

**Ref. No: RGUKT/Proc/MME/NDT/T15/E-2013, dated: 06.01.2014**

**BID DOCUMENT**

**Open Competitive Bid (OCB)**

**(e-Procurement)**

**For**

**Supply and Installation of Equipments  
for the Non Destructive testing & other items for  
Metallurgical & Materials Engineering Department  
at the three campuses of  
Rajiv Gandhi University of Knowledge Technologies**

**Proprietary & Confidential**



**RAJIV GANDHI UNIVERSITY OF KNOWLEDGE  
TECHNOLOGIES**

**Ground Floor, Vindhya C4 Building,**

**IIT-H Campus, Gachibowli**

**HYDERABAD- 500 032**

**Phone: 040-23001830**

## **Proprietary & Confidential**

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**News paper advertisement**

**E-Procurement Tender Notice**

**RAJIV GANDHI UNIVERSITY OF KNOWLEDGE TECHNOLOGIES**



**1 Floor, Vindhya C4 building, IIIT- H Campus, Gachibowli,  
HYDERABAD- 500 032  
Phone: 040-23001830**

***Ref: RGUKT/Proc/MME/NDT /T15/E-2013 dated: 06.01.2014***

Online tenders are hereby invited from reputed manufacturer/ authorized representatives for supply and installation of equipments for the Non Destructive Testing Lab & other items of Metallurgical & Materials Engineering Department to the three RGUKT campuses located at Basar in Adilabad dist, Nuzvid in Krishna dist and R.K. Valley in YSR Kadapa dist, in AP.

- 1.** Bidders can download the tender schedules from e-procurement Platform [www.eprocurement.gov.in](http://www.eprocurement.gov.in) from 07.01.2014 onwards. Bidders need to submit the bids online by uploading all the required documents through [www.eprocurement.gov.in](http://www.eprocurement.gov.in). **The last date for submission of tenders online is 22.01.2014 up to 05:00PM**

For further details regarding Tender Notification & Specifications please visit website: [www.eprocurement.gov.in](http://www.eprocurement.gov.in) and [www.rgukt.in](http://www.rgukt.in)

**Date: 06.01.2014**

**Sd/-  
Registrar**

## **Time schedule of Tender related events**

Bid calling date	<b>06.01.2014</b>
Bid Document fee	<b>Rs. 1,000/- (By way of DD from any Nationalized Bank)</b>
Bid Documents Downloading Start date	<b>07.01.2014</b>
Bid Document Downloading End Date	<b>22.01.2014 till 02:00 PM</b>
Pre Bid Meeting	<b>17.01.2014 at 02:00 PM</b>
Last date for uploading documents online	<b>22.01.2014 at 05:00 PM</b>
Last date for Submission of documents (hard copies)	<b>23.01.2014 at 05:00 PM</b>
Technical Bid opening date/time	<b>24.01.2014 at 02:00 PM</b>
Price Bid opening date/time	<b>25.01.2014 at 02.00 PM</b>
Contact person	The Registrar, RGUKT
Reference No.	RGUKT/Proc/MME/NDT/T15/E-2013, dated 06.01.2014

**Note:** The dates stipulated above are firm and under no circumstances they will be relaxed unless otherwise extended by an official notification or happen to be Public Holidays. For the assistance in the online submission issues, the bidder may contact the help desk of M/s. Vayam Technologies (e-procurement) at their e-mail address: [helpdesk.eproc@vayamtech.com](mailto:helpdesk.eproc@vayamtech.com)

**Registrar**

## SECTION - I

### INVITATION FOR BIDS

**Reference. No:** RGUKT/Proc/MME/NDT/T15/E-2013 Dated: 06.01.2014

**Subject:** Tender for supply and installation of equipments for the Non Destructive Testing Laboratory & other items of Metallurgical & Materials Engineering Department of the three campuses of RGUKT, which are located at Basar (Adilabad District), Nuzvid (Krishna District) and RK Valley (Kadapa District) – Reg..

Sir/Madam,

- 1) Bids are invited on the e-procurement platform from the eligible manufacturers or their authorized distributors for the supply and installation of equipments for Non Destructive testing Laboratory & other items of Metallurgical & Materials Engineering Department to three campuses RGUKT. These campuses are located at Basar (Adilabad District), Nuzvid (Krishna District) and R K Valley ( Kadapa District)of Andhra Pradesh. The details of bid terms and conditions can be downloaded from the electronic procurement platform of Government of Andhra Pradesh i.e. [www.eprocurement.gov.in](http://www.eprocurement.gov.in)
- 2) Bidders would be required to register on the e-Procurement market-place “[www.eprocurement.gov.in](http://www.eprocurement.gov.in)” and submit their bids online. On registration with the e-Procurement market place they will be provided with a user id and password by the system through which they can submit their bids online.
- 3) The bidders need to scan and upload the required documents as per the Check list given. Such uploaded documents pertaining to technical bid need to be attached to the tender while submitting the bids on line. The attested copies of all these uploaded documents of technical bid, and signed undertaking of bidder should be submitted off line to Registrar, RGUKT, Hyderabad by 05:00 PM of 23.01.2014 The RGUKT will consider only the bids submitted through on-line over the copies of the paper based bids.
- 4)
  - a) The participating bidder/s will have to pay tender processing fee (non-refundable) for the amounts specified in the Schedule of Requirements, in the form of Demand Draft drawn from any Nationalized Bank, in favour of Registrar, RGUKT, Hyderabad. Payable at Hyderabad.
  - b) Bidder shall furnish an unconditional and irrevocable bank guarantee for the amounts specified in the Section-II of Tender Document. This bank guarantee must be issued by any Nationalized bank in the standard format as shown in the Tender Schedule. A crossed Demand Draft drawn in favour of The Registrar,

RGUKT, Hyderabad for such amount is also acceptable. Bank guarantee must be submitted along with bids.

- c) All the participating bidders have to electronically pay a non-refundable transaction fee to M/s. APTS, the service provider through "Payment Gateway Service on E-Procurement platform", as per the Government Orders placed on the e-procurement website.
- d) RGUKT will not accept the tenders from blacklisted companies or undependable Suppliers whose past performance with RGUKT was found poor due to delayed and/or erratic supplies and those with frequent product failures, and also against whom there have been adverse reports of Sub-Standard Quality / Poor Service of Equipment supplies, as defined in the other parts of the Bidding document.
- e) For any clarification and further details on the above tender please contact Telephone No: 040-23001830 or Contact Person during office hours.

## SECTION-II

### STATEMENT OF IMPORTANT LIMITS/VALUES RELATED TO BID

Item	Description
EMD	<b>Rs. 1,00,000/- by way of Demand Draft from any Nationalized Bank or by way of irrevocable bank guarantee from any Nationalized Bank only. DD/BG from other than Nationalized Banks will not be accepted.</b>
Bid Validity Period	360 days from the date of opening of Financial bid
EMD Validity Period	90 days from the date of opening of Financial bid
Warranty Period	3 years Comprehensive Warranty
Variation in quantities/number of residents	<b>± 40 %</b>
Period for furnishing performance Security Deposit	Within 15 days from date of receipt of award
Delivery Schedule	Bidder shall deliver the goods in one single lot within 90 days from the date of award of the contract.
Performance security value	<ol style="list-style-type: none"><li>1. 5% of contract value by way of irrevocable Bank Guarantee from any Nationalized Bank</li><li>2. 10% of contract value by way of in case of equipment is of foreign origin</li></ol>
Performance security validity period	Till 36 months from the date of installation. For equipment of indigenous origin, Performance security shall be submitted along with the order acceptance by the bidder. For imported equipment from foreign



	manufacturer, Performance Bank Guarantee shall be submitted prior to claiming the first payment against Letter of Credit opened.
Period for signing the order Acceptance	Within 15 days from date of receipt of notification of award
	<p>Payment for goods and services shall be made in Indian rupees or equivalent value in foreign currency.</p> <ol style="list-style-type: none"> <li>1. 80% of payment will be paid after installation, commissioning</li> <li>2. Balance 20% will be paid after 3 months after obtaining the satisfactory certificate from the Director, RGUKT IIITs.</li> <li>3. In case of equipment from foreign country LC will be opened for 100% and 90% of payment will be paid on delivery &amp; submission of documents and remaining 10% will be paid after installation and commission.</li> </ol>
Maximum Liquidated Damages for late deliveries	For delays:- If the supplier fails to deliver any (or) all of the goods or perform the services within the time period specified in the contract the purchaser shall without prejudice to its other remedies under the contract deduct from the contract price as liquidated damages a sum equivalent to 0.25% of the contract value per day until actual delivery or performance up to a maximum deduction of 10% of the delayed goods or services contract price. Once the maximum deduction is reached, the purchaser may consider the termination of the contract duly forfeiting the performance security etc.,
Placing work order	<ul style="list-style-type: none"> <li>➤ RGUKT will place order on identified successful bidder.</li> <li>➤ All the payments shall be made directly by RGUKT to the successful bidder as per the tender terms and conditions.</li> <li>➤ If decided RGUKT can split the order basing on the quoted price and service track record. The decision of RGUKT is final in this regard.</li> </ul>

Transaction Fee	<b>Transaction fee:</b> All the participating bidders who submit the bids have to pay an amount @ 0.03% of their final bid value online with a cap of Rs. 10,000/- for quoted value of purchase up to Rs.50 crores and Rs.25000/- if the purchase value is above Rs.50 crores & service tax applicable @ 12.36% as levied by Govt. of India on transaction fee through online in favour of MD, APTS. The amount payable to APTS is non refundable.
Transaction Fee Payable to	The Managing Director, A.P. Technology Services Ltd., Hyderabad
Bid submission	<b>Online.</b> Bidders are requested to submit the bids after issue of minutes of the pre bid meeting duly considering the changes made if any, during the pre bid meeting. Bidders are totally responsible for incorporating/complying the changes/amendments issued if any during pre bid meeting in their bid.
Procedure for Bid Submission	Bids shall be submitted online on <a href="http://www.eprocurement.gov.in">www.eprocurement.gov.in</a> platform <ol style="list-style-type: none"> <li>1. The participating bidders in the tender should register themselves free of cost on e-procurement platform in the website <a href="http://www.eprocurement.gov.in">www.eprocurement.gov.in</a></li> <li>2. Bidders can log-in to e-procurement platform in Secure mode only by signing with the Digital certificates.</li> <li>3. The bidders who are desirous of participating in e- procurement shall submit their technical bids, price bids as per the standard formats available at the e-market place.</li> <li>4. The bidders should scan and upload the respective documents in Pre-Qualification and Technical bid documentation including EMD. The bidders shall sign on all the statements, documents certificates uploaded by them, owning responsibility for their correctness/authenticity.</li> </ol>

	<p>5. The hard copies of all the uploaded Technical Bid to be attested by a Gazetted Officer or properly notarized.</p> <p>6. The rates should be quoted in online only</p>
Other conditions	<p>1. After uploading the documents, the copies of the uploaded technical bid documents, for evaluation and original Demand Drafts in respect of Bid Security and Bid document fee are to be submitted by the bidder to the “The Registrar, RGUKT, Vindhya-C4 Building, IIT Campus, Gachibowli, Hyderabad-32”, by <b>05:00 PM on 23.012014</b></p> <p>Failure to furnish any of the uploaded documents, certificates, will entitled in rejection of the bid. The RGUKT shall not hold any risk on account of postal delay. Similarly, if any of the certificates, documents, etc., furnished by the Bidder are found to be false / fabricated / bogus, the bidder will be disqualified, blacklisted, action will be initiated as deemed fit and the Bid Security will be forfeited.</p> <p>2. RGUKT will not hold any risk and responsibility regulating non-visibility of the scanned and uploaded documents.</p> <p>3. The Documents that are uploaded online on e-market place will only be considered for Bid Evaluation.</p> <p>4. Important Notice to Contractors, Suppliers and Department users (i) In the endeavor to bring total automation of processes in e-Procurement, the Govt. has issued orders vide G.O.Ms.No. 13 dated. 5.7.2006 permitting integration of electronic Payment Gateway of ICICI/HDFC/Axis Banks with e-Procurement platform, which provides a facility to participating suppliers / contractors to electronically pay the transaction fee online using their credit cards.</p>

## **SECTION-III**

### **TENDER SCHEDULE**

#### **1. PREAMBLE:**

The Registrar, Rajiv Gandhi University of Knowledge Technologies (RGUKT), Hyderabad invites tenders for supply and installation of Non Destructive Testing Laboratory Instruments & other items to its three campuses located at Basar (Adilabad District), Nuzvid (Krishna District) and RK Valley (YSR Kadapa District), through e-procurement platform.

#### **2. SCOPE OF WORK**

Supply and installation of Non Destructive Testing Laboratory Instruments & other items to the three campuses of RGUKT located at Basara (Adilabad Dist), Nuzvid (Krishna Dist) and R K Valley (YSR Dist).

#### **3. EARNEST MONEY DEPOSIT / SECURITY DEPOSIT:**

3.1 The tender should be accompanied by Earnest Money Deposit (EMD) for **Rs.1,00,000/-** by way of crossed Demand Draft/ Bank Guarantee issued/ drawn from any Nationalized Bank in favor of "Registrar, RGUKT" payable at Hyderabad. Tenders received without EMD will be summarily rejected.

3.2 Forfeiture of the EMD will be made in the following events:

3.2.1 Withdrawal of bid during the bid validity period.

3.2.2 In case of successful bidder, if the bidder fails to sign the contract in time or fails to submit performance guarantee.

#### **4. PERFORMANCE SECURITY:**

4.1 The successful bidder has to deposit 5% for indigenous equipments and 10% in case of imported equipment (foreign origin) of the total contract value as performance security deposit in the form of Bank Guarantee from any Nationalized Bank.

- 4.2 The Performance Security Deposit / Bank Guarantee of successful bidder will be retained for the period of contract in force and will be returned after expiry of contract, after deducting the outstanding liabilities if any.
- 4.3 The Performance Security Deposit / Bank Guarantee shall not carry any interest.

## 5 ELIGIBILITY CRITERIA

- 5.1 This bid is open to all firms within India who are eligible to do business under relevant Indian laws as in force at the time of bidding, subject to meeting the pre-qualification criterion. They should provide list of customers of previous supply of similar/ same items to IITs, NIT's or Central Universities or any Academic Institute of National repute with contact details. Copies of orders received from the reputed firms on bidding firm need to be submitted.
- 5.2 The bidder should have servicing facility or work shop with in India so the provision of service is possible at a short notice and without incurrance of delay.
- 5.3 The Bidding firm should have minimum turnover as follows:

<b>Bid Value offered against the tender call</b>	<b>Last financial year's business turnover</b>
Up to 25 lakhs	50 lakhs
More than 25 lakhs	1 crore

The bidder should have adequate experience in supply of such materials as required in the tender. Bidder should furnish proof of having supplied such materials as required in the tender in the previous financial year ending 31<sup>st</sup> March 2013 as mentioned above. A certificate indicating the Turn Over value details (in Rupees) of subject material, during the financial year 2012-13 (for the year ending 31.03.2013) from a Firm of Chartered Accountants must be enclosed (in original) as a proof for Turnover. The Turn Over of the subject Material must be separately indicated in the certificate.

- 5.4 The bidder should furnish satisfactory performance certificate from the parties concerned to whom bulk supplies were effected, in case such supplies were made. RGUKT may contact any such parties to elicit details.
- 5.5 Bidder should be registered under VAT Act/CST Act with the relevant State Sales Tax Authorities. He should furnish along with the bid document, the relevant VAT/CST Registration Document and PAN / TAN Card copies.
- 5.6 All bidders shall also include the following information and documents with their tenders ( in the Technical bid cover)
- 5.6.1 Copies of original documents defining the constitution or legal status, place of registration, and principal place of business of the bidding firm/entity; written power of attorney of the signatory of the Bid to commit the Bidder.
- 5.6.2 Machinery/equipment owned by the bidder and number of employees.
- 5.6.3 Latest Income Tax returns and **VAT/ CST** Returns filed.
- 5.6.4 List of Present Clientele with contact addresses & telephone numbers.
- 5.7 All the certificates furnished along with technical bids should be attested by a Gazetted Officer, counter signed by bidder along with their seal.

The bidders must submit all relevant documentary evidence to support their claim for eligibility in placing bid. **The tenders received without the above documents will be rejected.**

## **6. INSTRUCTIONS TO BIDDERS**

- 6.1 Tenders with over writings, alterations etc., will not be admitted unless they are attested by the bidder. Where there is a discrepancy between the amount (Rupees) in figures and words, the price, which is least of the two, will prevail.
- 6.2 Bid should be strictly in conformity with the Terms and Conditions mentioned in the tender schedule.
- 6.3 Bidders are expected to examine all the terms and instructions mentioned in the tender schedule and prepare their proposals accordingly. Failure to provide all requisite information will be at the bidders' own risk and may result in the rejection of the tender.
- 6.4 All assertions made in connection with the tender are to be supported / substantiated by relevant documents. The Registrar, RGUKT reserves

the right to verify the credentials of the bidder as per the eligibility criteria.

- 6.5 The Registrar, RGUKT will notify the bidder whose tender has been accepted.
- 6.6 The successful bidder shall execute an agreement with RGUKT on Non-judicial stamp paper worth Rs.100 agreeing to all the conditions of the contract 15 days upon intimation of acceptance of Tender. The successful bidder has to submit performance security guarantee after taking Letter of Intent but before having contract agreement. Failure on enter into an agreement within the stipulated time will result in forfeiture of the EMD.

The Registrar, RGUKT reserves the right to issue instructions / modifications at any point of time before award of contract.

## **7. METHOD OF SUBMISSION:**

Bids shall be submitted online on [www.eprocurement.gov.in](http://www.eprocurement.gov.in) Platform.

- 7.1. The participating bidders in the tender should register themselves free of cost on e-procurement platform in the website [www.eprocurement.gov.in](http://www.eprocurement.gov.in)
- 7.2. Bidders can log-in to e-procurement platform in Secure mode only by signing with the Digital certificates.
- 7.3. The bidders who are desirous of participating in e-procurement shall submit their technical bids, price bids as per the standard formats available at the e-market place.
- 7.4. The bidders shall sign on all the statements, documents certificates uploaded by them, owning responsibility for their correctness/authenticity.
- 7.5. The bidders should scan and upload the respective documents in Technical Documentation as per the check list.

- 7.6. After uploading the documents, the copies of the uploaded technical bid documents, for evaluation and original Demand Drafts in respect of Bid Security and Bid document fee are to be submitted by the bidder to the "The Registrar, RGUKT, Vindhya-C4 Building, IIIT Campus, Gachibowli, Hyderabad-32", by **05:00 PM on 23.01.2014**
- 7.7. Failure to furnish any of the uploaded documents, certificates, will entitled in rejection of the bid. The RGUKT shall not hold any risk on account of postal delay. Similarly, if any of the certificates, documents, etc., furnished by the Bidder are found to be false / fabricated / bogus, the bidder will be disqualified, blacklisted, action will be initiated as deemed fit and the Bid Security will be forfeited.
- 7.8. RGUKT will not hold any risk and responsibility regulating non-visibility of the scanned and uploaded documents.
- 7.9. The Documents that are uploaded online on e-market place will only be considered for Bid Evaluation.
- 7.10. Important Notice to Contractors, Suppliers and Department users (i) In the endeavor to bring total automation of processes in e-Procurement, the Govt.hasissued orders vide G.O.Ms.No. 13 dated. 5.7.2006 permitting integration of electronic Payment Gateway of ICICI/HDFC/Axis Banks with e-Procurement platform, which provides a facility to participating suppliers / contractors to electronically pay the transaction fee online using their credit cards.
- In case of consortium either the prime bidder or the consortium partner can purchase the bid document. The bid can be filed either with user ID of prime bidder or consortium partner.**
- 7.11. The rates should be quoted online only.

## **8 EVALUATION PROCEDURE:**

- 8.1 The Tenders will be opened on 24.01.2014 at 02:00 PM by the Registrar, RGUKT or his authorized representative in the presence of the bidders or their authorized representative who may be present at that time.



- 8.2 The Technical Bids will be opened first on 24.01.2014 at 02:00 PM The tenders will be evaluated so as to ascertain the capability of the bidders to provide the material within the period mentioned above and also to assess whether the bidder satisfies the eligibility criteria as detailed in Clause 5 above.
- 8.3 The rejection of the bidder on technical grounds will be based on the failure to meet eligibility requirements.
- 8.4 The committee may reject a bid for non conformance of the specifications
- 8.5 Price Bid of only those bidders, who have fulfilled the eligibility criteria specified in Clause '5', 8.2 and 8.4 above, will be considered and who does not fulfill the eligibility criteria will not be considered and their tender stands rejected.
- 8.6 Any claims or disputes raised by the unsuccessful bidders in respect of selection process and non-allotment of award will have no legal validity and will not be enforceable against the RGUKT. No further correspondence will be entertained regarding the disqualification.
- 8.7 The Registrar, RGUKT reserves the right to accept or reject any / or all the tenders without assigning any reasons whatsoever. The Registrar, RGUKT also reserves the right to cancel the selection process for award of the contract at any time. The decision of the Registrar, RGUKT is final and binding.

## **9. PENALTY CONDITIONS :**

- 9.1. 0.25% will be deducted from total value of the order for each day of delayed supply, and maximum of 10% will be deducted, if delay continues beyond 10% the contract is liable for termination. If contract is terminated the bidder forfeits the performance security Deposit etc.,

**(NOTE: Delivery and installation must be made in a single lot within the delivery date agreed at the time of award of contract)**

- 9.2. If the contract is terminated, as per clause 9.1 above the performance security will be en-cashed by Registrar, RGUKT and the bidder forfeits it.
- 9.3. In case after random check of equipment of the supplied lot, if it is found to be non conforming to the technical specifications then entire lot of such equipment will be rejected. In this case the Registrar, RGUKT shall encash the performance security deposit. The bidder shall have no claim to any payment towards the transaction.

## **10. VALIDITY OF THE CONTRACT**

The contract quoted bid price shall remain valid for a period of 365 days from the date of issue of purchase order.

## **11. GENERAL TERMS & CONDITIONS**

- 12.1. The supply, installation and Commissioning of Analytical and Laboratory Instruments shall be at the three IITs under the RGUKT located at
1. Basar, Adilabad District
  2. Nuzvid, Krishna District
  3. R K Valley (Idupulapaya), Kadapa District
- 12.2. Goods are to be supplied as per the specification and quantity. Details are annexed to this bid document.

### **12.3. Delivery and distribution:**

**General Clause:** The goods need to be supplied (in case of equipment need to be installed and commissioned) within the stipulated time agreed upon in the contract.

If no such clause exists in the contract, this period may be treated as 90 days from the signing on Supply Agreement Form.

Bidder shall deliver the goods in one lot within 90 days from the date of award of the contract.

- 12.4. All goods/ equipment supply shall carry a comprehensive warranty period of 3 years. Within the warranty period, in case of any damage to the supplied material like breakage, wear and tear, Electronics defects etc, it will be the responsibility of the supplier to trouble shoot, rectify and restore functioning or replace the damaged material within 7 working days.
- 12.5. A random sample of any item will be picked from the lot of items delivered by the bidder to the three campuses of RGUKT. This sample will be subjected to tests, if necessary at labs anywhere in the country to ensure compliance to specifications. If the result indicates non conformance, the entire lot will be rejected and the contract will stand terminated without any liability on the part of RGUKT. In addition, this event shall lead to the forfeiture of the performance security amount.

### **13.DISPUTES:**

All disputes and differences of any kind whatsoever arising out of or in connection with the contract, whether during or after completion of contract will be settled at Hyderabad only, amicably in a spirit of co – operation and the RGUKT's decision shall be final on all such matters and shall be binding on the Bidder.

### **14. DISCLAIMER:**

- 14.1. Even though adequate care has been taken in the preparation of this Tender Schedule the Bidder should satisfy himself that the Schedule is complete in all respects.
- 14.2. Neither RGUKT nor its employees make any representation or warranty as to the accuracy, reliability or completeness of the information in this tender schedule and it is not possible for the RGUKT to consider the investment

objective, financial situation and particular needs of each party who reads or uses the Tender Schedule. Certain prospective Bidders may have a better knowledge of the scope of work than others. Each prospective Bidder should conduct his or her own investigations and analysis and check the accuracy, reliability and completeness of the information in the Tender schedule and obtain independent advice from appropriate sources.

14.3. Registrar, RGUKT reserves the right to reject any or all the Bids submitted in response to this request for Proposal at any stage without assigning any reasons whatsoever.

14.4. Registrar, RGUKT reserves the right to change any or all of the provisions of this tender Proposal.

#### **15. REJECTION OF TENDERS:**

15.1. The Registrar, RGUKT reserves the right to cancel the tender process and reject all tenders at any time prior to the award of contract without thereby incurring any liability as against the affected bidder or any obligations to inform the affected bidder of the grounds of acceptance or rejection.

15.2. No bidder is entitled to withdraw his or her offer after submission. In case of such withdrawal, the EMD deposited along with the tender schedule shall stand forfeited.

15.3. For breach of any of the conditions prescribed in the tender or as specified by the RGUKT from time to time, the EMD is liable to be forfeited. Decision of the Registrar, RGUKT in this regard is final and binding on bidders.

#### **16. Requirement :**

The following Non Destructive Testing Laboratory Instruments & other items are required in the specifications mentioned here under for all the three Campuses of RGUKT located at Basar (Adilabad District), Nuzvid (Krishna District), RK Valley (YSR District)

**Specifications of Non Destructive Testing Laboratory  
Instruments & other items.**

<b>SL. No.</b>	<b>Instrument Name</b>	<b>Quantity per each campus</b>	<b>Total quantity</b>
1	Radiographic flaw examination unit	1	3
2	Ultrasonic flaw detector ( Configuration 1)	1	3
3	Ultrasonic flaw detector ( Configuration 2)	1	3
4	Ultrasonic flaw detector ( Configuration 3)	1	3
5	Reference / Calibration Blocks/ probes kit for ultrasonic testing	1	3
6	Reference/Calibration blocks kit for ultrasonic testing	1	3
7	Dual frequency eddy current flaw detector	1	3
8	Yoke type magnetic particle tester	1	3
9	Liquid dye penetrant test kit	2	6
10	Portable/Laboratory induction melting furnace	1	3
11	High cycle fatigue testing system	1	3
12	C-Ring corrosion tester	1	3
13	FCAW/MIG/MAG welding unit	1	3
14	Friction stir welding unit	1	1
15	Laboratory double headed rolling mill	1	3
16	Planetary mill	1	3
17	50 ton hydraulic power compact press	1	3

## Specifications for Instruments

### 1. Radiographic flaw examination unit

#### Specifications:

This unit shall consist of the components listed below

#### A. Tube

- Nominal tube voltage: 225kV
- Continuous rating : 1800W
- Focal spot acc. EN 12543 d = 1.0 mm
- Filament current max: . 4.1 A
- Filament voltage, typical: 7.3 V
- Inherent filtration: 0.8 mm Be
- Target material: W
- Target angle: 11°
- Radiation coverage: 40° x 30°
- Exposure time : 5s to 30minutes
- Leakage radiation: max. 5 mSv/h
- Cooling medium: Water
- Cooling medium flow rate: min. 4 l/min

#### B. Generator

- Voltage range: 15 – 225 kV with Adjustment increments (min. step) 0.1 kV/step
- Accuracy: +/- 1% of output value +/- 0.1 kV
- Reproducibility (at constant temperature): +/- 0.01% of max. kV-value
- High voltage ripple (with 10m HV cable): 5 V/mA, min. 20 V
- Temperature induced drift: 80 ppm/°C based on output value
- Current range: 0 – 15 mA
- Adjustment standard range: in 0.05 mA steps from 0.5 mA to max. value
- Accuracy (at constant temperature): +/- 0.2% of output value +/- 0.01 mA
- Reproducibility (at constant temperature): +/- 2µA
- Temperature induced current drift: 50 ppm/°C of output value
- Max. power~2.5KW
- Mains 230V AC 50/60 Hz 25A

#### C. Microprocessor based control system:

It should exhibit (i) input voltage for tube, (ii) current input to the tube, (iii) timer to set and control exposure time, (iv) radiation ON/OFF switch when machine is energized, (v) key switch, without whose operation the x-ray device must be inoperable., (vi) programmable chip and display unit for storage and

retrieval of operating parameters, ( Vii) fault diagnostics software for trouble shooting the x-ray unit, (viii) software for conducting the tests.

- D. **Laser beam centering device** : This is for aligning the x-ray beam centerline with the center point of Image intensifier
- E. **The X-ray unit** should be able to maneuvered to move up or down, back or front to help in focusing.
- F. **Other items:**  
Power supply, Oil insulated high voltage tank, cassettes for film radiography
- G. **High voltage cable** : of adequate length and proper insulation
- H. **Water cooler:**
- I. **Documentation:**-The system should come with at-least two copies of documentation of operation, safety practices etc.,

#### **Safe-gaurds:**

1. **Temperature:** the system should a safety alarm for temperature and the system should automatically trip when the temperature goes beyond range.
2. **Earthing:** All metallic items including casings, interconnecting cables, power supply unit, x-ray control unit, tube assembly, warning signal indicators, other safety gear and irradiated objects must be bounded together and grounded to earth.
3. The system shall have personnel and equipment safety that will meet Indian and International requirements of safety regulations. Some important safety features shall be a) door closer switches, radiation On Indication by glowing of bulb, c) Emergency OFF button, and d) radiation leakage monitoring system at the main door.

#### **Accessories:-**

- Set of Wire type image quality indicators, Intensifying screens that are required for weld defect analysis must be provided with the quote.

## **2. Ultrasonic flaw detector ( Configuration 1)**

#### **Required features:**

- Built-in DGS/AVG curves for time proven flaw size evaluation
- TCG (Time Controlled Gain) which compensates for amplitude decay with distance. A very useful feature.
- Dynamic DAC curves which allow change of Test Range and Gain after plotting them
- Built-in software for flaw evaluation as per AWS standard

#### **Technical Specification**

- Test Range 10 mm to 5 meter (in steel) with definite preset values. Test range should be adjustable in steps of 1mm.
- Velocity : Adjustable between 1000 m/sec to 9999 m/sec.
- Delay: Variable from 0 to 3000 mm and adjustable in step of 0.5 mm (0.02 in).
- Gain: 100 dB calibrated gain adjustable in 0.5, 1, 2, 6, 12 or 20 dB step.
- Rejection:0 to 100% FSH with LED indicator
- Rectification: Full-wave rectified with filtering
- Frequency:Broad Band amplifier 0.5 MHz to 15 MHz.
- Test Modes:Pulse echo and transmit/receive.
- Transmitter: Transmission pulse Negative spike with selectable high or low power
- (10)Damping: Selectable between high / low.
- Freeze/Peak Freeze: A- Scan Freeze and Peak Freeze must be available. In Peak freeze it should hold echo dynamic pattern which is useful during angle beam probing to locate peak signal.
- Monitor: Dual gate adjustable in 1% of Screen width with Positive/Negative logic, Gate Expand modes. In Gate Expand the range expands to width of the gate.
- A-Scan memory : 200 Trace Patterns can be stored (with Note/Detail) recalled, printed or transferred to PC via RS-232 serial port
- Calibration Set-up: 50 different calibration set-ups can be Stored and Recalled
- Software: DGS Interface software for transferring A-Scan from detector to PC should be possible.
- Printer Attachment: IBM compatible Printer having serial port should be directly attachable to main unit for printing of stored A-Scan waveform with calibration data
- ReferenceA-Scan:Reference A-Scan pattern of standard test object could be saved and recalled in the background for easy comparison during testing.
- DAC: Dynamic DAC curve need be Digitally plotted on screen with -6dB and -14dB DAC curves. DAC curve can be set as flaw monitor gate. Using minimum 2 to maximum 10 points DAC curve can be plotted.
- DGS:Defect size evaluation should be possible to perform using predefined probe settings and custom probe set-ups. Defect size is directly displayed in ERS value (Equivalent Reflector Size).
- Digital Readout: Thickness/Depth can be displayed in digital readout when using a normal probe and Sound path, Surface Distance and Depth are directly displayed when angle probe is in use. Measurement point should be selected as Peak or Flank. Measurement of Echo height, ERS value, dB diff of DGS curve to single height, Echo height w.r.t. should be possible.
- Video Output:Composite video signal (PAL) output for connection to a TV.



- Battery operation using Lithium-Ion Battery pack 14.4VDC, 4AH,= should be possible.

### **3. Ultrasonic flaw detector ( Configuration 2)**

**This unit shall have the following salient features:**

#### **➤ Thickness Survey**

- Encoded B-Scan
- Measurement resolution of 0.01mm
- Test Range : 2.5mm to 10 meters (Steel)
- Auto Tracking for immersion testing and thro' coating/Oxide Scale Thickness Measurement.
- Minimum thickness capture mode.
- Powerful 'Thickness Data Management Software' for thickness logging in Sequential, 2D and 3D file configurations.
- Dual independent gates with different colours for two separate measurements.

#### **Flaw Detection**

- Colour coded skips/legs during weld inspection
- Peak Freeze/Active Echo Dynamic feature.
- Tuned Amplifier for better performance.
- RF display for better measurement accuracy and flaw characterization.
- Auto Calibration / Two point calibration.
- PRF down to 4 Hz for large objects / forgings to avoid phantom echoes.
- Simultaneous display of four measurement values.
- Frequency down to 250 KHz (0.25 MHz) for checking composites and highly attenuative materials
- Probe frequency upto 20 MHz for testing on low thicknesses and better sensitivity.

#### **Flaw Sizing**

- Dynamic DAC, DGS/AVG,TCG features and AWS software (AWS D1.1/D1.5).
- DAC as per ASME, ASME III, JIS.

#### **Memory**

- On-board memory of 500 A-scan, 20,000 thickness data, 50 B-scan, 50 set-ups.
- Virtual unlimited storage capacity extension thorough the use of USB removable disc (pen drive).

## **Communication / General**

- Rotary scroll knobs for analogue feeling.
- USB port for connectivity with PC and peripherals.
- World-class Li-Ion battery with option of using 6 normal C size alkaline batteries.
- VGA output for external monitor or video projectors / beamers.
  
- Complies to EN-12668 and ASTM E317.
- Five options of display background colours including black and white for day light viewing.
- All joints with gasket for IP sealing.
- On-board battery charger. Optional external charger
- In Real-time RF A-Scan and TOFD D-Scan. After collecting data, stored data/A-Scan pattern could be reviewed using cursor.

## **Technical Specifications**

### **Pulser / Receiver**

- Test Range: 2.5mm to 10 meter of steel
- Velocity: 1000m/s to 15000 m/sat preset intervals
- Delay: Variable from -10.0 to 2000 mm.
- Gain: 100 dB calibrated gain which is adjustable in steps of 0.1, 0.5, 1, 2, 6 or 12 dB.
- Rejection: 0 to 100% FSH with LED indicator.
- Rectification: Full-wave, Half wave -ve, Half wave +ve and RF mode.
- Frequency: It must be tuned by an amplifier with four bands: (a) 0.2 MHz to 1 MHz (b) 0.5 MHz to 4 MHz (c) 0.8 MHz to 8 MHz (d) 2 MHz to 20 MHz
- Test Modes: Pulse echo and Transmit/Receive.
- Transmitter: Transmission pulse Negative spike. (Pulse rise Time<10ns) and with selectable high (300 Vp) or low (250Vp)power.
- Dampin: It must be high/low is selectable (High=45 ohms, Low=345 ohms)
- Linearity deviation Vertical :  $\pm 3\%$ , Horizontal:  $\pm 0.5\%$

### **Monitor**

- Monitor: Dual gate adjustable in 1% of Screen height with, Positive/Negative Logic, Gate Expand, Interface trigger modes.
- Gate Expand: Expands Range to width of the gate.

### **Memory**

- A-Scan memory 500 Trace Patterns can be stored (with Note/Detail) which can be recalled, printed or transferred to PC via USB. Unlimited no. of A-Scan can be directly stored in USB Disk with auto file naming.

- Calibration Set-up Memory: 50 different calibration set-ups can be Stored and Recalled.
- B-Scan memory: 50 B-scan Patterns can be stored (with Note/Detail) which can be recalled or transferred to PC via USB. Unlimited no of B-Scan be directly stored in USB Disk with auto file naming.
- T-LOG:20,000 readings can be stored in 20 different files. Five Different types of templates are available for file creation. Stored readings can be recalled or transferred to PC via USB. Unlimited no. of Thickness readings can be stored in USB Disk with auto file naming.

### **Flaw Sizing**

- DAC Dynamic DAC curve can be Digitally plotted (Smooth parabolic curve) on screen with selectable additional offset curves from 0 to 14 db in 0.1 db selectable steps. DAC curve can be plotted using minimum 2 to maximum 10 points.
- TCG: After plotting DAC, TCG (Time Corrected Gain) must be activated for equalizing echo heights.
- Built-in Software for evaluation of defect in accordance with AWS standards (AWA D1.1/D1.5).
- DGS Defect size evaluation based on 18 predefined probe data and one custom probe set-up per memory location. Defect size is directly displayed in ERS value. (Equivalent Reflector Size).

### **Measurements**

- Digital Read Out: Thickness/Depth may be displayed in digital readout when using a normal probe and Sound Path, Surface Distance and Depth of echo signals of GATEa / GATEb are directly displayed when angle probe is in use. Measurement point can be selected to be Peak or Flank. Echo height, ERS value, dB diff of DAC/DGS curve to signal height, Echo height with respect to DAC in terms of percentage or in dB can be measured, T-Minimum, Travel distance can be measured when encoder is connected and time of travel during Freerun B-Scan.

### **Communication**

- IO Port for Optical Encoder connection to detector for positional detail must be possible. This can be used for Encoded B-Scan.
- Printer Attachment: USB Printer (PCL3 compatible)
- Video Output: VGA video signal output for connecting to monitor/LCD projector.

**Software:** Interface software for transferring A-Scan/B-Scan/T-LOG from the detector to PC is required as standard equipment, It should also create sequential, 2D and 3D configured files for thickness logging.

**Reference A-Scan:** Reference A-Scan pattern of standard test object could be saved and recalled in the background for easy comparison during testing.

**Freeze/Peak Freeze:** A-Scan freeze, Peak Freeze, Active Echo dynamic available.

**Power:** operated by Lithium-Ion Battery pack

#### 4. Ultrasonic flaw detector ( Configuration 3)

**This unit shall have the following salient features:**

##### Thickness Survey

- Encoded B-Scan
- Measurement resolution of 0.01mm
- Test Range : 2.5mm to 10 meters (Steel)
- Auto Tracking for immersion testing and thro' coating/Oxide Scale Thickness Measurement.
- Minimum thickness capture mode.
- Powerful 'Thickness Data Management Software' for thickness logging in Sequential, 2D and 3D file configurations.
- Dual independent gates with different colours for two separate measurements.

##### Flaw Detection

- Colour coded skips/legs during weld inspection
- Peak Freeze/Active Echo Dynamic feature.
- Tuned Amplifier for better performance.
- RF display for better measurement accuracy and flaw characterization.
- Auto Calibration / Two point calibration.
- PRF down to 4 Hz for large objects / forgings to avoid phantom echoes.
- Simultaneous display of four measurement values.
- Frequency down to 250 KHz (0.25 MHz) for checking composites and highly attenuative materials
- Probe frequency upto 20 MHz for testing on low thicknesses and better sensitivity.

##### Flaw Sizing

- Dynamic DAC, DGS/AVG,TCG features and AWS software (AWS D1.1/D1.5).
- DAC as per ASME, ASME III, JIS.

##### Memory

- On-board memory of 500 A-scan, 20,000 thickness data, 50 B-scan, 50 set-ups.
- Virtual unlimited storage capacity extension through the use of USB removable disc (pen drive).

### **Communication / General**

- Rotary scroll knobs for analogue feeling.
- USB port for connectivity with PC and peripherals.
- World-class Li-Ion battery with option of using 6 normal C size alkaline batteries.
- VGA output for external monitor or video projectors / beamers.
- Complies to EN-12668 and ASTM E317.
- Five options of display background colours including black and white for day light viewing.
- All joints with gasket for IP sealing.
- On-board battery charger. Optional external charger

### **Technical Specification**

#### **Pulser / Receiver**

- Test Range: 2.5mm to 10 meter of steel
- Velocity: 1000m/s to 15000 m/s at preset intervals
- Delay: Variable from -10.0 to 2000 mm.
- Gain: 100 dB calibrated gain which is adjustable in steps of 0.1, 0.5, 1, 2, 6 or 12 dB.
- Rejection: 0 to 100% FSH with LED indicator.
- Rectification: Full-wave, Half wave -ve, Half wave +ve and RF mode.
- Frequency: It must be tuned by an amplifier with four bands: (a) 0.2 MHz to 1 MHz (b) 0.5 MHz to 4 MHz (c) 0.8 MHz to 8 MHz (d) 2 MHz to 20 MHz
- Test Modes: Pulse echo and Transmit/Receive.
- Transmitter: Transmission pulse Negative spike. (Pulse rise Time < 10ns) and with selectable high (300 Vp) or low (250Vp) power.
- Dampin: It must be high/low is selectable (High=45 ohms, Low=345 ohms)
- Linearity deviation Vertical :  $\pm 3\%$ , Horizontal:  $\pm 0.5\%$

### **Monitor**

- Monitor: Dual gate adjustable in 1% of Screen height with, Positive/Negative Logic, Gate Expand, Interface trigger modes.
- Gate Expand: Expands Range to width of the gate.

### **Memory**

- A-Scan memory 500 Trace Patterns can be stored (with Note/Detail) which can

be recalled, printed or transferred to PC via USB. Unlimited no. of A-Scan can be directly stored in USB Disk with auto file naming.

- Calibration Set-up Memory: 50 different calibration set-ups can be Stored and Recalled.
- B-Scan memory: 50 B-scan Patterns can be stored (with Note/Detail) which can be recalled or transferred to PC via USB. Unlimited no of B-Scan be directly stored in USB Disk with auto file naming.
- T-LOG:20,000 readings can be stored in 20 different files. Five Different types of templates are available for file creation. Stored readings can be recalled or transferred to PC via USB. Unlimited no. of Thickness readings can be stored in USB Disk with auto file naming.

### **Flaw Sizing**

- DAC Dynamic DAC curve can be Digitally plotted (Smooth parabolic curve) on screen with selectable additional offset curves from 0 to 14 db in 0.1 db selectable steps. DAC curve can be plotted using minimum 2 to maximum 10 points.
- TCG: After plotting DAC, TCG (Time Corrected Gain) must be activated for equalizing echo heights.
- Built-in Software for evaluation of defect in accordance with AWS standards (AWA D1.1/D1.5).
- DGS Defect size evaluation based on 18 predefined probe data and one custom probe set-up per memory location. Defect size is directly displayed in ERS value. (Equivalent Reflector Size).

### **Measurements**

- Digital Read Out: Thickness/Depth may be displayed in digital readout when using a normal probe and Sound Path, Surface Distance and Depth of echo signals of GATEa / GATEb are directly displayed when angle probe is in use. Measurement point can be selected to be Peak or Flank. Echo height, ERS value, dB diff of DAC/DGS curve to signal height, Echo height with respect to DAC in terms of percentage or in dB can be measured, T-Minimum, Travel distance can be measured when encoder is connected and time of travel during Freerun B-Scan.

### **Communication**

- IO Port for Optical Encoder connection to detector for positional detail must be possible. This can be used for Encoded B-Scan.
- Printer Attachment: USB Printer (PCL3 compatible)
- Video Output: VGA video signal output for connecting to monitor/LCD

projector.

- **Software:** Interface software for transferring A-Scan/B-Scan/T-LOG from detector to PC is required as standard equipment, It should also create sequential, 2D and 3D configured files for thickness logging.
- Data analysis software for improvement of near and far surface resolution and lateral and Backwall echo removal.
- Software for TOFD data linearization.
- **Reference A-Scan:** Reference A-Scan pattern of standard test object could be saved and recalled in the background for easy comparison during testing.
- **Freeze/Peak Freeze:** A-Scan freeze, Peak Freeze, Active Echo dynamic available.
- **Power:** operated by Lithium-Ion Battery pack

## 5. Reference / Calibration Blocks kit for ultrasonic testing

They shall be of

- IIW type, conforming to IS - 4904 - 82, Material mild steel.
- Miniature Calibration block conforming to IS - 4904 - 82 with wooden box, Material mild steel.
- Step block with ten steps from 1mm to 10mm, Material mild steel.
- Area / Amplitude set ( 1 set = 8 blocks ).
- Distance / Area Amplitude set ( 1 set = 10 blocks ).
- Distance / Amplitude set ( 1 set = 19 blocks ).

## 6 Probes kit for Ultrasonic testing

- Normal probes: These with BNC connector and ES 45 protective membrane and following frequencies 0.5, 1.0, 2.0, 2.5, 4.0, 6.0 MHz and all of 24mm probe diameter.
- Normal probes: These with BNC connector and ES 24 protective membrane and following frequencies 0.5, 1.0, 2.0, 2.5, 4.0, 6.0 MHz and all of 10mm probe diameter.
- TR probes of 20mm diameter and of frequency 1.0, 2.0, 4.0 MHz
- Angle probes (1) 38 Deg. 2 MHz, (2) 45 deg. 4 Mhz, (3)60 Deg. 2 MHz, (4) 70 Deg. 4 Mhz, (5) 80 Deg. 2 MHz, (5)90 Deg. 4 Mhz
- Angle probes: Probe, 5 mm dia crystal size,
- MHz. Freq. Fitted with Microdot Socket
- 5.0 MHz. Freq. Fitted with Microdot Socket
- Flat, 45 Deg. Wedge for WKK Probes
- Flat, 60 Deg. Wedge for WKK Probes
- Flat, 70 Deg. Wedge for WKK Probes
- Curvature Wedge, 45/60/70 Deg. For WKK Probes (one each angle and radius of 5mm)
- Probe connectors and cables for probes above.

## 7. Dual frequency eddy current flaw detector

### Required features

The unit or kit required is meant to detect cracks, pin-holes, open welds, voids, inclusions, concentrated porosity, weld defects, slivers, opened up skin laminations, deep pittings as well as mechanical damage in metal tubes, bars and wires.

Ferromagnetic, non-ferromagnetic as well as austenitic materials can be inspected by the system in Online, Offline, Inline and Spool-to-spool configurations.

The inspection capability should be as per API, ASTM, DIN, BS, ETTC, JIS, IS or other standards.

With the unit it should be possible to an encircling test coil for full body inspection or with a segment test head for inspection of the weld zone.

### Specifications

- Frequency Range : 1 KHz to 1000 KHz
- Test Channels : 1 Differential + 1 Absolute, Optional simultaneous multi-frequency operation (up to 2 frequencies / 4 channels)
- Differential Gain : 14 dB to 91.9 dB in steps of 0.1 dB
- Absolute Gain : 0 dB to 59.9 dB in steps of 0.1 dB
- Phase : 0 deg to 359 deg in steps of 1 deg
- Filters : Independently adjustable High Pass and Low Pass. Can Auto-track in online configurations
- Thresholds : Upper, Lower, Third, Sector
- Evaluation Modes : Phase Sensitive (differential channels), Amplitude (all channels), Sector (Phase+Amplitude) (differential only)
- Balance :
  - Differential channel: Non-balancing
  - Absolute channel: Smart auto-balance
- Data Storage : Hard Disk
- Printers Supported : External PCL-3 compatible parallel-port printers
- Setup : Manual, Visual and Automatic
- Tube Diameters : 1 mm to 219 mm for encircling test heads, 25mm to 520mm for segment test heads
- Test capability : API 5L/5LX, ASTM A450, BS 3889, ETTC, JIS and several other international standards
- Paint Markers : Two for differential, one for absolute channel
- Screen : TFT LCD



- Digital Outputs : Threshold Crossings, Result, Paint Markers
- Test Automation : External PLC

### **8. Yoke type magnetic particle tester**

The unit shall have

- Pole Spacing: 0 to 300 mm through articulated legs
- Pole Face Area: 25 mm x 25 mm
- Power Supply: 230 V  $\pm$  30 V, Single Phase, 50 Hz, 5 Amps A.C.
- Input Current: 2 Amps (max)
- Magnetization: Longitudinal
- Magnetic Field: A.C. Constant, H.W.D.C, Variable
- Flux Density: Approx, 10600 lines of force/cm<sup>2</sup> at 100 mm pole spacing
- Controls: i) Push Button On-Off for Operation, ii) Toggle Switch for A.C./HWDC selection, iii) Potentiometer for Infinite Step (Step less)
- Lifting Power: a) H.W.D.C.: 28 Kg at 100 mm spacing, b) A.C.: 5 Kg at 100 mm spacing
- Duty Cycle: 50% on 5 Minutes time cycle
- Bump Test for Kit: Withstands 40 g, 4000 bumps
- Test Process: Dry or Wet
- Test Method: Continuous or Residual
- Test Technique: Yoke Magnetization
- Test Particles: Visible, under white light, Fluorescent, under Black Light
- Accessories
  - BHEL Test block
  - Pie field indicator
  - Spring loaded contact clamps
  - Test piece for testing longitudinal field of yoke type crack detector
  - Prod sets and prod cables

### **9. Liquid dye penetrant test kit**

This kit shall contain

- a. Penetrants - Visible and Fluorescent, in 1 literl packing
- b. Developer - in 5 Liter packing
- c. Cleaner - in 5 Liter packing
- d. Ni.Cr. Test panel
- e. Aluminum Comparator

### **10. Portable/ Laboratory Induction Melting Furnace**

#### **Features**

- Fully automatic control.
- Automatic power regulation.

- PID controller for temperature and digital temperature indicator
- Feather touch controls.
- Simple in operation. Suitable for Research and Development purpose and precious metal melting
- All safety precautions provided.
- Lower power consumption.
- Reduced metal loss on remelting
- Continuous melting of metal with chilling plant provided
- Perfect mixing of alloys due to auto stirring

Power supply	3 phase 415V 50Hz
Power rating	Up to 15 kW
Capacity of crucible	6 kg of liquid copper
Operating temperature ( Maximum)	1500-1600°C
Crucible type	Silica or graphite
Temperature measurement	Digital/Thermocouple type
Cooling water Temperature	20 to 35°C
Water pressure	4 bar
Water flow rate	Commensurate with water cooling requirements
Chilling unit	Capacity as required
Other accessories	Step down/step up transformer, water softening unit

## 11.SPECIFICATIONS FOR HIGH CYCLE FATIGUE SYSTEM

### 1. Details of Load Frame

- Fully integrated 25 kN servo-hydraulic test system with standalone load frame assembly
- Configuration: Load-frame with manually moveable top crosshead and actuator mounted on bottom platen supported on base frame enclosing pump and controls.
- Noise during routine operation not to exceed 65-70 dB
- Power: Single phase 220V only, 3-phase supply unacceptable
- Load frame - 2 column, 25 kN dynamic capacity
- Column spacing - ~400 mm
- Column diameter - 40 mm
- Vertical daylight - ~700 mm

### 2. Servo-Hydraulic Actuator Assembly

- 25 kN fatigue rated double acting, double ended, equal area actuator with an integrated manifold, anti rotate fixture and a monolithic piston design.
- Inline mounted LVDT for displacement measurement of actuator
- Actuator manifold mounted with servo valve of suitable capacity, and accumulators

- Total stroke: 50 mm
3. Fatigue rated load cell

- 25 kN dynamic capacity
- Static capacity : 150% of rated capacity
- Precision machined shear-web type design for protection against side loads and high stiffness
- Fitted with 350 Ohm precision transducer class strain gauges)
- Conditioner including the shunt calibration
- Linearity : 0.3% of full scale
- Accuracy: 1% of readout
- Resolution : 0.05% of full range

4 Servo Hydraulic Power pack

- Contamination insensitive servo-hydraulic power pack of 3.8 LPM flow, 210 bar, 1.5 kW system operating on single phase AC supply
- Variable frequency drive based control hardware to achieve required combination of flow and pressure from hydraulic power pack with suitable gear pump.
- Relief valve to limit system pressure and electrically adjustable pressure regulation to set pressure from zero to 210 bar. Shall be incorporated with trip protection against over temperature, low oil level, filter clogging, phase failure and motor overload safety interlock.
- Remote or local power pack operation with suitable return line filter, Pressure transducer for power pack pressure sense and temperature sensor.
- Radiator based natural air-oil cooling unit for 4 LPM HPS

5. Digital Servo Controller

- High performance 32-bit controller integrated into test system and compatible with off-the-shelf notebook personal
- Computers running MS-Windows and USB interface preferred.
- Stroke, load and strain signal conditioners with 32-bit data acquisition at up to 7.5 kHz.
- 32 bit servo loop update at up to 8 kHz.
- Auto calibration for all strain channels
- Mother board with stroke/high level, load, strain & encoder channels - 1 each
- Digital IO including pump control and sense - 8
- D - A output - 2 Channels
- External cable set ( for 3 transducers, one servo)
- Suitable software

6. Computer Specifications:

- Laptop of latest high end specification .
- Microsoft Windows XP Professional operating environment and MS-Office basic edition.
- All required cabling must be provided with supply.

- Accessories shall be quoted separately.

#### 7. Accessories for High Temperature HCF/LCF Testing

- High Temperature Three Zone Box Type Furnace capable of operating up to  $\geq 1000^{\circ}\text{C}$
- Dimensions Internal:  $\sim 8''$  W x  $\sim 8''$  D x  $\sim 12''$  H
- Temp Accuracy better than or equal to  $\pm 2$  deg. C
- Power Capacity: 5800 Watts / 25 Amps @ 230 VAC, 1Ph, 50 Hz.
- Thermocouple: K type and connector with mounting port
- Quartz Glass view port of 100 x 100 mm dimensions for viewing the specimen during tests
- Shall include mounting brackets on to the material test system
- Furnace Controller: Digital furnace control system with PID Control
- Standalone unit
- Heating rate up to 15 deg. C/min
- Temperature accuracy  $\pm 2$  deg. C

#### 8. High temperature Mechanical LCF grip assembly

- Force rating: up to 25 kN, Operating temperature: up to 900 deg. C
- Manual lockable and self aligning, Zero backlash,
- Light weight and easily mountable without special tools
- shall include High temperature mounting cups for testing
- M8 & M10 threaded specimens
- One set of spiral washer for positive locking of grip on actuator and load cell side.
- Water cooling unit for grip cooling complete with hoses and pump

#### 9. High Temperature Axial Extensometer Specifications:

- Gage length: 12.5 mm, Measuring range:  $\pm 1.5$  mm
- General purpose extensometer for axial tensile, compression and cyclic testing
- Strain gauged devices, making them compatible with any electronics designed
- Temperature Range: up to 900 degree C
- Cable: Ultra-flexible cable, 2.5 m standard

#### 10. Test Control software for HCF and LCF testing according to

- ASTM E 466 and ASTM E 606 respectively

#### 11. Grip-hoist- where necessary

#### 12. Spares:

Essential recommended Spare Parts for three years of trouble-free operation.

#### 13. Installation, commissioning & training:

System Installation, System commissioning & software training to be done by factory trained Service Engineer, at RGUKT's Installation site, for two weeks at no extra cost.

14. Load cell & extensometer calibration:

Both the load cell & extensometers needs to be calibrated during Installation.

15. User list:

Vendors should have supplied these systems, in the last three years, to reputed laboratories/ Institution of National Importance in India and the user list needs to be enclosed.

16. Compliance:

Vendors must provide a compliance statement (point wise) along with the quote.

17. Freight & Insurance -

The applicable freight on Board, insurance and the delivery charges to Hyderabad Airport shall be clearly indicated. Indicate separately the cost for CIP & CIF (ICD), Hyderabad

**11.Warranty :** The system quoted shall have three years of comprehensive warranty.

### **12.C -RING CORROSION TESTER**

SSC Proof Ring Machine	Should be made of precision machined Steel fully re: to test environment as per NACE Standards TM-017 sub size specimen testing attachment.
Pressure Vessel	Should me made of C-276,40 Kg pressure tested
Testing Temperature	100 – 175 ° C
Proof Ring Timer Panel	One Channel, standard cables, connectors for limit s' with adjustable arms on proof ring stand
Gas Distribution Panel	Includes valves, connections of gas inlet, outlet & me
Testing Temperature	R.T/100 – 175 ° C.

### **13.FCAW/MIG/MAG WELDING UNIT**

#### **Features**

- The offered equipment shall be suitable for semiautomatic FCAW/MIG/MAG welding process using flux-cored and solid wires of carbon steel, low-alloy steel and stainless steel.
- The equipment shall be suitable for welding in all positions with pure argon, carbon-di-oxide or argon plus carbon di-oxide gas mixture as shielding gas and also for welding with self-shielded flux-cored wires.

#### **Configuration**

It shall consist of

- 1) Welding Power-source,
- 2) Wire feeder unit,
- 3) welding torch Type A,
- 4) Gas Regulators for (Ar + CO<sub>2</sub>) Gas Mixture or CO<sub>2</sub> Gas,
- 5) CO<sub>2</sub> Gas Pressure Regulator,
- 6) Flow-Meter and Heater Unit,
- 7) Set of inter-connecting cables/hoses with quick-fix end couplings,
- 8) Consumables & Spares for Welding Torches,
- 9) Electrical & Mechanical Spares for Power-source and Wire-Feeder

#### **A. Power Source**

- Inverter Controlled with IGBT and Constant Potential type, even with a fluctuation of  $\pm 10\%$  in the Input Voltage
- Bidder shall indicate the Switching Frequency of the Inverter Circuit and the maker of IGBT used
- Current rating: 400 Amps. @ 60 % Duty Cycle with suitability for working at a minimum of 300 Amps. At 100% Duty Cycle.
- Operating Range : a) Voltage - 20 Volts to 50 Volts (continuous control)  
b) Current -50 Amps. To 400 Amps. (Continuous control)
  
- Power Input :  $415 \pm 10\%$  V AC, 3 Phase,  $50 \pm 2\%$  Hz, through a 3 Wire System [4th wire for EARTHING] – No Neutral Conductor
- Provision of one Single Phase AC tapping point in the Power source, for the gas heater input power supply [ 230 V – AC Supply]
- Auxiliary Power for Wire-Feeder Unit : Low voltage (like 48 V/110V) auxiliary power tapping point in the Power source
- Weld Stop Condition : No globule formation at the wire tip , at the time of weld stopping
- Gas Flow Setting: Gas Flow Check Push Button for Gas Solenoid Valve actuation in weld switch in “OFF” position.
- Compulsory Features : The Power source shall have Features like a) Gas / Wire Inching Facility, b) Spatter Control Facility, c) Gas Pre-flow / Post-flow Facility, d) Crater Control & Fill
- Insulation: Class "H" preferred – Tropical Working Conditions
- Machine Cooling Forced Air Cooling with interlock for tripping of the welding machine.
- Power source protection: a) Inbuilt protection for the IGBT/Power-source against Thermal / Overload / Short-Circuit conditions., b) All PCBs shall be sprayed with mould coating to prevent damage from dust and grinding particles., c) Machine Design to ensure proper earthing for the machine and its peripherals, d) Measures to nullify the effects of Electro-Magnetic Induction
- Power Source Model: Bidder has to specify the Model of Power-source Offered.

## **B. WIRE-FEEDER UNIT**

- Burn-Back Control Compulsorily to be provided
- Wire Sizes/Solid 0.8 mm to 1.6 mm (Solid Wires)
- Wire Sizes/Cored 1.0 mm to 1.6 mm (Self-Shielded and Flux Cored Wires also)
- Wire Feed Speed 1.0 to 18.0 mtrs. / min.
- Wire Spool Weight Facility to hold wire spools of 5 to 10 kgs. Of weight and spool diameter of 300 mm
- Brake Torque on Wire Feeder Hub Shall be of adjustable.

## **C. WELDING TORCH**

- Make: Reputed brand like OTC / DAIHEN / DAIDEN (JAPAN)
- Type Goose-Neck, Gas cooled
- Shielding Gas CO<sub>2</sub>, Argon or Mixture of CO<sub>2</sub> & Argon
- Wire Sizes/Solid 0.8 mm to 1.2 mm
- EE.6 Wire Sizes/Cored 1.2 mm to 1.6 mm (Self-Shielded / Flux-Cored Wires)
- Wire Material Carbon & Low Alloy Steel, Stainless Steel, Aluminum
- Torch Type A) – Rating 300 / 350 Amps. @ 60 % Duty Cycle Torch with 3.0 meter long cable.

## **D. GAS REGULATOR, FLOW METER AND HEATER**

- To regulate CO<sub>2</sub> Gas Pressure, Flow Rate and for Heating the CO<sub>2</sub> Gas, to avoid ice formation.
- Power To draw from Single Phase AC Power Supply from Power source ( 230 V - AC)
- Pressure Gauges: Preferably 2 Nos. – To indicate independently cylinder pressure and gas delivery pressure

## **E. MANUALS**

- Manual shall contain all instructions for machine installation and welding trial testing, in sequence.
- Manual to give general circuit diagrams, showing the interconnection of various elements and also details on PCBs [Printed Circuit Board] like tapping voltages, main electronic elements' specifications and ratings, etc.
- Manual to give other details like trouble-shooting chart, weld parameters selection for various base metals, etc.
- Master List of Parts & Spares used in the machine with Make, Model, Rating, etc. shall be provided.

## **F. SPARES (To be quoted separately item-wise)**

Power Source: All type of Spares including IGBTs, PCBs (Printed Circuit Board) Control-Transformers, Cooling Fans, etc. recommended for 3 years of operation

- Wire-Feeder Unit: Spares such as feed-rolls (suitable for 0.8, 1.0, 1.2 and 1.6 mm dia. suitable for Solid & Cored Wires), wire-feed motor, wire guides, control PCB cards, connectors, etc. shall be offered.
- Welding Torch Consumables & Spares such as Liners & Contact Tip

#### **L. GENERAL CONDITIONS**

- Inspection: If necessary, the equipment shall be offered for inspection at supplier's works for performance evaluation by RGUKT prior to dispatch.
- Commissioning: The equipment shall be commissioned at free of cost by the supplier's representative at RGUKT's place of installation.
- Training: The Supplier's Service engineer shall give training in the Operation and Maintenance (mainly on electric/electronic troubleshooting) of the Machine for RGUKT Staff, after the successful commissioning of the Welding Machines
- The equipment shall be warranted for a period of thirty six months from the date of commissioning.

### **14.FRICTION STIR WELDING UNIT**

#### **Scope**

- FSW machine should be NC based and must have features of acquisition of axial and radial forces, speed fluctuation data and online display of data. Machine will be used for both ferrous and non-ferrous materials. Machine must have high quality LM guides, spindle bearings, touch panel etc.

#### **Features Required**

- Z axis (Axial) stroke : 90 mm or higher
- Z axis thrust: 18 kN or higher
- Z axis movement: Servo mechanism
- X axis (radial) stroke: 300 mm or higher
- X axis thrust: Not less than 2.5 kN
- X axis movement: Servo mechanism
- Y axis movement: Manual or servo-mechanism
- Spindle speed: 3000 rpm or higher
- Spindle motor: 10 kW or higher
- Servo motor: BOSCH REXTROTH or similar
- Spindle motor & drive: SIEMENS / BOSCH REXTROTH or similar

### **15.LABORATORY DOUBLE HEADED ROLLING MILL**

#### **Features**

- Double headed Unit to facilitate rolling of sheet on one side and rod rolling
- Chilled cast iron rolls of high surface hardness
- Adjustable Screw down mechanism to keep the roll gap constant during r



- Gear box coupled with suitable pinion drive to transfer the drive from motor to the roll
- Gears made of EN24
- Lubricated gear drive to eliminate the friction and noise

### **Technical specifications**

1. Roll width : >150 mm
2. Roll diameter : 75- 101 mm
3. Wire grooves : 0.71 to 12 mm
4. Maximum sheet width that can be rolled : 150 mm
5. Rolls made of : Case hardened High carbon chromium steel
6. No of half round grooves : 2
7. Roll speed : One or two fixed speeds
8. Lubricating system : Automatic
9. Power input supply : 3-Phase AC 50Hz
10. Power rating : 4 to 6 H P or as required

### **16. PLANETARY MILL**

1. Number of working station : 2 (Four), each 500 ml;
2. Useful capacity: 225 ml or higher;
3. Grinding Bowl, lid and Capacity: 2 No's. of 500 ml Zirconia bowls with Zirconia lids and 2 No's of 500 ml corundum (sintered alumina) bowls with Sintered corundum (sintered alumina) lids
4. Grinding Ball, size and No of balls : zirconia, 10 mm dia, 400 No's and Sintered corundum (sintered alumina), 10 mm dia, 400 No's
5. Additional lock-system for all grinding bowls 500 ml volume-2 No's (for the transport of the closed grinding bowl with gassing lid)
6. O-ring for gas-tight and dust proof seal
7. Maximum feed particle size: up to 10 mm;
8. Final fineness: < 1  $\mu$ m (Documentary evidence must be attached.);
9. Transmission ratio: 1: -2.19 or better;
10. Rotational Speed of main disk: 50 - 400 rpm or better;
11. Compensation of unbalance of all grinding bowls using a compensation mechanism which is easy to operate;
12. Cooling of the grinding chamber with a built-in fan for long grinding times.

13. RS232 interface
14. Programmable interval and break times and rotation direction (clock wise & anti clock wise)
15. Safe lock clamping system; Grinding in Dry and wet conditions;
16. Main disc diameter  $\geq 250$  mm;
17. Warranty: 3 years

### **17. 50 TON HYDRALLIC POWDER COMPACTING PRESS COMPRESSION**

- Required features
- These Powder compacting Hydraulic presses are used for compacting various materials such as Ceramic powder like silicon carbide, zirconia, Inter-metallics, friction material, Metallic alloy powders and Graphite.
- The maximum press capacity shall be 50 tons.
- The press operations must be controllable, programmable, and automated
- The press should have variable pressure and speed controls
- It should have facility for heating the platens up to 400 °C.
- It should have double acting rams and Top, bottom and auxiliary ejection systems
- Full pressing force delivered at any point in stroke with full tonnage achieved throughout stroke\Faster set-ups.
- Ability to accommodating different dies
- Built-in overload protection, thus ensuring no need to worry about overloading
- Presses designed with safety interlocks that preclude damage to personnel and the press itself
- Press must allow flexible powder compaction so to create different parts at different yield strengths from simple to complex shapes
- Fully integrated press system that is safe for explosive and combustible powder applications
- Press should have sturdy frame with column construction
- Press should have diagnostic control option
- Press should have all the instrumentation to measure the stroke, force or pressure, displacement, die cushion continuously in a typical pressing operation.

Capacity (tonnage)-50 Ton

Plate size min 300mm×300mm

Delight	min 300mm
Stroke	min 250mm
Heating method	Electrical
Motor H.P	Suitable capacity
Max.working pressure	200 kg/cm <sup>2</sup>

**General terms and conditions to be followed by the suppliers/manufacturers**

1. Any supplier / manufacturer is eligible to quote the rates for items partially or completely to which tenders are called for
2. While quoting the prices, it should be combined with prices of the accessories insisted in the specifications
3. Where ever additional accessories are essential to be quoted , however, allowed to do so by quoting separately
4. supplier / manufacturer should provide the clear data of utility requirement list
5. supplier / manufacturer should provide the instruction manual for both the experimental setups and instruments
6. supplier / manufacturer should provide the sample data & calculations and standard results for comparison in case of experimental setups

### Financial Bid

#### Price Schedule for Goods offered

Please quote amounts in numerals and words at each place.

Sl. No.	Instrument Name	Total Qty	Unit Price (In Rs) Without Taxes & Duties	Taxes & Duties on Unit Price	Unit Price (In Rs) With Taxes and Duties T(4+5)	Total Price (In Rs) (3*6)
1	2	3	4	5	6	7
1	Radiographic flaw examination unit	3				
2	Ultrasonic flaw detector (Configuration 1)	3				
3	Ultrasonic flaw detector (Configuration 2)	3				
4	Ultrasonic flaw detector (Configuration 3)	3				
5	Reference / Calibration Blocks/ probes for ultrasonic testing	3				
6	Reference/Calibration blocks for ultrasonic testing	3				
7	Dual frequency eddy current flaw detector	3				
8	Yoke type magnetic particle tester	3				
9	Liquid dye penetrant test kit	6				
10	Portable/Laboratory induction melting furnace	3				
11	High cycle fatigue testing system	3				
12	C-Ring corrosion tester	3				
13	FCAW/MIG/MAG welding unit	3				
14	Friction stir welding unit	1				
15	Laboratory double headed rolling mill	3				
16	Planetary mill	3				
17	50 ton hydraulic power compact press	3				

**(Signature of the Bidder)**

**Note:** Please quote for imported equipments in Foreign Currency only. The exchange rate as on date of opening of the price bid will be applied and the comparative statement will be drawn in Indian Rupees. Wherever quoted in Indian Rupees such price will be considered for comparison.

**ANNEXURE-1**

**RGUKT. Ref. No: *RGUKT/Proc/MME/NDT /T15/E-2013***

**Bid Security(EMD) form**

( To be issued by a Nationalized Bank in India and having at least one branch in Hyderabad)

Whereas.....(here in after called “ the Bidder”) has submitted its bid  
Dated.....(Date). For the execution of .....(here in after called “the Bid”)

KNOW ALL MEN By these present that WE.....of .....having our

Registered office at .....(hereinafter called the “Bank”) are bound unto  
the Rajiv Gandhi University of Knowledge Technologies,. (hereinafter called “The RGUKT”) in  
the sum of .....for which payment well and truly to be made to the said RGUKT itself,  
its successors and assignees by these presents.

The conditions of these obligations are:

1. If the bidder withdraws its bid during the period of bid validity or
2. If the bidder, having been notified of the acceptance of its bid by the RGUKT during the period of bid validity
  - 1) Fails or refuses to execute the contract form if required; or
  - 2) Fails or refuses to furnish the performance security, in accordance with the bid requirement;

We undertake to pay the RGUKT up to the above amount upon receipt of its first written demand, without the RGUKT having to substantiate its demand, provided that in its demand the RGUKT will note that the amount claimed by it is due to it, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including 45 days after the period of the bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

Place: Signature of the Bank

Date: and seal.

**ANNEXURE-II**

**RGUKT Ref. No:RGUKT/Proc/MME/NDT/T15/E-2013**

**PERFORMANCE SECURITY FORM**

( To be issued by a Nationalized Bank in India and having at least one branch in Hyderabad)

To :.....( Address of RGUKT)

WHEREAS..... (Name of Vendor) hereinafter called “the Vendor” has undertaken, in pursuance of

Contract No.....Dated,.....(Date), to supply.....called “the Contract” AND WHEREAS it has been stipulated by you in the said Contract, that the Vendor shall furnish you with a Bank guarantee by a Nationalized bank for the sum specified therein as security for compliance with the supplier’s performance Obligations in accordance with the Contract.

WHEREAS we have agreed to give the Vendor a Guarantee:

THEREFORE WE hereby affirm that we are Guarantors and responsible to you, on behalf of the Vendor, up to a total of Rs.....and we undertake to pay you, upon your first written demand declaring the Vendor to be in default under Rs..... (Amount of Guarantee) as aforesaid without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the .....day of ..... (Date)

Place:

Signature of Guarantors and Seal

Date:

**ANNEXURE-III**

**SUPPLY AGREEMENT FORM**

THIS AGREEMENT made the ..... day of..... (Year).Between the Rajiv Gandhi University of Knowledge Technologies (hereinafter “the RGUKT”) of one part and..... (Name of Vendor) of..... (City and Country of Vendor) (Hereinafter “the Vendor”) of the other part:

WHEREAS the RGUKT is desirous that certain items as described in the bid document and briefly outlined below, should be provided by the Vendor.

Date of tender call:

Title of the project:

Brief outline of the work:

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

In this agreement words and expression shall have the same meanings as are respectively assigned to them in the bid document referred to.

The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.

1. bid documents
2. clarifications issued by RGUKT if any,
3. RGUKT notification of award.

In consideration of the payments to be made by the RGUKT to the Vendor as hereinafter mentioned, the Vendor hereby covenants with the RGUKT to provide the **items and to replace defective items during the warranty period** therein in conformity, in all respects, with the provisions of the contract.

The RGUKT hereby covenants to pay the Vendor in consideration of the provision of the items and **to replace defective items during the warranty period** therein, the contract price or such other sum as may become payable under the provisions of the contract at the times and in the manner prescribed by the contract.

Brief particulars of the items which shall be provided by the Vendor are as under:

Items	Quantity	Unit price (Inclusive of all taxes and duties)	Total Amount	Remarks

The Bidder further notes and accepts that:-

- Bidder shall deliver the goods in one single lot within 90 days for indigenous as well as imported equipments also from the date of award of the contract.

<b>Payment terms</b>	
On delivery at user site	<p>Payment for goods and services shall be made in Indian rupees as follows.</p> <ol style="list-style-type: none"> <li>1. 80% of payment will be paid after installation, and demonstrating of satisfactory functioning on site.</li> <li>2. Balance 20% will be paid after 3 months after obtaining the satisfactory certificate from the Director, RGUKT IIIT.</li> <li>3. In case of equipment from foreign country LC will be opened for 100% and 90% of payment will be paid on delivery &amp; submission of documents and remaining 10% will be paid after installation and commission.</li> </ol>
Maximum Damages for late deliveries	<p>Liquidated for late deliveries</p> <p>For delays:- If the supplier fails to deliver any or all of the goods or perform the services within the time period specified in the contract the purchaser shall without prejudice to its other remedies under the contract deduct from the contract price as liquidated damages a sum equivalent to 0.25% of the contract value per day until actual delivery or performance up to a maximum deduction of 10% of the delayed goods or services contract price. Once the maximum deduction is reached, the purchaser may consider the termination of the contract duly forfeiting the performance security etc.,</p>

In addition if the contract is cancelled, the performance security will be en-cashed and forfeited.

- In case, after random sampling of the supplied lot, it is found that there is any non conformance to specifications, the performance guarantee will be en-cashed and forfeited and the bidder will have no claim to any payments. The entire lot will be rejected.
- The supply and distribution of Items supplied shall be done at all the three RGUKT campuses located at



- Basara, Adilabad District
  - Nuzvid, Krishna District
  - R K Valley (Idupulapaya), Kadapa District
- There shall be a warranty period of 3 years and within the warranty period, in case of any damage to the supplied material like breakage, wear and tear, Electrical defects etc., it will be the responsibility of the supplier to make working the damaged material.
- A random sample of any size will be picked from the lot of items delivered by the bidder to the three IITs under the RGUKT. This sample will be subjected to tests, if necessary at labs anywhere in the country to ensure compliance to specifications. If the result indicates non conformance, the entire lot will be rejected and the contract will stand cancelled without any liability on the part of RGUKT. In addition, this event shall lead to the forfeiture of the performance security amount.
    - All disputes and differences of any kind whatsoever arising out or in connection with contract, whether during or after completion of contract will be settled amicably in a spirit of co – operation and the RGUKT decision shall be final on all such matters and shall be binding on the bidder.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year above written.

Signed, and delivered by

Signed, and delivered by

For the Vendor.

For. Rajiv Gandhi University  
of Knowledge Technologies

Vendor's common seal:

RGUKT common seal:

Place

Place:

Date:

Date:

In the presence of:.....

**BID LETTER FORM**

From:

(Registered name and address of the bidder)

To

Rajiv Gandhi University of Knowledge Technologies,

Ground floor, Vindhya C4 Building,  
IIIT-H Campuses, Gachibowli,  
Hyderabad-500032.

Sir,

Having examined the bidding documents and amendments there on, we the undersigned, offer to supply and deliver the Non Destructive Testing Laboratory & other items of Metallurgical & Materials Engineering Department (and other related materials) as the case may be, in conformity with the terms and conditions of the bidding document and amendments thereon in response to your tender call dated.....

We undertake to supply the above mentioned materials, as assigned to us in conformity with the said bidding documents, for an estimated sum of Rs ..... (Total bid amount in words and figures) which may vary in accordance with the schedule of prices attached herewith and coverage options made by RGUKT or its user organization.

If our bid is accepted, we undertake to:

- a. supply the materials according to the time schedule specified in the bid document,
- b. Obtain the performance guarantee from a scheduled bank in accordance with bid requirements for the due performance of the contract, and
- c. Agree to abide by the bid conditions, which remain binding upon us during the entire bid validity period and the bid may be accepted any time before the expiration of that period.
- d. We understand that you are not bound to accept the lowest or any bid you may receive, nor to give any reason for the rejection of any bid, and that you will not defray any expenses incurred by us in bidding.

Place:

Bidder's Signature

Date:

Seal.

### **BIDDER INFORMATION**

1	Name of the organization	
2	Year of establishment	
3	Registered Office Address	
4	Phone No.	
5	Fax No.	
6	Email	
7	Total No. of branch offices in AP	
8	Whether Manufacturer	Yes/No
9	Details of EMD furnished	
10	Details of certificates enclosed.	

**Turn over details of item/product - 2012-13**

<b>S.No</b>	<b>Item name</b>	<b>Nos. sold</b>	<b>Amount (Rs in Lakhs)</b>

**List of Major Customers - 2012-13**

<b>S. No</b>	<b>Customer Address</b>	<b>Full Year of supply</b>	<b>of Item Name</b>	<b>Turn Over (Rs. in Lakhs)</b>

## CHECK LIST

### Important:

The Bidder must ensure that the following details in the check list are furnished along with the bid document. The bidder must also carefully go through all the contents of the BID Document and any additional information/documents, required more than the items listed in the check list below, also shall have to be furnished. Non-furnishing of any required information/document as per the Tender Document will lead to rejection of the bid.

SL. NO	PARTICULARS	PAGE NUMBER
1	Bidder Information	
2	Tender processing fee of Rs.1000/- by way of DD from any Nationalized Bank	
3	EMD (DD/BG) from a Nationalized Bank	
4	Proof of having supplied materials during the FY 12-13	
5	Certificates issued by the firm of CA's regarding turnover of the subject material	
6	Copy of ISO certification	
7	Satisfactory performance certificate from parties	
8	Constitution/legal status of the firm	
9	Copy of registration certificate	
10	Latest income tax returns filed	
11	VAT/CST registration	
12	Latest VAT/CST returns	
13	Power of attorney, where ever applicable	
14	List of Machinery/equipment of the bidder	
15	Number of Employees	
16	List of customers of previous supply of similar/ same items to IITs, NIT's or Central Universities or any Academic Institute of National repute institutions	
17	List of servicing facility centers or work shop with in India	
18	List of present clientele with contact Addresses & Telephone numbers	
19	The hard copies of all uploaded Technical bid documents should be attested by the Gazzetted officer and counter sign by bidder with seal	
20	All other information/documents that are required in bid documents	

NOTE: All pages of the bid documents must be serially numbered and signed.