oil flow meter to measure the oil in circulation.
- 5.) Oil flow meter : 0.2 to 2 L / minute.
- 6.) It should be capable of measuring oil film temperature (ambient to 200 °C) and pressure (ambient to 50 bar) in central plane of the bearing  $[0^0-360^0]$  using suitable sensors at 12 different places.
- 7.) The mechanism for changing the test bearing should be simple and easy to operate.
- 8.) Provision for measuring frictional torque.
- 9.) Provision for estimating fluid film thickness using non-contact displacement sensor.
- 10.) The mechanism for changing the test bearing should be simple and easy to operate.
- 11.) Provision for measuring dynamic characteristics of proposed bearings.
- 12.) Software to set or measure or both (as applicable) online oil film temperatures, pressures, frictional torque and estimated film thickness as well as load and speed during operation should have following points:
  - Measurements with manually defined parameters or by defining a 'Standard Operating Procedure' Compatible with latest Windows based operating system.

- Trend plots to allow plotting any one measured parameter from selected records versus the second parameter.
  - Facility for overlaying several plots with facility to export plots.
  - Results should be exported to word processing packages or spreadsheets using a template or cut and paste.
  - Access to all measured data including correlation functions, fitted data points, residuals and all experimental parameters should be possible. The same might be stored for subsequent examination.
- 13.) For data acquisition, the system should be offered with latest version of branded windows operating system based PC compatible with above software along with laser printer and UPS for computer.
- 14.) The Test Rig should be provided with at least **FOUR** samples each of circular and non-circular journal bearing of L/D ratio of 1 of brass and the demonstration on the same should be given at the time of installation.
- 15.) Installation/Demonstration/Training to be provided by the supplier at the institute free of cost.
- 16.) Warranty period of the test rig should be at least 1 year and another 2 years total 4-nos. service visit on free of cost basis in which 2 visits in 2<sup>nd</sup> year and 2 visits in 3<sup>rd</sup> year after warranty period.
- 17.) The test rig should be supplied within 26 weeks after placing the purchase order.

**Note:**

- **Please attach filled sheet with a prequalification requirements documents within the sealed Envelope super-scribed as “Prequalification Requirements of the Bidder”**

## SARDAR VALLABHBHAI NATIONAL INSTITUTE OF TECHNOLOGY, SURAT

### TENDER DOCUMENT FOR POTENTIOSTATE WITH NECESSARY ACCESSORIES WITH SPECIFICATIONS AS PER TECHNICAL SPECIFICATION SHEET AT MED, SVNIT, SURAT

S. No.	Name of Equipment / Instrument	Ref. No.	Qty.
2	Potentiostat With Necessary Accessories	MED/Metallurgy Lab/Annual Plan/2875/2017-18	1 set

#### SECTION I: PREAMBLE

- The Sardar Vallabhbhai National Institute of Technology, Ichchhanath, Surat (SVNIT, Surat) invites sealed bids from the experience & competent supplier for **Potentiostat With Necessary Accessories** with Specifications as per Technical Specification Sheet at MED, SVNIT, Surat.
- Eligible bidders should provide items as per technical specification and services expectations and restore functionality as defined in “**Schedule of Technical Requirements**” in this tender; at the terms and conditions specified in the section “**General Terms & Conditions**”; provided the bidder satisfies the pre-qualification requirements as listed out in “**Prequalification Requirements of the Bidder**” in the tender.
- The entire tender document comprises of various sections as listed below:
  1. Preamble (this page)
  2. Schedule of Tender
  3. Tender Form
  4. Prequalification Requirements of the Bidder
  5. Technical Requirements Sheet
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  8. Summary Sheet
- A complete set of bidding documents must be downloaded from the institute web-site <http://www.svnit.ac.in> or <http://www.svnit.edu.in>. Non-refundable tender fee as specified in the bid document by way of demand draft have to be remitted with the bid in favor of **Director, SVNIT MHRD Fund**, payable at Surat with tender documents. Without the tender fees being remitted, the tender will not be considered.
- All bids must be accompanied by a **bid security (EMD)** as specified in the bid document and must be delivered to the above office latest by the date and time indicated.
- Bids will be opened in the presence of Bidders' representatives who may choose to attend on the specified date and time.
- In the event of the date specified for the bid receipt and opening, being declared as a closed holiday for SVNIT, the due date for submission of bids and opening of bids will be the following working day at the appointed times.
- **The bid from the bidder who was found in fraud activity with SVNIT or on the name of SVNIT will not be allowed for bidding. The bid from such bidder will not be accepted and will be straight away rejected. Also the bid submitted in consortium with such bidder will be rejected and if such information is found later then the order issued will be terminated immediately without any notice.**



## SECTION II: SCHEDULE OF TENDER

1.	Last date for submission of Tender at SVNIT	<b>21/02/2018 upto 5:00 p.m.</b>
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7.	EMD to be remitted with tender by only Demand Draft drawn in favor of <b>“Director, SVNIT MHRD Fund” Payable at Surat</b> .	<b>Rs. 20,000/- (Twenty Thousand only)</b> DD No.: _____ & Date: _____ Name of Bank: _____ Branch : _____

Note:

- **Demand Draft of EMD and Tender Fee must be separate otherwise tender will be rejected.**
- Tender offer must be sent by **Registered Post A.D. / Speed Post / Hand delivery** only during office hours.
- **Price in Indian Rupees at F.O.R SVNIT, Surat.**

**SECTION III: TENDER FORM**

FROM: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

To,  
The Director,  
SVNIT, Surat

**Sub.: Tender for Potentiostat with Necessary Accessories with Specifications as per Technical Specification Sheet at MED, SVNIT, Surat.**

Sir,

With reference to above, we submit the following particulars of our Firm/Agency.

1. Name of the firm & address with direct :  
phone numbers
  
2. Name of the proprietor/chief of the firm :
3. Registration number & date :
4. Date of Establishment :
5. Present strength of the firm :
  - Any Certification Standards :
  - No. of Major Clients with execution of :  
work orders involving similar scope and  
magnitude of work
  - No. of sites handled :
6. Annual turnover in Rs. Lacs :  
(only in providing similar services)

**AUTHORISED SIGNATURE WITH STAMP**

## **SECTION IV: PRE-QUALIFICATION REQUIREMENTS OF THE BIDDER**

Following are the specific pre-qualification requirements which should be satisfied by the bidder (henceforth referred to as the “bidder”) for being primarily considered for bidding for Potentiostate With Necessary Accessories with Specifications as per Technical Specification Sheet at MED, SVNIT, Surat at the terms & conditions, mentioned in the appropriate section in this document:

Sr. No.	Details	Documentary evidence required to be attached	Compliance Yes/No	Corresponding document as proof in our prequalification requirements document set on page no.
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2	Users list and the certificates of satisfactory operation of the equipment/instrument supplied by Bidder to at least three well known Organizations preferably within Gujarat state during the last three years	Copy of Purchase Order along with satisfactory completion certificate		
3	The Bidder should have ISO 9001-2000/ ISO 9002/ ISO 14001for OEM Manufacturer for offered items.	Copy of Certificate		
4	The Bidder shall not be under a Declaration of Ineligibility for corrupt or fraudulent practices or blacklisted with any of the Central / State Government agencies / Public Sector	Declaration in this regard by the authorized signatory of the Bidder		
5	Technical specification as per requirement	Filled Technical requirement sheet attached at section: V		

If complying all of the above conditions and appearing to be qualifying to bid, the prospective bidder shall provide appropriate documents stating compliance of the above, put them in a separate envelope along with a compliance statement stating compliance to all the above requirements, superscript it with “Prequalification Requirements of the Bidder” and enclose it in the main envelope along with the commercial bid (which should be supplied in other separate envelope).

Place:

Signature of the Bidder:

Date:

Name & Address of the Bidder with office stamp

## SECTION V: TECHNICAL REQUIREMENTS SHEET

**Technical Specification Sheet for POTENTIOSTAT with necessary accessories**  
**(To measure Corrosion resistance of Metals, Composites, Ceramics and Advanced Material)**

### DETAILED TECHNICAL SPECIFICATIONS FOR Potentiostat with necessary accessories

Sr. No.	Specification
<b>A</b>	<b><u>Detailed technical Specification for Electrochemical Workstation:</u></b>
1.	<b>Electrode Connections:</b> 2-or 3- or 4 terminals plus ground
2.	<b>Minimum Compliance Voltage:</b> ±30 V at ±1 A(Minimum) or better
3.	<b>Minimum Output Current:</b> ±1 A at ±30 V(Minimum) or more
4.	<b>Minimum Output Voltage Range:</b> ±6V, ±30 V or better
5.	<b>Current Ranges Smallest Current Range:</b> ±4 nA to 1 A (in 10 or more ranges)
6.	<b>Minimum Applied Potential Resolution:</b> 305 nV for ±10 mV signal or better
7.	<b>Minimum Measured Voltage Resolution:</b> 5 μV or better
8.	<b>Accuracy of Applied Current:</b> ±0.2% of reading or better
9.	<b>Measured Current Resolution:</b> ≤ 35 fA or better
10.	<b>Potentiostat Rise/Fall Time:</b> 56 ns or lower
11.	<b>Gain Bandwidth Range of Amplifier:</b> 7 MHz or better
12.	<b>Bandwidth of Electrometer:</b> >10 MHz (Minimum)

13.	<b>Input Impedance of Electrometer:</b> 1x10 <sup>13</sup> ohm (Minimum)
14.	<b>IR Compensation:</b> Yes
15.	<b>Input Bias Current :</b> ≤5 pA at less than 25°C (typical)
16.	<b>External Voltage Input:</b> Yes
17.	<b>Interface to PC:</b> USB
<b>B</b>	<b><u>Technical Specification for EIS :</u></b>
	<ul style="list-style-type: none"> <li>• Potentiostat/Galvanostatic with In Built hardware with Frequency Range 10 μHz to 7 MHz or better with Minimum Voltage Amplitude of 0.1mV RMS</li> <li>• It should be possible to perform EIS measurements over entire frequency range from 10 μHz to 7 MHz upto 1A currents (minimum). <ul style="list-style-type: none"> <li>○ Signal generator frequency range should be 10 μHz to 7MHz or higher for future upgradation.</li> <li>○ Signal types: 1 sine, 5 sine, 15 sine; input channels E and I from the potentiostat/galvanostat or X and Y external signals.</li> </ul> </li> </ul> <p><b>Data Presentation:</b></p> <ul style="list-style-type: none"> <li>○ Nyquist, Bode, Admittance, Dielectric, Mott- Schottky etc.</li> </ul> <p><b>Data Analysis:</b></p> <ul style="list-style-type: none"> <li>○ Fit and Simulation, Find circle, Element subtraction etc.</li> </ul>
<b>C</b>	<b><u>Electrochemical Software:</u></b>  Windows compatible software should be included as an essential part of the item and it should have <b>Facility to display plots simultaneously and comparison of the previous experiments with experiments in progress should be possible.</b>  The software should include following basic electrochemical measurements:

	<ul style="list-style-type: none"> <li>• Voltametry (linear scan, cyclic and staircase in single and multi-cycles, Square Wave, Differential Pulse, Normal Pulse, Reverse Normal Pulse, Multi-Vertex)</li> </ul>
	<ul style="list-style-type: none"> <li>• Chronoamperometry, Chronopotentiometry, Chronocoulometry</li> </ul>
	<ul style="list-style-type: none"> <li>• Polarization (Linear, cyclic and split)</li> </ul>
	<ul style="list-style-type: none"> <li>• Potentiostatic, Potentiodynamic, Galvanostatic, Galvanodynamic</li> </ul>
	<ul style="list-style-type: none"> <li>• Electrochemical Impedance Spectroscopy (EIS) (Potentiostatic, Galvanostatic)</li> </ul>
	<ul style="list-style-type: none"> <li>• Tafel Electrochemical Noise, Mott – Schottky, Dynamic iR</li> </ul>
	<ul style="list-style-type: none"> <li>• Charge-Discharge, Cyclic Charge/Discharge (CCD), Current CCDPL, Resistance and power CCD</li> </ul>
	<ul style="list-style-type: none"> <li>• Intermittent Titration Technique (Galvanostatic, GITT, Potentiostatic, PITT)</li> </ul>
	<ul style="list-style-type: none"> <li>• Galvanic Corrosion and Zero Resistance Ammeter (ZRA)</li> </ul>
	<ul style="list-style-type: none"> <li>• Constant Current Constant Voltage Control (CC-CV)</li> </ul>
	Also, other standard modes like Constant Current, Potential etc. should be included.
	<p><b>Future Upgradation of software:</b></p> <p>A Comprehensive software to be provided with the system with lifetime license fully 32-bit/ 64 bit Windows based platform. Software should be capable of remote interface for RDE &amp; RRDE Measurements. Preferably with USB or Ethernet controlled system &amp; all the future upgradation of the software should be provided free of cost.</p>
<b>D</b>	<p><b><u>Electrochemistry Cell:</u></b></p> <p>It should consist of the following:</p> <ul style="list-style-type: none"> <li>• Flat Corrosion Cell - 250-mL sample volume(3 Sets)</li> <li>• Reference Electrode – Ag/AgCl(3 Sets)</li> <li>• Reference Electrode Filling Solution – sat AgCl/ sat KCl (3 Sets)</li> <li>• Counter Electrode – Platinum (3 Sets)</li> <li>• Five Sets of sample holder with 1cmx1cm area exposure</li> </ul>
<b>E</b>	<p><b><u>Data Acquisition System:</u></b></p> <p>A compatible branded Desktop like Dell or equivalent for system control &amp; data</p>

	<p>acquisition system should be offered along with the workstation.</p> <p><b>It should have following minimum specifications.</b></p> <p>Intel-i3 processor or equivalent, RAM- 4GB, HDD-1TB    18.5" LED Monitor, Mouse, Keyboard along with OS: Windows 10</p> <p>Branded color printer for A4 size paper printing</p> <p>Branded 1KVA UPS of minimum 20 minutes power backup</p>
<b>F</b>	The supplier must have local service center and technical expertise (including factory trained experienced service engineers & application specialists) in India for after sales service and application support.

- The vendor should submit a point-wise confirmation to be specifications in tabular format in their offer and any deviation has to be specified clearly in the offer. The vendor should also fill and submit the check list of compliance in the attached format (**Refer Annexure-A**).

**ANNEXURE A**

**DETAILED TECHNICAL SPECIFICATIONS FOR Potentiostat with necessary accessories**

SR. No.	Specification	Vendor Compliance	
		Whether Vendor met the Specifications Yes / No	Specification of Vendor
A	<b><u>Detailed technical Specification for Electrochemical Workstation:</u></b>		
1.	<b>Electrode Connections:</b> 2-or 3- or 4 terminals plus ground		
2.	<b>Minimum Compliance Voltage:</b> ±30 V at ±1 A OR BETTER		
3.	<b>Minimum Output Current:</b> ±1 A at ±30 V or more		
4.	<b>Minimum Output Voltage Range:</b> ±6V, ±30 V or better		
5.	<b>Current Ranges Smallest Current Range:</b> ±4 nA to 1 A (in 10 or more ranges)		
6.	<b>Minimum Applied Potential Resolution:</b> 305 nV for ±10 mV signal or better		
7.	<b>Minimum Measured Voltage Resolution:</b> 5 µV or better		
8.	<b>Accuracy of Applied Current:</b> ±0.2% of reading or better		
9.	<b>Measured Current Resolution:</b> ≤ 35 fA or better		
10.	<b>Potentiostat Rise/Fall Time:</b> 56 ns or lower		
11.	<b>Gain Bandwidth Range of Amplifier:</b> 7 MHz or better		
12.	<b>Bandwidth of Electrometer:</b> >10 MHz or higher		
13.	<b>Input Impedance of Electrometer:</b> 1x10 <sup>13</sup> ohm or higher		



14.	<b>IR Compensation:</b> Yes		
15.	<b>Input Bias Current :</b> ≤5 pA at less than 25°C (typical)		
16.	<b>External Voltage Input:</b> Yes		
17.	<b>Interface to PC:</b> USB		
<b>B</b>	<p><b><u>Technical Specification for EIS :</u></b></p> <p>Potentiostat/Galvanostatic with In Built hardware with Frequency Range 10 μHz to 7 MHz or better with Minimum Voltage Amplitude of 0.1mV RMS</p> <p>It should be possible to perform EIS measurements over entire frequency range from 10 μHz to 7 MHz upto 1A currents (minimum).</p> <p>Signal generator frequency range should be 10 μHz to 7MHz or higher for future upgradation.</p> <p>Signal types: 1 sine, 5 sine, 15 sine; input channels E and I from the potentiostat/galvanostat or X and Y external signals.</p> <p><b>Data Presentation:</b></p> <p>Nyquist, Bode, Admittance, Dielectric, Mott- Schottky etc.</p> <p><b>Data Analysis:</b></p> <p>Fit and Simulation, Find circle, Element subtraction etc.</p>		

C	<p><b><u>Electrochemical Software:</u></b></p> <p>Windows compatible software should be included as an essential part of the item and it should have <b>Facility to display plots simultaneously and comparison of the previous experiments with experiments in progress should be possible.</b></p> <p>The software should include following basic electrochemical measurements:</p>		
	<ul style="list-style-type: none"> <li>• Voltametry (linear scan, cyclic and staircase in single and multi-cycles, Square Wave, Differential Pulse, Normal Pulse, Reverse Normal Pulse, Multi-Vertex)</li> </ul>		
	<ul style="list-style-type: none"> <li>• Chronoamperometry, Chronopotentiometry, Chronocoulometry</li> </ul>		
	<ul style="list-style-type: none"> <li>• Polarization (Linear, cyclic and split)</li> </ul>		
	<ul style="list-style-type: none"> <li>• Potentiostatic, Potentiodynamic, Galvanostatic, Galvanodynamic</li> </ul>		
	<ul style="list-style-type: none"> <li>• Electrochemical Impedance Spectroscopy (EIS) (Potentiostatic, Galvanostatic)</li> </ul>		
	<ul style="list-style-type: none"> <li>• Tafel Electrochemical Noise, Mott – Schottky, Dynamic iR</li> </ul>		
	<ul style="list-style-type: none"> <li>• Charge-Discharge, Cyclic Charge/Discharge (CCD), Current CCDPL, Resistance and power CCD</li> </ul>		
	<ul style="list-style-type: none"> <li>• Intermittent Titration Technique (Galvano-static, GITT, Potentiostatic, PITT)</li> </ul>		
	<ul style="list-style-type: none"> <li>• Galvanic Corrosion and Zero Resistance Ammeter (ZRA)</li> </ul>		

	<ul style="list-style-type: none"> <li>• Constant Current Constant Voltage Control (CC-CV)</li> </ul>		
	Also, other standard modes like Constant Current, Potential etc. should be included.		
	<p><b>Future Upgradation of software:</b></p> <p>A Comprehensive software to be provided with the system with lifetime license fully 32-bit/ 64 bit Windows based platform. Software should be capable of remote interface for RDE &amp; RRDE Measurements. Preferably with USB or Ethernet controlled system. All the future upgradation of the software should be provided free of cost.</p>		
<b>D</b>	<p><b><u>Electrochemistry Cell:</u></b>It should consist of the following:</p> <ul style="list-style-type: none"> <li>• Flat Corrosion Cell - 250-mL sample volume (3 Sets)</li> <li>• Reference Electrode – Ag/AgCl(3 Sets)</li> <li>• Reference Electrode Filling Solution – sat AgCl/ sat KCl(3 Sets)</li> <li>• Counter Electrode – Platinum(3 Sets)</li> <li>• Five sets of sample holder with 1cmx1cm area exposure</li> </ul>		
<b>E</b>	<p><b><u>Data Acquisition System:</u></b></p> <p>A compatible branded Desktop like Dell or equivalent for system control &amp; data acquisition system should be offered along with the workstation.</p> <p>It should have following minimum specifications.</p> <p>Intel-i3 processor or equivalent, RAM- 4GB, HDD-1TB 18.5" LED Monitor, Mouse, Keyboard along with OS: Windows 10</p> <p>Branded color printer for A4 size paper printing</p> <p>Branded 1KVA UPS of minimum 20 minutes power backup</p>		

F	The supplier must have local service center and technical expertise (including factory trained experienced service engineers & application specialists) in India for after sales service and application support.		
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**Note:**

- **Please attach filled sheet with a prequalification requirements documents within the sealed Envelope superscribed as “Prequalification Requirements of the Bidder”**

## SARDAR VALLABHBHAI NATIONAL INSTITUTE OF TECHNOLOGY, SURAT

### TENDER DOCUMENT FOR MICRO HARDNESS TESTER WITH NECESSARY ACCESSORIES WITH SPECIFICATIONS AS PER TECHNICAL SPECIFICATION SHEET AT MED, SVNIT, SURAT

S. No.	Name of Equipment / Instrument	Ref. No.	Qty.
3	Micro Hardness Tester with necessary accessories	MED/ SIC Lab/Annual Plan/2200/2017-18	1 set

#### SECTION I: PREAMBLE

- The Sardar Vallabhbhai National Institute of Technology, Ichchhanath, Surat (SVNIT, Surat) invites sealed bids from the experience & competent supplier for **Micro Hardness Tester with necessary accessories** with Specifications as per Technical Specification Sheet at MED, SVNIT, Surat.
- Eligible bidders should provide items as per technical specification and services expectations and restore functionality as defined in “**Schedule of Technical Requirements**” in this tender; at the terms and conditions specified in the section “**General Terms & Conditions**”; provided the bidder satisfies the pre-qualification requirements as listed out in “**Prequalification Requirements of the Bidder**” in the tender.
- The entire tender document comprises of various sections as listed below:
  1. Preamble (this page)
  2. Schedule of Tender
  3. Tender Form
  4. Prequalification Requirements of the Bidder
  5. Technical Requirements Sheet
  6. General Terms & Conditions
  7. Declaration
  8. Summary Sheet
- A complete set of bidding documents must be downloaded from the institute web-site <http://www.svnit.ac.in> or <http://www.svnit.edu.in>. Non-refundable tender fee as specified in the bid document by way of demand draft have to be remitted with the bid in favor of **Director, SVNIT MHRD Fund**, payable at Surat with tender documents. Without the tender fees being remitted, the tender will not be considered.
- All bids must be accompanied by a **bid security (EMD)** as specified in the bid document and must be delivered to the above office latest by the date and time indicated.
- Bids will be opened in the presence of Bidders' representatives who may choose to attend on the specified date and time.
- In the event of the date specified for the bid receipt and opening, being declared as a closed holiday for SVNIT, the due date for submission of bids and opening of bids will be the following working day at the appointed times.
- **The bid from the bidder who was found in fraud activity with SVNIT or on the name of SVNIT will not be allowed for bidding. The bid from such bidder will not be accepted and will be straight away rejected. Also the bid submitted in consortium with such bidder will be rejected and if such information is found later then the order issued will be terminated immediately without any notice.**

## SECTION II: SCHEDULE OF TENDER

1.	Last date for submission of Tender at SVNIT	<b>21/02/2018, upto 5:00 p.m.</b>
2.	Date of Opening of Tender of Pre-qualification requirements	<b>23/02/2018 at 3:00 p.m.</b>
3.	Date of opening of Techno-commercial Offer	<b>23/02/2018 at 3:00 p.m.</b>
4.	Place of opening of bids	Office of Head, Mechanical Engineering Department, SVNIT, Surat.
5.	Address for communication	Director, S V National Institute of Technology, Ichchhanath, Surat – 395007
6.	Tender fee to be remitted with tender by only Demand Draft drawn in favor of <b>“Director, SVNIT MHRD Fund” Payable at Surat</b> .	<b>Rs. 550/- (Five Hundred &amp; Fifty only)</b> DD No.: _____ & Date: _____ Name of Bank: _____ Branch : _____
7.	EMD to be remitted with tender by only Demand Draft drawn in favor of <b>“Director, SVNIT MHRD Fund” Payable at Surat</b> .	<b>Rs. 20,000/- (Twenty Thousand only)</b> DD No.: _____ & Date: _____ Name of Bank: _____ Branch : _____

Note:

- **Demand Draft of EMD and Tender Fee must be separate otherwise tender will be rejected.**
- Tender offer must be sent by **Registered Post A.D. / Speed Post / Hand delivery** only during office hours.
- **Price in Indian Rupees at F.O.R SVNIT, Surat.**

**SECTION III: TENDER FORM**

FROM: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

To,  
The Director,  
SVNIT, Surat

**Sub.: Tender for Micro Hardness Tester with necessary accessories with Specifications as per Technical Specification Sheet at MED, SVNIT, Surat.**

Sir,

With reference to above, we submit the following particulars of our Firm/Agency.

1. Name of the firm & address with direct :  
phone numbers
  
2. Name of the proprietor/chief of the firm :
3. Registration number & date :
4. Date of Establishment :
5. Present strength of the firm :
  - Any Certification Standards :
  - No. of Major Clients with execution of :  
work orders involving similar scope and  
magnitude of work
  - No. of sites handled :
6. Annual turnover in Rs. Lacs :  
(only in providing similar services)

**AUTHORISED SIGNATURE WITH STAMP**

## **SECTION IV: PRE-QUALIFICATION REQUIREMENTS OF THE BIDDER**

Following are the specific pre-qualification requirements which should be satisfied by the bidder (henceforth referred to as the “bidder”) for being primarily considered for bidding for Micro Hardness Tester with necessary accessories with Specifications as per Technical Specification Sheet at MED, SVNIT, Surat at the terms & conditions, mentioned in the appropriate section in this document:

Sr. No.	Details	Documentary evidence required to be attached	Compliance Yes/No	Corresponding document as proof in our prequalification requirements document set on page no.
1	The bidder must be OEM or Authorized dealer/ Authorized agent	For Authorized dealer/ authorized agent, copy of authentic authorization from OEM should be attached with this tender reference		
2	Users list and the certificates of satisfactory operation of the equipment/instrument supplied by Bidder to at least three well known Organizations preferably within Gujarat state during the last three years	Copy of Purchase Order along with satisfactory completion certificate		
3	The Bidder should have ISO 9001-2000/ ISO 9002/ ISO 14001for OEM Manufacturer for offered items.	Copy of Certificate		
4	The Bidder shall not be under a Declaration of Ineligibility for corrupt or fraudulent practices or blacklisted with any of the Central / State Government agencies / Public Sector	Declaration in this regard by the authorized signatory of the Bidder		
5	Technical specification as per requirement	Filled Technical requirement sheet attached at section: V		

If complying all of the above conditions and appearing to be qualifying to bid, the prospective bidder shall provide appropriate documents stating compliance of the above, put them in a separate envelope along with a compliance statement stating compliance to all the above requirements, superscript it with “Prequalification Requirements of the Bidder” and enclose it in the main envelope along with the commercial bid (which should be supplied in other separate envelope).

Place:

Signature of the Bidder:

Date:

Name & Address of the Bidder with office stamp



## SECTION V: TECHNICAL REQUIREMENTS SHEET

### Technical Specification Sheet for MICROHARDNESS TESTER with necessary accessories

(To measure Microhardness of Metals, Composites, Ceramics and Advanced Material)

Technical specifications for Micro-hardness tester

Micro-hardness testing machine shall conform to the ASTM E-384 or equivalent international standard. The machine should comprise of following sub-systems:

Sr. No.	Item	Description
1	<b>Turret</b>	Turret should have SIX positions over 360 degree for holding at least Four objective lenses and Two indenters
2.	<b>Loading system</b>	
	Test load	1 gf – 2000 gf (1, 5, 10, 25, 50, 100, 200, 300, 500, 1000, 2000 gf) or more
	Test force accuracy	≤ 1 % ( for load : 200 gf to 1000 gf) ≤1.5 % ( for load : Upto 100 gf )
	<b>Test procedure</b>	<b>Automatic ( loading/dwelling/unloading)</b>  <b>Dwell time: 10 – 60 seconds ( adjustable)</b>  <b>Indenter approach velocity : 15 - 70 μm/s</b>
3	<b>Electronic microscope system</b>	
	<b>Eyepiece</b>	Digital eyepiece 10X/15X with built –in cross – wires.  Display Resolution 0.01 micron least count or better  Minimum measurement 260 micron at 400X or better
	<b>Objectives</b>	(i)10 X (ii) 40 X/ 50 X (iii) (ii) 80X/100X one No. Each
	<b>Light source</b>	LED illumination with Lambda Plate of 530 angstrom wavelength & oblique illumination with green filter

	<b>Measurement of indentation diagonal</b>	<ul style="list-style-type: none"> <li>• Measurement on the image projected on computer monitor, interfaced with the machine</li> <li>• Imaging camera : It must have: 1/2" Camera with minimum 2 megapixel camera adopter, Image grabber card,</li> <li>• Machine should have provision for manual measurement using cross wires in eyepiece with display on controller along with the provision for measurement on computer monitor.</li> <li>• Automatic reading of hardness and hardness graph plotting with motorized X-Y &amp; Z motion control and having state of art autofocussing is preferred</li> </ul>
4	<b>Specimen</b>	<ul style="list-style-type: none"> <li>• Maximum Height : 75 mm or higher</li> <li>• Maximum Weight : 1 kg or more</li> </ul>
5	<b>X-Y stage</b>	<p>Ceramic coated stage with dimension 150 x 150 mm.  Motorized movement of maximum 25 mm in X-Y plane and motorized controlled movement in Z direction</p> <p>Stage Movement Resolution 1 <math>\mu</math> or better</p>
6	<b>Computer</b>	<p>The computer should be of branded make and interfaced with machine controller for image acquisition, measurement of indent diagonals and calculation of hardness. Minimum configuration of the computer shall be : Intel Core i3 or higher processor, RAM : 4 GB (1X4 GB); Integrated 10/100/1000 Ethernet network interface on system board ; 18" inch Widescreen Flat Panel Display with LED backlights, 16X DVD <math>\pm</math> RW or higher DVD Drive, Image grabber card; USB Standard Keyboard and Optical 2-button USB mouse.</p> <p>Branded color printer for A4 size paper printing</p> <p>Branded 1KVA UPS of minimum 20 minutes power backup</p>
7	<b>Software</b>	<ul style="list-style-type: none"> <li>• Software for Vickers Hardness estimation by automatic or cursor clicking on the diagonal ends of an indentation image, on computer screen. automatic conversion to hardness value</li> <li>• Software offering dwell time countdown, loading, Unloading, intensity variation, turreting of objective and Indenter, (Operations can be performed either through computer or LCD panel)</li> </ul>

		<ul style="list-style-type: none"> <li>• Automatic conversion of hardness values to Rockwell, Rockwell Superficial, Brinell, Leeb as per ASTM E-140.</li> <li>• Software for fracture toughness measurements and Brittleness Index measurement</li> <li>• Grain Size measurement.</li> <li>• Porosity Measurement</li> <li>• Linear measurement, Angular Measurement, Area measurement.</li> <li>• Percentage phase analysis module.</li> <li>• Image database maintenance software.</li> <li>• Report generation in MS Excel format.</li> <li>• Calibration feature for Micron marking</li> <li>• N/Kg load unit display/ change</li> </ul>
8	<b>Power source</b>	230 V± 10 % AC, 50 Hz, single phase ( or appropriate adopter shall be provided if machine required power supply of different rating )
9	<b>Essential accessories and spares</b>	<ul style="list-style-type: none"> <li>• Certified standard test blocks of 2 no (Range – One High Hardness and One low hardness )</li> <li>• Fixture for odd shaped components - One no.</li> <li>• Holder for holding thin sheet - One no.</li> <li>• Flat edge holder - One no.</li> <li>• Level indicator - One no.</li> <li>• Certified Vickers indenter – 1 No</li> <li>• Certified Knoop indenter – 1 No</li> <li>• Lamp/other light source ( 2 No.s)</li> <li>• Fuses ( 2 No.s)</li> <li>• The supplier should also provide (i) a manual giving details of machine’s different parts, its operation and general troubleshooting and (ii) conversion table ( Hardcopy) between diagonal lengths and micro-hardness values for different test methods ( Vickers and Knoop ) and at different test loads.</li> <li>• Demonstrate the performance of the machine or certified standard test blocks. Repeatability requirements as per ASTM E 384/equivalent international standard shall be complied.</li> </ul>
10	<b>Installation and commissioning</b>	<ul style="list-style-type: none"> <li>• The scope of supply includes (i) installation and commissioning of machine at SVNIT Surat and (ii) training to SVNIT staff for operation of the machine</li> </ul>

- The vendor should submit a point-wise confirmation to be specifications in tabular format in their offer and any deviation has to be specified clearly in the offer. The vendor should also fill and submit the check list of compliance in the attached format ( **Refer Annexure-A**).

## Check list of Compliance

S.No	Item	Description	Compliance/Remarks/Deviation
<b>Micro-hardness testing machine shall conform to the ASTM E384 or equivalent international standards</b>			
1	<b>Turret</b>	Turret should have SIX positions over 360 degree for holding at least Four objective lenses and Two indenters	
2	<b>Loading systems:</b>		
	Test load	Standard test load at 1 gf – 2000 gf (1, 5, 10, 25, 50, 100, 200, 300, 500, 1000, 2000 gf) or more	
	Indenters	Certified Vickers and Knoop Indenter-1No.each	
	Test force accuracy	≤ 1 % ( for load : 200 gf to 1000 gf) ≤1.5 % ( for load : Upto 100 gf )	
	Test procedure	Automatic ( loading/dwelling/ unloading)  Dwell time: 10 – 60 seconds ( adjustable)  Indenter approach velocity : 15 - 70 μm/s	
3	<b>Electronic microscope system</b>		
	Eyepiece	Digital eyepiece 10X/15X with built –in cross wires for manual measurement  Display resolution 0.01 micron or better  Minimum measurement 260 micron at 400X	
	Objectives	(i)10 X(ii) 40 X/ 50 X (iii)80X/100X one No. Each	
	Light source	LED illumination with Lambda Plate of 530 angstrom wavelength & oblique illumination with green filter	
	Measurement of indentation diagonal	<ul style="list-style-type: none"> <li>• Measurement on the image projected on computer monitor, interfaced with the machine</li> <li>• Imaging camera : It must have: 1/2" Camera with minimum 2 megapixel camera adopter, Image grabber card,</li> </ul>	

		<ul style="list-style-type: none"> <li>Machine should have provision for manual measurement using cross wires in eyepiece with display on controller along with the provision for measurement on computer monitor.</li> <li>Automatic reading of hardness and hardness graph plotting with motorized X-Y &amp; Z motion control and having state of art autofocussing is preferred</li> </ul>	
4	<b>Specimen</b>	<ul style="list-style-type: none"> <li>Maximum Height : 90 mm or higher</li> <li>Maximum Weight : 1 kg or more</li> </ul>	
5	<b>X-Y stage</b>	<p>Ceramic coated stage with dimension 150 x 150 mm.</p> <p>Motorized movement of maximum 25 mm in X-Y plane and motorized controlled movement in Z direction</p> <p>Stage Movement Resolution 1 <math>\mu</math> or better</p>	
6	<b>Computer</b>	<p>The computer interfaced with machine controller for image acquisition, measurement of indent diagonals and calculation of hardness. Minimum configuration of the computer shall be : Intel Core i3 or higher processor, RAM : 4 GB ; 18" inch Widescreen Flat Panel Display with LED backlights, 16X DVD <math>\pm</math> RW or higher DVD Drive; USB Standard Keyboard and Optical 2-button USB mouse.</p> <p>Branded color printer for A4 size paper printing</p> <p>Branded 1KVA UPS of minimum 20 minutes power backup</p>	
7	<b>Software</b>	<ul style="list-style-type: none"> <li>Software for Vickers Hardness estimation by automatic or cursor clicking on the diagonal ends of an indentation image, on computer screen and automatic conversion to hardness value</li> <li>Software offering dwell time countdown, loading, Unloading,</li> </ul>	

		<p>intensity variation, turreting of objective and Indenter, (Operations can be performed either through computer or LCD panel)</p> <ul style="list-style-type: none"> <li>• Automatic conversion of hardness values to Rockwell, Rockwell Superficial, Brinell, Leeb as per ASTM E-140.</li> <li>• Software for fracture toughness and Brittleness Index measurements</li> <li>• Grain Size measurement.</li> <li>• Porosity Measurement</li> <li>• Linear measurement, Angular Measurement, Area measurement.</li> <li>• Percentage phase analysis module.</li> <li>• Image database maintenance software.</li> <li>• Report generation in MS Excel format.</li> <li>• Calibration feature for Micron marking</li> <li>• N/Kg load unit display/ change</li> </ul>	
8	<b>Power source</b>	230 V± 10 % AC, 50 Hz, single phase ( or appropriate adopter shall be provided if machine required power supply of different rating )	
9	<b>Essential accessories and spares</b>	<ul style="list-style-type: none"> <li>• Certified standard test blocks of 2 no (Range – One High Hardness and One low hardness )</li> <li>• Fixture for odd shaped components - 1No</li> <li>• Holder for holding thin sheet - One no.</li> <li>• Flat edge holder - One no.</li> <li>• Level indicator - One no.</li> <li>• Certified vickers indenter – 1 No</li> <li>• Certified knoop indenter – 1 No</li> <li>• Lamp/other light source ( 2 No.s)</li> <li>• Fuses ( 2 No.s)</li> <li>• The supplier should also provide (i) a manual giving details of machine’s different parts, its operation and general troubleshooting and (ii) conversion table ( Hardcopy) between diagonal lengths and micro-hardness values for different test methods ( Vickers and Knoop ) and at different test loads.</li> <li>• Demonstrate the performance of the machine or certified standard test blocks. Repeatability requirements as per ASTM E</li> </ul>	

		384/equivalent international standard shall be complied.	
10	<b>Installation and commissioning</b>	<ul style="list-style-type: none"> <li>The scope of supply includes (i) installation and commissioning of machine at SVNIT Surat and (ii) training to SVNIT staff for operation of the machine</li> </ul>	

**Note:**

- Please attach filled sheet with a prequalification requirements documents within the sealed Envelope superscribed as “Prequalification Requirements of the Bidder”



## **SECTION VI: GENERAL TERMS & CONDITIONS**

1. The bidder must comply all the pre-qualification conditions mentioned in the head **“PREQUALIFICATION REQUIREMENTS OF THE BIDDER”**.
2. Tenders should be enclosed in a **sealed covers**, super-scribed **“Tender for Various Equipments / Instruments as per Tender Notice Sr. No with Equipment/Instrument Name and Technical Specification Sheet at MED, SVNIT- Surat”** addressed to the “Director, Sardar Vallabhbhai National Institute of Technology, Ichchhanath, Surat – 395 007.”
3. The main sealed cover should contain following within it, apart from the other required documents /items, the following at least **Three** envelopes viz.
  - a. A sealed Envelope super-scribed as **“Prequalification Requirements of the Bidder”** containing compliance statement for all the pre-qualification requirements.
  - b. A sealed envelope to contain the **Demand Draft for EMD and Demand Draft for tender fees.**
  - c. A sealed Envelope super-scribed as **“Techno-Commercial Statement” – Summary Sheet of Price of tender.**

It should very clearly be noted **that any bid without these three envelopes, enclosed in the main envelope, will be treated as an incomplete bid and is liable to be rejected.**

4. The tender documents without tender fee and the earnest money deposit will be rejected. EMD shall not bear any interest and no claim shall be entertained against the DIRECTOR in respect of the same. EMD will be refunded on request by A/C Payee cheque only to the Bidder who does not qualify or receive the work order.
5. The tender documents with earnest money deposit previously for any other tender will not be considered and in such case tender will be rejected.
6. The tenders received after due date will be rejected.
7. The **envelope containing the commercial bid shall be opened only after** the appropriate satisfaction and verification of the pre-qualification & requirements, by the SVNIT tender committee.
8. The bidder shall explicitly express the compliance to all the above terms and conditions with the signature, along with official stamp, at the end of this tender document.

9. The Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive to the bidding documents in every respect will be at the Bidder's risk and may result in rejection of its bid.
10. **In case of the authorized dealers quoting on behalf of manufacturers, a copy of certificate stating that the equipment being quoted by the bidder is on behalf of the concerned manufacturer and the manufacturer undertakes the responsibility to provide the after sales maintenance of the equipment must be enclosed without which bid will be rejected.**
11. The bidder should install the tender items and bring in to complete operation at a location of the purchaser's choice and to satisfaction without any charge.
12. **Consortium is not allowed in this Tender participation.**
13. The bidder shall arrange for repair/replace of the defective/worn out components of the equipment at this Institute premises during the guarantee period at purchaser's first instructions within stipulated Time. This will be carried out at the cost of prospective Supplier and no charges whatsoever will be paid including Transportation, Courier Charges or T.A. and D.A. of the Service Engineer for the same.
14. Supplier is not able to rectify the defect or make the alternate arrangement within stipulated time limit. Institute can get it rectified and the amount so spent will be deducted from security deposit plus 10 % of the expense made.
15. The bidder should clearly mention the after sales service facility/capability and provide the same during guarantee/warranty period.
16. In case the equipment/services are internationally certified for quality and bears the ISO 9001 certification, a copy of relevant certificate may be enclosed
17. The rates shall be quoted separately for each item, stating the specific model & part-code no etc, including the standard items to be supplied with the unit. The detailed specifications, physical dimensions, guarantee period, after sale services, etc should be clearly stated.
18. The rate for individual service/equipment should be quoted in **Indian rupees** for all Indigenous goods. In case of imported equipment / instrument the institute is exempted from the payment of Excise and Customs duty only against the DSIR certification. In case of foreign instruments, prospective Supplier should handle the custom clearance and transportation up to the destination i.e. SVNIT Surat.

19. The bid shall be finalized on the basis of the **Net Amount in rupees** (including cost of the Installation, Packing, Forwarding, Transportation, Trainings, **all Taxes** and any other charges) F.O.R. on SVNIT, Surat mentioned in the SUMMARY SHEET. Any bids without the summary sheet may be rejected.
20. The EMD amount shall be refunded later, on receipt of a written request from the bidder. The EMD amount will not carry any interest. Tenders not accompanied by earnest money will not be considered and will be summarily rejected. This institute is managed by an autonomous body and hence registration with the **State Government Store Purchase Department is not adequate**.
21. The bidder must deposit a **Security Deposit** at a rate of **10%** of work order at the time of accepting the work order within 15 days of receipt of work order otherwise penalty of 2% of the work order will be charged for every week delay and delay of maximum 15 days will be allowed else order will be treated as cancelled without any notice and vender will be blacklisted. **The contract will commence only after Security Deposit and penalty if applicable is deposited**.
22. The Security Deposit shall be in the form of Bank guarantee and will remain valid for the entire **warranty period**. Failure on the part of the prospective Supplier to provide the services as per the terms and conditions in this document, shall constitute a breach of the terms and conditions of the contract and will entail forfeiture of the security deposit solely to the discretion of the Director, SVNIT.
23. Security deposit shall be released only after the satisfactory completion of work, due if any and faithful performance of the work and after receipt of application from contractor for the same. No interest will be paid on security deposit, in case of any default on the part of the contractor, the security deposit will be forfeited and the decision of SVNIT authorities in this regard will be treated as final and abiding to the contractor.
24. Failure of the successful bidder to comply with the above requirement shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security, in which event SVNIT may make the award to the next lowest evaluated bidder or call for new bids at the discretion of Director,
25. Arithmetical errors will be rectified on the following basis: If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail. If the prospective Supplier does not accept the correction of errors, its bid will be rejected and its bid security (EMD) may be forfeited.

26. **No Bidder shall contact the SVNIT authorities on any matter relating to its bid, from the time of the bid opening to the time the Contract is awarded. If the bidder wishes to bring additional information to the notice of the SVNIT, should be done in writing.**
27. Any effort by a Bidder to influence the SVNIT and its decisions on bid evaluation, bid comparison or contract award may result in rejection of the Bidder's bid.
28. SVNIT being an Educational Technical Institute, the concession applicable in rates/Taxes under state/central govt. notification should be considered while quoting.
29. The institute **CAN NOT issue 'C' or 'D' forms.** However, a certificate regarding the exclusive use of equipment/Instrument/services to be procured, for the purpose of teaching /research, can be issued if any concession in this regard be made available to the purchaser.
30. Bidders shall not be under a declaration of ineligibility for any corrupt and fraudulent practices prosecuted by the court of law.
31. The prospective Supplier should clearly state the delivery period and time period required for installation and commissioning of the equipment/services, from the date of receipt of firm order. In case, if prospective Supplier anticipates delivery of any or all items being delayed due to the reasons beyond his control, the prospective Supplier shall apply for suitable extension, starting the reason for the same and state his firm date of delivery. The purchaser, if feels suitable may extend the delivery date.
32. In case of delay of delivery of the unit beyond the stipulated / stated period, **a penalty of 5% (Five percent) of total value of the ordered equipment** will be levied for each week of delay of part thereof.
33. The bidder may offer the Tender on their letter heads giving full specifications and references to the serial number of the item and schedule. **Bid must be written in ink, or typewritten, and correction, if any, should be attested. Penciled quotations will not be accepted.**
34. Individuals signing the offers or documents connected with the contract must specifically state whether (s)he (they) is(are):
- a. Signing as sole proprietor
  - b. Whether signing for the firm, and
  - c. In the case of companies or firms registered under the India partnership Act, the capacity in which (s) he (they) is (are) signing i.e. Secretary, manager, partner etc. or their attorney by production of document empowering him to do so.

35. Tender forms and schedules are not transferable.
36. Acceptance to abide by the conditions stipulated by the Director, should be duly signed along with the offer. The absence of the acceptance of the conditions may result in the rejection of the offer.
37. The acceptance or rejection of the tender is left entirely to the discretion of the Director. The Director does not bind himself to accept the lowest or any tender and Director, reserves the right to split the tenders and place orders for the equipment covered by the lists on one or more tenders.
38. The Institute does not make payment in an advance against delivery/documents through Bank and hence, the prospective Supplier should specifically note that no advance payment will be made.
39. The Prospective supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to final destination as indicated in the Contract (In case of material damage, supplier have to bare all expenses/responsibility before material reaches to the final destination). The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.
40. The tender should reach the SVNIT office on or before the last date and time specified earlier. Tenders received thereafter will not be considered, in any case.
41. The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be provided for in the Contract including additional requirements, if any, specified and in any subsequent instructions ordered by the SVNIT.
42. The Goods supplied under the Contract shall be fully insured by the bidder in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery.
43. The Prospective Supplier's request(s) for payment shall be made to SVNIT in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and the services performed, and by documents, submitted. Also along with these documents, the **prospective Supplier shall have to obtain a satisfactory installation certificate from the Concern**

**Department of SVNIT – only after which the bill may be processed.**

44. Payment shall be made in Indian Rupees. No payment will be released unless the material/equipment/instrument is as per the specifications specified in the tender.
45. If there is delay in installation beyond stipulated time duration due to lack on part of SVNIT, Director at its discretion may approve the part payment of the as per work completed but not exceeding 80% of the total cost.
46. Deviation from any requirements, terms and conditions mentioned in the tender document will not be entertained and tender will be rejected.
47. **The Director reserves the right to reject any or all the tenders without assigning any reasons thereof.**
48. **The bid from the vendor who has received the work order for providing such service to SVNIT and was unable to provide the service, will be rejected.**
49. **The bid from the bidder who was found in fraud activity with SVNIT or on the name of SVNIT will not be allowed for bidding. The bid from such bidder will not be accepted and will be straight away rejected. Also the bid submitted in consortium with such bidder will be rejected and if such information is found later then the work order issued will be terminated immediately without any notice.**
50. **All prospective bidders should keep looking at the institute website for information concerning the changes/amendments on the website.** No claim of any nature on any ground on inadequate information or knowledge or misunderstanding or otherwise in such respects will be admissible, later on.
51. The tender, as quoted once shall be considered final. No change, alterations and modifications shall be permitted at a later stage. Incomplete tenders will be rejected without assigning any reason.
52. **It is compulsory to attach all the mentioned and required documents at time of submission of tender. No additional attachment is permitted later on.**
53. **All documents along with tender form must be numbered (1...n) and corresponding page number must be entered in the pre-qualify sheet, no further clarification will be entertained.**
54. The bidder should give performance warranty for the complete system for the **warranty period of 03 year as specified from the date of the successful and satisfactory installation.**

55. **Bidder must provide back-to-back OEM/Manufacturer support for 3 years onsite with parts.**  
OEM should provide warranty/support certificate for 3 years and specify undertaking for all quoted items on respective OEM letter-head along with MAF in favour of SVNIT.
56. The Prospective Supplier warrants that the Goods supplied under this Contract are new, unused, of the **most recent or current models** and they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Prospective Supplier further warrants that all Goods supplied under this Contract shall have no defect arising from design, materials or workmanship (except when the design and/or material is required by the SVNIT's Specifications) or from any act or omission of the Prospective Supplier, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination.
57. The supplier should provide necessary training for the operation and servicing of the equipment/instrument at free of cost to the concerned personnel, if asked by the purchaser.
58. The supplier shall provide 3 sets of both technical/service manuals and operation/installation manuals along with the proper dust covers for the instrument/equipment at free of cost. Supplier should also provide certificate of calibration traceable to National / International Standards.
59. In case the quoted rates are as per the valid and prevailing contract, with DGS and D, New Delhi/ GEM, the supplier shall furnish a certified Xerox copy of the same to the purchaser. It may also be mentioned whether supplier can accept a direct order based on DGS and D rate / GEM contract.
60. **The bid from the vendor or its sister concern or group of company who has been black listed at any Government organization / Semi-Government Organization / public sector etc. will be rejected.**
61. **The bid for OEM who has been black listed at any Government organization / Semi-Government Organization / public sector etc. will be rejected.**
62. Defective equipment should be replaced by next business day.
63. The delivery should be effected within eight weeks from the date of receipt of supply order or a mutually agreed date. The tender should clearly state the delivery period required.
64. The minimum validity period for the offer should be for 120 days. However it is desirable to have a longer validity period.
65. The specification as mentioned below must be listed explicitly in **tabular form** along with information of compliance/non compliance/better feature than the standard specification required.

The quoted specification must match the required standard specification. **Better and higher specification may be given preference if found suitable.**

66. The supplier should provide pre-dispatch inspection of working of instruments/ equipments at their works if required at their cost before dispatch and should incorporate the required changes, if inspector suggests.
67. In case of any dispute, the matter will be subjected to SURAT jurisdiction only.
68. Any change in the tender opening date will be displayed on the institute website. Vendors are requested to visit the SVNIT website ([www.svnit.ac.in](http://www.svnit.ac.in)) regularly.
69. **ALL THE DEMAND-DRAFT (TENDER FEE AND EMD) SHOULD BE SUBMITTED IN FAVOUR OF "DIRECTOR, SVNIT MHRD FUND" PAYABLE AT SURAT.**

**DIRECTOR, SVNIT**



## SECTION VII: DECLARATION

**Tender Reference No.: MED/Annual Plan/CAD-Metallurgy-SIC/2017-18**

I/We hereby declare I/We have read all the terms and conditions of the Tender stated in all the sections in this tender document and as may be modified/mutually agreed upon, are acceptable and binding to me/us.

I/We have also verified that the bidding document contains at least the following

- A sealed Envelope super-scribed as “Prequalification Requirements of the Bidder” containing compliance statement for all the prequalification requirements.
- A sealed envelope to contain the Demand Draft for EMD and the Demand Draft for tender fees.
- A sealed Envelope superscribed as “Techno-Commercial Statement” to contain at least the following:
  - The Tender document appropriately signed and stamped at all pages
  - General Terms & Conditions of Contract
  - Acceptance to all the Requirements;
  - Summary Sheet in the format laid in this document

I also understand that my bid without these three envelopes, enclosed in the main envelope, super scribed as **“Tender for Various Equipments / Instruments as per Tender Notice Sr. No with Equipment/Instrument Name and Technical Specification Sheet at MED, SVNIT- Surat”** will be treated as an incomplete bid and is liable to be rejected.

Place:

Signature:

Date:

Name & Address of the Bidder with  
office Stamp with all contact details

**SECTION VIII: SUMMARY SHEET**

**Tender Reference No.: MED/Annual Plan/CAD-Metallurgy-SIC/2017-18**

<b>Sr. No.</b>	<b>Description</b>	<b>Qty.</b>	<b>Brand / Make &amp; Model</b>	<b>Total Amount (Rs.)</b>
1.	Journal Bearing Test Rig with Data Acquisition System (CIRCULAR & NON-CIRCULAR PROFILES)			
	Total in Rs.			
	Rebate / Concession in Rs.			
	Net Amount			
Rupees (in Words)				

Note:

- All taxes should be inclusive.
- This summary sheet must be enclosed in Techno-Commercial envelop, otherwise the bid will be rejected.
- Unit prices of the item should be quoted, without which bid will be rejected
- Warranty should be 3 years from the date of successful installation
- Validity of Quotation should be (minimum) 120 days from the date of bid opening.

I understand that any ambiguity in or incompletely filled SUMMARY SHEET will lead to rejection of offer without being cited any reasons.

Place:

Signature:

Date:

Name & Address of the Bidder with office Stamp with all contact details

**SECTION VIII: SUMMARY SHEET**

**Tender Reference No.: MED/Annual Plan/CAD-Metallurgy-SIC/2017-18**

<b>Sr. No.</b>	<b>Description</b>	<b>Qty.</b>	<b>Brand / Make &amp; Model</b>	<b>Total Amount (Rs.)</b>
2.	Potentiostat with necessary accessories			
	Total in Rs.			
	Rebate / Concession in Rs.			
	Net Amount			
Rupees (in Words)				

Note:

- All taxes should be inclusive.
- This summary sheet must be enclosed in Techno-Commercial envelop, otherwise the bid will be rejected.
- Unit prices of the item should be quoted, without which bid will be rejected
- Warranty should be 3 years from the date of successful installation
- Validity of Quotation should be (minimum) 120 days from the date of bid opening.

I understand that any ambiguity in or incompletely filled SUMMARY SHEET will lead to rejection of offer without being cited any reasons.

Place:

Signature:

Date:

Name & Address of the Bidder with office Stamp with all contact details

**SECTION VIII: SUMMARY SHEET**

**Tender Reference No.: MED/Annual Plan/CAD-Metallurgy-SIC/2017-18**

<b>Sr. No.</b>	<b>Description</b>	<b>Qty.</b>	<b>Brand / Make &amp; Model</b>	<b>Total Amount (Rs.)</b>
3.	Micro Hardness Tester with necessary accessories			
	Total in Rs.			
	Rebate / Concession in Rs.			
	Net Amount			
Rupees (in Words)				

Note:

- All taxes should be inclusive.
- This summary sheet must be enclosed in Techno-Commercial envelop, otherwise the bid will be rejected.
- Unit prices of the item should be quoted, without which bid will be rejected
- Warranty should be 3 years from the date of successful installation
- Validity of Quotation should be (minimum) 120 days from the date of bid opening.

I understand that any ambiguity in or incompletely filled SUMMARY SHEET will lead to rejection of offer without being cited any reasons.

Place:

Signature:

Date:

Name & Address of the Bidder with office Stamp with all contact details