

**INSTITUTE FOR PLASMA RESEARCH**  
**NEAR INDIRA BRIDGE, BHAT, GANDHINAGAR 382 428**  
**GUJARAT STATE**

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**TENDER NOTICE DATED 26-7-2010**

Itemwise sealed tenders are invited in **TWO PARTS** from reputed and eligible parties for the following.

Sr. No	Tender Notice No.	Item	Qty.	Due Date & Time for		Tender Fee	EMD (Rs.)
				Submission of tender	Opening of tender		
1.	IPR/TN/PUR/014/10-11 <b>(TWO PART TENDER)</b>	Supply, testing, installation and commissioning of Universal Testing Machine	1 No.	15-9-2010 by 1.00 p.m.	15-9-2010 2.30 p.m.	1000.00	65000.00
2.	IPR/TN/PUR/015/10-11 <b>(TWO PART TENDER)</b>	<b>Supply, testing, installation and commissioning of Creep and Stress Rupture Machine</b>	<b>6 Nos.</b>	<b>16-9-2010 by 1.00 p.m.</b>	<b>16-9-2010 2.30 p.m.</b>	<b>1000.00</b>	<b>168000.00</b>

Tender documents are available on IPR Website : [www.ipr.res.in/purchasetenders.html](http://www.ipr.res.in/purchasetenders.html). Tenderers meeting the eligibility criteria mentioned in the tender documents may, at their option, download the tender documents from the website and submit their offer along with prescribed **Tender Fee (non refundable) and EMD** in the form of Demand Draft from any nationalized/scheduled bank drawn in favour of **Institute for Plasma Research** and payable at **Ahmedabad** as per the details given in the tender documents. In case party desires to collect the tender documents by post, they may contact the Purchase Officer along with prescribed tender fee. Tender documents will be issued upto **16-8-2010**. Representative who is going to attend the tender opening should carry an authorization letter from the organization for participation in the tender opening failing which he will not be allowed to attend the tender opening.

**TENDER NOTICE No.IPR/TN/PUR/015/10-11 DATED 26-7-2010**  
**(TWO PART)**

**For Supply, testing, installation and commissioning of Creep and Stress Rupture Machine – 6 Nos.**

**NOTE: THIS IS A TWO PART TENDER. KINDLY SUBMIT TECHNO-COMMERCIAL BID (PART-A) AND PRICE BID (PART-B) SEPARATELY IN TWO DIFFERENT ENVELOPES SUPERSCRIBING TECHNO-COMMERCIAL BID AND PRICE BID IN ONE SINGLE ENVELOPE**

**NOTE:**

1. Full details and specifications of the items and general instructions to be followed regarding submission of tenders are indicated in the tender documents.
2. **Proof for fulfillment of eligibility criteria mentioned hereunder should be submitted along with the tender. If the tender is submitted without valid documents, we shall not consider your offer. Tenders received without proof of eligibility criteria will be rejected.**
3. Tender documents can also be obtained by submitting a written request to the Purchase Officer together with prescribed tender fee, provided that the eligibility criteria is fulfilled. Last date for issue of Tender documents is 16-8-2010.
4. While requesting for Tender Documents, such request shall indicate **the “REQUEST FOR TENDER DOCUMENTS AGAINST TENDER NOTICE NO.IPR/TN/PUR/014/10-11 DATED 26-7-2010”.**
5. The tender fee of Rs.1000/- (non refundable) should be made in the form of **DEMAND DRAFT from any nationalized/scheduled bank drawn in favour of Institute for Plasma Research and payable at Ahmedabad.** Vendor's name and tender number shall be indicated on the reverse side of the Demand Draft.
6. **DD should not be prior dated to the date of advertisement. Separate request letter and separate Demand Draft shall be sent for each tender.**
7. Those who use the downloaded tender documents from IPR Website may submit the prescribed Tender Fee keeping in a separate envelope along with the tender.
8. **Tenders received without the prescribed tender fee will be rejected.**
9. No request for the extension of due date will be considered.
10. Late/Delayed offers will not be accepted.
11. **Tender in a sealed envelope (Technical Bid, Commercial terms and conditions and EMD [Part-A] in one envelope and Price Bid [Part-B] in another envelope) superscribing the envelope with the above tender no., date, due date and brief description of tendered item should be submitted to the Purchase Officer at the above address by 1.00 p.m. on 16<sup>th</sup> September, 2010. Part-A (Techno-commercial**

**bid along with Tender Fee of Rs.1000/- and EMD for Rs.168000/-) will be opened on the same day at 2.30 p.m. in the presence of attending tenderers.**

12. In the event of any date indicated above is a declared Holiday, the next working day shall become operative for the respective purpose mentioned herein.
13. IPR will not be responsible for any delay/loss of documents in transit.
14. Tenders received without the details asked for including proof of eligibility for participating in the tender may not be considered.
15. Tenderers should furnish/enclose full technical details/literature, delivery period and confirm the terms and conditions attached with the tender.
16. **Those who do not meet with the eligibility criteria need not submit Tender.**
17. **Those who are quoting on behalf of their foreign Principals should submit a Proforma Invoice of Foreign Principals in foreign currency.**
18. The Director, IPR reserves the right to accept or reject any offer in full or part thereof without assigning any reason thereof.
19. **Quotations received without EMD will not be considered.**
20. **AUTHORITY LETTER**
  - a. **The representative who is going to attend the tender opening should carry an authorization letter from the organization for participation in the tender opening failing which he will not be allowed to participate in the tender opening.**
  - b. **The tenderers representative, who reaches the venue of the tender opening late, i.e. after the starting time specified for opening of the tenders, may not be allowed to take part in the tender opening. It should be noted that only one representative of each tenderer will be permitted to participate in the tender opening.**

**ELIGIBILITY CRITERIA:** The vendor (a) should be Manufacturer or their Authorized Dealer (In case of Authorized Dealer, attach valid Dealership certificate), (b) must have experience of at least 5 years in supply of equipment for metallography and material testing ( attach proof like copy of purchase orders etc.), (c) must have executed orders with a single value of Rs.50 lakhs and more in the last five years (attach copy of purchase orders) and (d) should capable of providing training of equipment supplied.

**NOTE: Issue of tender documents does not mean that a vendor is qualified to submit tenders. IPR's decision to consider as to whether a vendor has met with the eligibility criteria is final.**

## **Technical Specification for Creep Test Machine**

### **1) Type of creep Tester:**

Supply, Fabrication, testing, installation and commissioning of creep and stress rupture machine for testing in air environment.

### **Special characteristics:**

- ⇒ The machine includes a loading frame with an integral control cabinet.
- ⇒ Machine should have load capacity up to **100 KN**.
- ⇒ The machine should be equipped with a three zone furnace to carry out the tests at high temperatures in the range 200 °C (473 K) to 1000 °C (1273 K) with an accuracy of  $\pm 1^\circ\text{C}$ . High precision, high accuracy temperature controller and power control unit is to be employed to achieve the above mentioned temperature accuracy.
- ⇒ Automatic load lever beam leveling device with over travel trips is required.
- ⇒ The specimen elongation (strain) has to be measured by using **Digital dial gauge** during the test.
- ⇒ Continuous temperature and strain measurements, and also storage and analyses of data are required through computer controlled data acquisition system.
- ⇒ It is required to indicate the elapsed test time by a digital time meter with a zero hour to a full scale reading of 99999 hours, with a resolution of 0.1 hour. The digital meter shall have provision for manual reset to zero hour and with a memory at power break.
- ⇒ There must be a provision to automatically shut off the electrical power to the machine when the specimen breaks.
- ⇒ The operating power for the whole control cabinet and the furnace should be of 230 volts single phase 50 Hz.
- ⇒ The main switch and the other switches for temperature controllers, elevator motors etc. must be provided with suitable good quality circuit breaker for the safety reasons.
- ⇒ A good quality of bright neon pilot light should be used wherever required.
- ⇒ Fuses should be used wherever required and the fuse points shall be easily accessible.
- ⇒ Spirit level should be mounted on top of lever arm in each machine, so that the horizontal position of the beam can be confirmed periodically.
- ⇒ Provision should be there to put off the power to the furnace, in case of overshooting of temperature due to malfunctioning of any of the temperature controllers.

### **2) Standards:**

- ⇒ IS 1828(Part 1): 1991/ISO 7500-1: 1986 Metallic materials-Verification of static uni-axial testing machine Part 1 Tensile testing machines (Second revision)
- ⇒ IS 1828(Part 2): 2002/ ISO 7500-2:1996 Metallic materials- Verification of static uni-axial testing machine-Tension creep testing machine verification of the applied load
- ⇒ IS 3407(Part 1): 1983 Method for creep testing of steel at elevated temperature part 1 Tensile creep testing (1st revision) (superseding IS3408:1965)
- ⇒ IS 3407(Part 2): 1983 Part 2 Tensile creep stress rupture testing (1st revision)(superseding IS 3409:1965)
- ⇒ Standard Test methods for Conducting Creep, Creep-Rupture and Stress-rupture Tests of Metallic Materials ASTM E 606 ASTM E139 testing standard

### 3) **Load Frame:**

- ⇒ Free standing load frame features a small footprint that optimizes laboratory floor space.
- ⇒ Design requires no special foundation (It is recommended that installation be on a level floor that is free from shocks and vibrations that may potentially affect test result.)
- ⇒ There should be provision for vibration isolation with neoprene waffle pads under the weight pan and load frame feet to absorb shock and vibration.

### 4) **Load Cell and Pull rods:**

- Load is applied through a Lever Arm with a single lever ratio of 20:1
- Load range = up to 100 KN
- Load Accuracy =  $\pm 0.5 \%$
- ⇒ High accuracy (Linearity, Repeatability, Hysteresis, Resolution) according to ASTM E4 and ISO7500-1
- ⇒ High measurement range in class 1 according to ISO 7500-1 from 0.2%...100% of nominal load
- ⇒ Extreme low temperature sensitivity
- ⇒ **One calibrated load cell shall also be supplied.**
  
- Pull rods made of nickel-based super alloy having durability greater than 3 years at full load.
- Upper pull rod with spherical bearing, lower pull rod with clamping lever
- ⇒ Axial alignment according to ASTM E 292
- ⇒ No additional alignment cardan joints necessary

### 5) **Furnace :**

- ⇒ **TYPE:** Three-zone vertical cylindrical furnace should be of split construction hinged in the rear. Other end should have provision for locking at top and bottom using CAMLOC type of assembly or equivalent.
  
- ⇒ **Top and bottom Finish Insulation:** Low thermal conducting (low 'K' factor) vacuum cast ceramic fiber insulation to provide minimum heat loss, high temperature capability and for rigid structure.
  
- ⇒ **Exterior Finish:** The outer shell should be made by a bright stainless steel 1.6 mm thick or above. It is preferable to avoid using flanges. Closures at top and bottom of the furnace should fit snugly around pull bars and reduce the heat loss at these points. Provisions must be there to seal the top and bottom of the furnace by the compressed vacuum cast ceramic fiber insulation. Clamps or equivalent can be provided to keep the tight fitting of the above thermal insulation boards to seal the leakages.
  
- ⇒ **Dimensions:**
  - Outer Diameter: 10" (250 mm)
  - Inner Diameter: 3" (75 mm)
  - Height: 12" (300mm)
  
- ⇒ Uniform temperature zone at the middle of the furnace should be at least 100 mm.

⇒ Separate controllers should be employed to control the temperature of each zone.

**Power Controller for Furnace:**

- ⇒ The power supply terminals to the furnace should be kept near the hinges i.e. in the sides of the furnace with the suitable protective covers.
- Heating Element: Kanthal - A1
- Max. Temperature: 1000 °C
- Operating Voltage: 230 V AC single phase 50 Hz.
  
- ⇒ The rear-hinged part of the furnace should be mounted on the machine frame such that the position of the furnace is adjustable vertically.
- ⇒ Integrated, sophisticated control-Algorithm for a precise Temperature along specimen and to prevent Temperature overshooting.
- ⇒ Automatic control setting from 80° C to ...1000° C.
- ⇒ Temperature-tolerances acc. ASTM 139
- ⇒ Interface for 6 Thermocouples (3 for furnace, 3 for Specimen special configuration possible)
- ⇒ Digital display of temperature
- ⇒ Stand alone or PC-operation possible

**6) PID Temperature controller: (Eurotherm make or Equivalent)**

Input

- 1. Temperature range RT - 1000°C
- 2. Input range ± 100 mV and 0 to 10 V dc (auto ranging)
- 3. Sample rate 9 Hz (110 ms)
- 4. Calibration accuracy 0.25% of reading, ± 1 LSD, ± 1°C/F
- 5. Resolution < 1 µV for ± 100 mV range, < 0.2 mV for 10 V dc range
- 6. Linearization accuracy < 1.0 of reading
- 7. Input filter 1.0 to 999.9 seconds
- 8. Zero filter To be available

Thermocouple

- 1. Cold junction compensation Universal Automatic
- 2. Thermocouple break protection To be available
- 3. Output Relay output and control output (4-20 mA)

Control functions

- 1. Modes PID or PI with overshoot inhibition, PD, PI, P only on/off
- 2. Application Heating and cooling
- 3. Auto/manual Bump less transfer
- 4. Set point rate limit 0.01 to 99.99 degrees or display units per minute
- 5. Cooling algorithms Linear
- 6. Tuning: One-shot tune Automatic calculation of PID and overshoot inhibition parameters
- 7. Automatic droop Automatic calculation of manual reset value when using

compensation	PD control
8. Alarm types	Full scale high or low, Deviation high, low, or band

#### General

1. Display	Dual, 4 digit x 7 segment high intensity LED
2. Dimensions	48 x 48 x 103 mm (width, height and depth respectively)
3. Supply	230 V AC, 50 Hz, 10 Watts max
4. Temperature and RH	0 to 55°C RH: 5 to 90% non-condensing
5. Panel sealing	IP65
6. Non-volatile EERPOM	To be available

#### 7) Thyristor Power Control Units: (Eurotherm make or Equivalent)

1. Load type	Constant resistance
2. Power supply	230 V AC, 50 Hz
3. Heater voltage	230 V AC
4. AC current rating	15 A
5. Firing mode	Phase angle
6. Input	4-20 mA DC
7. Manual input	Input impedance 330 kilo ohms
8. Slave output	+10 V
9. Operating temperature	Upto 50°C
10. Mounting	Din Mounting
11. Current limit	Adjusted from 10 to 100%
12. Compatibility	Should be compatible with the above temperature controller

#### Thyristor protection

1. External	High speed fuse
2. Internal	RC snubber

#### 8) Motorized Draw head Assembly:

- ⇒ Provision should be made to prevent the draw head assembly from exceeding the limits during manual or mechanical operations.
- ⇒ There must be a provision to manually operate the draw head motor (i.e. the motor and gear assembly which supports the creep specimen train) electrically to move it up or down. During the test, it should be ensured the draw head motor moves down automatically by the above said beam-leveling unit.
- ⇒ There must be a provision to de-clutch the motor assembly from the gear assembly so that (hand wheel or equivalent) the specimen train assembly can be moved up or down manually.
- Precise, anti-rotation worm gear drive jack with **101 mm (4")** linear travel and powered by a gear reduced high torque motor.
- Flexible coupling for stable, no-jitter continuous draw head motion
- Proximity switches for **non-contact** sensing of lever arm position. (This provides auto-leveling control and prevents damage when the specimen fails.)

#### 9) Grips, Adapter, Fixtures and Accessories:

- ⇒ System shall have suitable fixtures to avoid bending and eccentricity.

- ⇒ Specimen adapters made of nickel-based super-alloy Size from the : M8, M10, M16 with standard pitch
- ⇒ A set of full capacity (room temperature) load train accessories is included with the machine. This hardware provides alignment, pull rods and couplings that accommodate a wide variety of specimen sizes for both room temperature and high temperature trains.

#### 10) Extensometer:

The output of extensometer or auxiliary device of the extensometer system should be suitable for control purposes, readout and recording.

#### Either Mitutoyo's or Baker's Digital Dial Gauge,

[ One Number with each machine ]

- i)
  - Inductive Spring loaded type
  - 0-10 mm range, Stroke
  - Least count 1 micron
  - Linearity deviation: +/- 0.5 % of full scale
  - Repeatability: +/-0.1 % of full scale

#### 11) Controllers and User Interface:

**Measurements:** Stable 6-1/2 Digit Multimeter with 22 bit resolution

- Capable of measuring
  - o Temperature (with thermocouples R, K types, RTDs or thermistor) with accuracy  $\pm 0.2$  °C
  - o DC Volts : upto 300 V with 100 mV resolution
  - o Input Impedance : > 10 G Ohm in 100 mV, 1 V and 10 V range
  - o 2-wire or 4-wire resistance : 100  $\mu\Omega$  to 100 M $\Omega$
  - o 2 ch current measurement with the 40 ch module DC and AC current 10 mA to 1 A directly
- It should have VFD Display and must have GPIB / RS232 interface in addition to External Trigger I/P and Alarm O/P.
- The unit should be configurable as Data logger / Data acquisition system / high performance switching unit, with capability to work as stand alone or controlled by computer.
- It should comprise of a modular mainframe with facility to plug in upto 3 expansion modules at any point of time
- It should be configured with 40 channels for measurement and upgradeable to another at least 20 channel in the future.

#### System Characteristics:

- System Speed : > 100 reading/sec
- Scan Triggering : internal, external, manual, Software, on Channel Alarm
- Scanning input : Analog and Digital
- Scan count : 1 to 50 000 or continuous
- Scan interval : 0 to 99 hrs, step size of 1ms
- Alarms : Hi, Lo with TTL compatible alarm outputs
- Memory : 50 000 time stamped readings
- Power up memory : 5 user configuration with labels
- Math function : Scaling (AX +B), min/max./average
- Relay maintenance : Should count each relay closures

Appropriate plug and play bench link data logger software should be provided.

**Specification for 40 Channel Module:**

- No of Channels : 40 + 2 channels for currents
- Scan speed : 60 Ch/sec
- Offset Voltage : < 3µV
- Configuration : 4 wire

**12) Software:**

- ⇒ User-friendly software with all help file and window features for conducting Creep and Stress rupture tests shall be supplied.
- ⇒ All data, graphical and numerical, may be exchanged with any other windows programs including spreadsheets, word processors and databases, allowing you to create personalized reports.
- ⇒ All the application is compatible with both the operator panel and console software.
- ⇒ It shall be perform in accordance with ASTM E139 and forthcoming ISO standard.

**13) Certificates:**

- ⇒ Calibration certificate for all digital and non-digital instruments and probes to be used.
- ⇒ Verification certificate for Creep testing machine.
- ⇒ The following devices should be calibrated against standards traced to the National Institute of Standards and Technology. Applicable ASTM standards are listed beside the device.

- Load measuring system Practice E4 and E74
- Extensometer Practice E83
- Thermocouples Method E 220
- Micrometers MIL-STD-120
- Load Cell, LVDT or Digimatic Indication and Temperature measuring device also should be verified.

**14) Computer and printer:**

System should having latest configurations and compatible with the machines. (Vendor should have to quote necessary details.)

**15) Upgrade Systems:**

The system should be compatible with all upgradable accessories and versions. (Vendors can quote these accessories.)

**16) Inspection, testing and training including acceptance criteria:**

**(a) At Vendor site ( Pre-dispatch Inspection):**

- ⇒ Two IPR officers along with their representatives will visit the vendor’s site for the inspection and testing the system.
- ⇒ The supplier shall demonstrate all the functions of the system according to the specifications as mentioned above.
- ⇒ Vendor shall verify all the calibrated items and demonstrate the functions of major systems and instruments as follows:
  - All digital and non-digital instruments and probes

- Load measuring system
- Extensometer
- Thermocouples
- Micrometers
- Load Cell
- Digimatic Indication
- Temperature measuring device

**(b) Acceptance tests at IPR site (After Installation):**

- (i) The vendor shall install the machines and demonstrate all the functions of the system according to the specifications mentioned above.
- (ii) Vendor shall demonstrate the functions of major systems and instruments as follows:
  - All digital and non-digital instruments and probes
  - Load measuring system
  - Extensometer
  - Thermocouples
  - Micrometers
  - Load Cell
  - Digimatic Indication
  - Temperature measuring device
- (iii) Load cell Calibration procedure shall be demonstrated to the users by standard Load cell (provided by user) for calibration purpose.
- (iv) Vendor shall provide training to 4 IPR engineers for operating the systems including operating sequence and methods.

**NOTE:**

- (a) All standard and optional accessories as quoted shall be equipped with machine during the time of installation/Delivery.
- (b) General requirements as mentioned in specific features shall have to be ensured.
- (c) Once installed, the equipment shall be guaranteed for a period of one year.

**17) Documentation:**

- ⇒ Detailed user Manual, complete with circuit diagrams, operational features. Installation diskettes/CDs shall be supplied along with the equipment.
- ⇒ Detailed circuit diagram of the electronic controller of the machine and other electronic and electrical equipments should be provided.
- ⇒ Detailed manual and toolkit for the assembly of mechanical parts should be provided.
- ⇒ Routine and Periodic chart/schedule should be provided for maintenance and Safety concern.
- ⇒ Calibration Certificate for sensors at time of installation.

**18) Spares:**

All necessary spares will be given with M/c, for 2 years trouble free operation

**The Offer shall include:**

List of users in India

Availability of after sales service

**INSTRUCTIONS TO BIDDERS AND TERMS AND CONDITIONS**

1. The quotation and any order resulting from this tender/enquiry shall be governed by our Conditions of contract and supplier quoting this enquiry shall be deemed to have read and understood the same in toto.
2. Where counter terms and conditions have been offered by the supplier, the same shall not be deemed to have been accepted by us, unless our specific written acceptance thereof is obtained.
3. **Tender Fee: Tenders received without the prescribed Tender Fee will be rejected.**
4. **Clarifications:**  
Any technical and commercial questions, information, clarifications, etc. that may be required pertaining to this Tender/enquiry may be obtained from the Purchaser before submitting the tender.
  - 4.1 Bids shall be complete in all respects and shall include properly filled in prices, other specifications, schedules, relevant drawings and catalogues as necessary along with the bid covering letter, all in duplicate.

5 **MANNER AND METHOD FOR SUBMISSION OF TENDERS**

- 5.1 All tenders in response to this invitation shall be submitted in TWO PARTS as under and in the different envelopes.
  - 5.1.1 **PART-A (TECHNO-COMMERCIAL):** This part of the tender shall include/contain all technical details, technical specifications, drawings and also the commercial terms and conditions for the supplies to be made and the services to be rendered **EXCLUDING ANY PRICE DETAILS THEREOF.**
  - 5.1.2 **PART-B (PRICE):** This part should contain only the prices of the stores offered for the services to be rendered.
- 5.2 **Part-A (Techo-commercial)** should contain/include only technical specifications, technical details, literature, reference to earlier supplies of similar equipment, drawings, quantity, time required for submission and approval of drawings, manufacturing and delivery schedule, inspection/testing procedure, itemized list of spares and quantity (without price) recommended by the tenderer for purchase, term of price, mode and terms of payment, mode of dispatch, the quantum/percentage of statutory levies payable by the purchaser as extra and all related commercial terms and conditions for the supplies and for the services like erection and commissioning to be rendered by the tenderers. This part of the tender, i.e. Part-A (Techno-commercial) shall be enclosed separately in an envelope duly sealed and superscribed with the purchaser's tender number and the last date and time specified for receipt and opening indicated in the instruction sheet of this tender document. The tenderer shall take special care NOT TO MIX UP the price of the stores in this part of the tender.
- 5.3 **Part-B (Price)** shall include/contain only price, price break-up, freight/safe delivery charges, charges for training of the Purchaser's engineers wherever applicable, lumpsum charges for erection and commissioning work or per diem charges for the supervision of erection and commissioning work as is envisaged in the Purchaser's tender document, testing

- charges, third party inspection charges, etc. This part of the tender, i.e. Part-B (Price) shall be enclosed separately in an envelope duly sealed and superscribed with the Purchaser's tender number and the last date and time specified for receipt and opening of the tenders as in the tender document.
- 5.4 If tenderer includes prices of any nature in Part-A (Techno-commercial) of the tender such offers are liable for rejection without any notice to the tenderers.
- 5.5 Late and delayed quotations will not be considered. IPR will not be responsible for postal delays or any other delays in receipt of quotation. Envelopes received without Tender number, date, due date and short description of item may be rejected. The quoted prices should be firm for a period of 120 days from due date for placing order. IPR is not bound to accept lowest rate/s. IPR reserves the right to place order on one or more parties irrespective of whether he is lowest or not. The scope of supply includes insurance by the Contractor/Supplier.
6. **Specifications:** Material should be offered strictly conforming to our specifications/drawings. Deviation, if any, should be clearly indicated by the supplier in their quotation. The supplier should also indicate the Make/Type number of the materials offered and catalogues, technical literature and samples, wherever necessary should accompany the quotation.
7. **Terms of prices:** Quotation should be submitted on door delivery basis without extra charge wherever possible. For quotations on Ex-Works, Ex-godown basis the approximate packing and forwarding charges should be indicated by the supplier. In the case of local suppliers, the material is to be delivered at our stores free of charge. Unit rate/s should be valid throughout the validity of purchase order/contract period for addition/deletion purposes. Break-up of price should be furnished. The quoted price should not be subject to price escalation for whatsoever reasons. The quoted price shall be firm, fixed and non-revisable during the validity/extended validity of purchase order/contract.
- 7.1 Prices are required to be quoted according to the units indicated in the tender form. When quotations are given in terms of units other than those specified in the tender form, relationship between the two sets of units must be furnished.
- 7.2 Wherever options are specified in the tender documents, IPR reserves the right to accept any option/s irrespective of whether all the vendors have quoted for all the options or not. The decision of IPR in this regard will be final.
8. Tender should be free from Correction and Erasures. Corrections, if any, must be attested. All amounts shall be indicated both in words as well as in figures. Where there is difference between amounts quoted in words and figures, amount quoted in words shall prevail.
9. IPR shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portion of the quantity offered and the tenderers shall supply the same at the rates quoted.
10. **Sales Tax etc.:** We have no "C" or "D" form. The percentage of Sales Tax/VAT, surcharge, if applicable, and other levies legally leviable and intended to be claimed should be clearly indicated in the tender. Where this is not done, no claim on these accounts would be admissible later.

- 10.1 **VAT Registration:** You may submit a copy of VAT Registration certificate along with your quotation (if applicable).
- 10.2. **Service Tax:** Wherever Service tax is applicable, it should be mentioned clearly. You may indicate percentage of Service Tax in your quotation.
- 10.3 **Excise Duty:** As per Notification No.10/97-CE (Central Excise) dated 1-3-1997, the Purchaser is entitled for availing Excise Duty exemption at present. Excise Duty Exemption Certificate, wherever applicable, and as per rules will be issued at the appropriate time. Hence Excise Duty should not be included in the BID. However, prevailing percentage of Excise Duty may be indicated.
- 10.4 **Customs Duty:** The purchaser is entitled for Customs Duty exemption under Notification No.51/96-Custom dated 23-7-1996 and can place order directly on foreign manufacturers. Necessary Customs Duty Exemption Certificate, wherever applicable, and as per the rules will be issued at appropriate time. Hence, Customs Duty should not be included in the BID. However, prevailing percentage of Customs Duty may be indicated.

Wherever, against a requirement, both indigenous as well as imported offers are received, the offers for imported stores will be evaluated on the basis of the total landed cost after loading the custom duty and other levies as may be applicable from time to time for taking purchase decision.

**Offers from Indian Agents on behalf of foreign suppliers:** In case the tender is submitted by an Indian supplier/Indian agent on behalf of their foreign supplier/ principals, following documents should be submitted with the tender, failing which, their offer is liable to be ignored.

- a) Photocopy of the Agency Agreement between the Principals and the Indian Agent showing the percentage or the quantum of agency commission payable and a Letter of Authority from the Principals authorizing the Indian Agents to submit the tender on their behalf.
- b) The type and nature of after sales services to be rendered by the Indian Agent

The Indian Agents are allowed to quote on behalf of only one foreign Principal/ Supplier against this tender.

- 10.5 **Octroi:** Octroi is not applicable in our case.
11. **Delivery Date:** The supplier must indicate the firm delivery date by which the materials will be despatched/delivered by them from the date of our order.
12. **Inspection:** Materials on its arrival at IPR will be inspected by Stores In-charge, and his decision in the matter will be final.
13. **EARNEST MONEY DEPOSIT (EMD):**  
The Bidder shall submit interest free Earnest Money Deposit (EMD) for Rs.1,68,000/- (Rupees One lakh Sixty eight thousand only) by way of Demand Draft from a nationalized/scheduled bank issued in favour of "**Institute for Plasma Research**" and payable at **Ahmedabad**. **Tender received without EMD will be summarily rejected.**
- 14.1 **EMD of unsuccessful Bidder will be returned after finalizing the Contract/placing Purchase order.**

14.2 **The EMD shall be forfeited in case the selected Bidder does not start the work within the time limit specified or fail to complete the work within the stipulated delivery period or fail to comply with any of the terms and conditions in the purchase order/contract.**

14.3 **Exemption from payment of EMD:** Firms who are registered with DGS&D and NSIC are exempted from payment of EMD subject to submission of valid registration certificate with the bid. **Tenders received without the valid registration certificate will be rejected.**

15. **Payment:**

15.1 10% of supply portion will be paid as advance against submission of Bank Guarantee for an equivalent amount from a nationalized/scheduled commercial Bank. This payment will be made only after signing the contract/Purchase order and submission of Security Deposit.

15.2 10% of the supply portion will be paid after approval of major drawings by IPR and on receipt of Bank Guarantee for an equivalent amount from a nationalized/scheduled commercial bank.

15.3 60% of supply portion against delivery of material at IPR site, its verification by IPR representative and on receipt of Proforma Invoice in triplicate.

15.4. Balance 20% along with 100% of erection and commissioning charges within 30 days from the date of final acceptance and on receipt of Performance Bank guarantee for 10% of the contract value from a nationalized/scheduled commercial bank.

Wherever, advance payment is involved, it will be paid only against submission of Bank Guarantee from a Nationalised Bank. Bank Guarantees should be furnished as per IPR format.

16. No correspondence will be entertained within 30 days from the date of receipt of material and bills, whichever is later.

17. Quotation should be valid at least for 120 days from the date of opening of the tender.

18. **Guarantee:** The Stores/material/goods/equipment offered by the bidder should be guaranteed for a minimum period of twelve months from the date of acceptance, against defective materials, design, workmanship, operation or manufacture. For defects noticed during the Guarantee period, replacement/ rectification should be arranged free of cost within a reasonable period of such notification. In cases where our specifications call for a guarantee period more than 12 months specifically, then such a period shall apply.

19. **Security Deposit:** The successful Bidder will have to furnish to the Purchaser an interest free security deposit for 10% (Ten percent) of the order value in the form of Bank Guarantee of an equivalent amount from a nationalised/scheduled commercial Bank within 15 days from the date of LOI/Purchase order and the said Guarantee should be valid till the goods are accepted by IPR. The Security deposit shall be forfeited in case the selected Bidder does not start the work within the time limit specified or fail to complete the work within the stipulated delivery period or fail to comply with any of the terms and conditions in the purchase order/contract.

20. **Liquidated Damages:** In addition to forfeiting Security Deposit, Liquidated Damages for the delay shall be 1/2% (half percent) of the total order value for the delay of each week in the scheduled time of supply or the scheduled date of final completion for the work

as the case may be, subject to a maximum of 5% (five percent) of total order value. Liquidated Damages will be recovered from the payment due to the supplier.

21. **Performance Bank Guarantee:** The Contractor/Supplier will have to furnish to the Purchaser (IPR) an interest free performance bank guarantee for 10% (Ten percent) of the order value/ contract value by Demand Draft or by way of providing a Bank Guarantee from a Nationalised/Scheduled commercial Bank valid for a period of 12 months/guarantee period mentioned in the order from the date of installation/acceptance for satisfactory performance of the work carried out by the Contractor.
22. The Contractor/Supplier shall at all times indemnify the purchaser against all claims which may be made in respect of the stores/material/goods/equipment for infringement of any right protected by Patent Registration of design or Trade Mark and shall take all risk of accidents or damage, which may cause failure of supply from whatever cause arising and the entire responsibility for sufficiency of all means used by him for the fulfillment of the contract.
23. **BAR/PERT Charts:**  
To be provided as per the requirement of Purchaser.
24. **Sub-Contract:** All sub-contractors are required to be appraised and approved by the Purchaser before placement of orders by the Vendor.
25. **Jurisdiction:** The contract/Purchase order shall be governed by the Laws of India for the time being in force. The Courts of Ahmedabad only shall have jurisdiction to deal with and decide any legal or dispute arising out of this contract.
26. **Settlement of disputes:** Any disputes or difference arising out of or in connection with the Contract/Purchase order shall be to the extent possible settled amicably between the parties.  
  
If amicable settlement cannot be reached then all disputed issues shall be settled by arbitration.
27. **Arbitration:** In the event of any dispute or difference arising under this Contract, the matter shall be referred to the Arbitrators one each nominated by the Purchaser and Contractor from their respective organisations. In case the said Arbitrators are not able to settle the dispute by themselves, the matter shall be referred to the Arbitrator mutually nominated by the Purchaser and the Contractor and whose decision will be final and binding on both the parties. The venue of arbitration will be IPR. Subject to as aforesaid the Arbitration Act, 1996 and the rules thereunder and any statutory modification thereof for the time being in force shall be deemed to apply to the Arbitration proceedings under this Contract.
28. **Permits and Licences:** The Contractor shall secure and pay for all permits and licence which he may require to comply with in respect of all laws, ordinances and regulations of the Government or Public Authorities in connection with the performance of his obligations under the Contract. The successful contractor shall be responsible for all damages and shall indemnify and save the Purchaser harmless from and against all claims for damages and liability which may arise due to his failure to comply with what is stated above.
29. **Training:** The successful tenderer shall, if required by the Purchaser, provide facilities for the practical training of Purchaser's engineering or technical personnel for their active

association on the manufacturing process throughout the manufacturing period of the Contract/stores, number of such personnel to be mutually agreed upon.

30. **Operation/Instruction Manual:** Where operation/instruction manual is essential to enable the Purchaser to put the stores to proper use, the successful tenderer shall furnish such operation/instruction manual along with the stores.
31. **Test Certificate:** Wherever required, test certificates should be sent along with the despatch documents.
32. **Secrecy:**
  - 32.1 All information, drawings, designs and specifications imparted to the bidder/successful contractor shall, at all times, remain the absolute property of the Purchaser, the bidder/successful contractor shall not use them for purposes other than for which they are provided for and shall treat all these documents as confidential. These shall not be reproduced in whole or in part for any other purpose.
  - 32.2 The contractor shall use his best endeavours to ensure that such information are not divulged to third parties except where needed for the performance of the contract by the successful bidder with the prior consent of the Purchaser. In such cases, the successful contractor shall ensure and obtain similar obligation of confidence, from third parties in question.
33. **Indemnity:** The Contractor shall warrant and be deemed to have warranted that all stores supplied against this contract are free and clean of infringement of any Patent, copy right or trade mark and shall at all times indemnify the Purchaser against all claims which may be made in respect of the stores for infringement of any right protected by patent. Registration of design or Trade Mark and shall all risk of accidents of damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for the sufficiency of all the means used by him for the fulfilment of the contract.
34. **Counter terms and conditions of Suppliers:** Where counter terms and conditions printed or cyclostyled conditions have been offered by the supplier, the same shall not be deemed to have been accepted by the Purchaser unless specific written acceptance thereof is obtained.
35. **Installation/commissioning/site works:** Wherever these activities are part of scope of work/specifications, Vendor should carryout out the same without any extra cost to IPR.
36. **Free Issue Material (FIM) (If specified in the tender documents):** Successful tenderer will have to furnish in the form a Bank Guarantee or in any other form as called for by the Purchaser towards adequate security for the materials/property provided/issued by the Purchaser as Free Issue Material (FIM) for the due execution of the contract. Successful bidder shall submit Bank Guarantee from a nationalized bank and arrange insurance for the cost of FIM at his expenses.
37. Late/delayed tenders will not be accepted. Incomplete tenders may be rejected at the discretion of IPR.
38. **IPR is not bound to accept the lowest tender. IPR reserves the right to select any vendor at its sole discretion.**

39. **Result of the tenders:** Unsuccessful tenderers will not be informed of the result of their tenders.
40. The Director, IPR reserves the right to accept or reject any quotation/tenders fully or partly without assigning any reason.
41. IPR reserves the right to place order on a single party or to split the order at its sole discretion.

**We agree to the above terms and conditions.**

**Place:**

**Signature of Bidder with seal**

**Date:**

**Note: A copy of our terms and conditions duly signed should accompany your quotation.**

## PART-B

### PRICE BID FORMAT

*(Bidders are requested to offer their price bid in the following format)*

S.No	Description	Quantity	Unit cost (Rs.)	Total price (Rs.)
1	Supply of Creep and Stress Rupture Machine	6 Nos.		
2.	Charge towards installation and demonstration of the machine (including unloading, shifting, handling with accessories) <b>(Quote Lumpsum charge)</b>	Lumpsum		
3.	Spares required for 2 years trouble free operation (attach separate list for details of spares)	1 Set		
3.	Other charges, if any.			
			<b>Total Rs.</b>	

	<u>Indicate percentage except Freight</u>		
	Percentage	Included	Excluded
Packing and forwarding			
Excise Duty			
Sales Tax/VAT			
Insurance			
Service Tax on Sr.No.2 above			
Freight	Rs.		

**Place:**

**Signature of Bidder with seal**

**Date :**