

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

Phone: 079 23962022

Fax: 079 23962277

TENDER NOTICE No. IPR/TPT/TN/PUR/F/16-17/9 DATED 26-08-2016

Sealed tenders are invited in TWO PARTS from the eligible vendors for the following item.

| Sr. No | Tender Notice No.  | Item   | Qty.     | Due Date & Time for   |  | Tender Fee   | Earnest Money Deposit (EMD)   |
|--------|--|--|----------|---|--|--|---|
|        |  |  |          | Submission of tender  | Opening of tender  |  |   |
| 1.     | IPR/TPT/TN/<br>PUR/F/16-<br>17/9<br><br>(TWO PART<br>TENDER) | Supply,<br>Installation &<br>Commissioning,<br>Site Acceptance<br>Tests and<br>Training for<br>Personnel of<br>Helium<br>Compressor and<br>Oil Removal<br>System from<br>Cryogenic Test<br>Facility at IPR | 1 System | 26 <sup>th</sup> October,<br>2016<br>by<br>13:00 Hrs.<br>I. S. T. | 26 <sup>th</sup><br>October,<br>2016<br>by<br>14:30 Hrs.<br>I. S. T. | Rs. 1000.00<br><br>OR<br>USD 15.00<br><br>OR<br>Euro 13.00 | Rs.<br>4,70,000.00<br><br>OR<br>USD<br>6921.00<br><br>OR<br>Euro<br>6098.00 |

1. For further details, please visit IPR Website : <http://www.ipr.res.in/documents/tenders.html>.
2. Interested parties may download the tender documents & submit their quotation, if they fulfill the eligibility criteria
3. Tender documents will also be issued from this office upto 09-09-2016. Interested parties may approach us with tender fee.

INSTITUTE FOR PLASMA RESEARCH  
NEAR INDIRA BRIDGE, BHAT  
GANDHINAGAR: 382428  
GUJARAT STATE  
(INDIA)

Tele No. +91-79-2396-2000 / 2022-26  
E-mail : [bkbsrao@ipr.res.in](mailto:bkbsrao@ipr.res.in), [alpesh@ipr.res.in](mailto:alpesh@ipr.res.in)

Fax No. 91-79-2396-2277

Tender No. IPR/TPT/TN/PUR/F/16-17/9  
BID DUE DATE 26<sup>th</sup> October, 2016  
Time : 13:00 Hrs IST.

TWO-PART TENDER

M/s \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Dear Sirs,

Sub: Supply, Installation & Commissioning, Site Acceptance Tests and Training for Personnel of Helium Compressor and Oil Removal System from Cryogenic Test Facility at IPR, Bhat, Gujarat, INDIA.

This document contains Invitation to tender, tendering conditions, contracting conditions and specifications of stores required by us. The tenders in respect of this case are to be submitted in TWO-PARTS. If you are interested to quote, please go through the contents particularly the tendering conditions and ensure that your quotation reaches us on or before the due date indicated above.

Yours faithfully,

BKBS Rao  
Purchase Officer-II

INSTITUTE FOR PLASMA RESEARCH  
NEAR INDIRA BRIDGE, BHAT  
GANDHINAGAR: 382428  
GUJARAT STATE  
(INDIA)

Tele No. +91-79-2396-2000 / 2022-26

Fax No. 91-79-2396-2277

E-mail : [bkbsrao@ipr.res.in](mailto:bkbsrao@ipr.res.in), [alpesh@ipr.res.in](mailto:alpesh@ipr.res.in)

INSTRUCTION SHEET

Instructions to Tenderers indicating the Tender Number, Last Date and Time for Receipt of Tender, place at which the Tender can be submitted and the Date/Time and Venue in which Tenders will be opened.

Tender No. IPR/TPT/TN/PUR/F/16-17/9 dated 26-08-2016

|     |  |   |
|-----|--|---|
| I   | Last Date for reaching both Part - I (Technical & Commercial) and Part - II (Price) of the Tender in Sealed envelopes to Institute for Plasma Research to reach on or before the last date & time. | 13:00 Hours (IST) on <u>26<sup>th</sup> October, 2016</u>                                 |
| II  | Due Date and Time for Opening of Part-I of the Tender i.e. Techno Commercial Part  | 14:30 Hours (IST) on <u>26<sup>th</sup> October, 2016</u>                                 |
| III | Venue for Opening the Tender   | Institute for Plasma Research<br>Nr. Indira Bridge<br>Bhat, Gandhinagar-382428<br>Gujarat |

## SECTION – 'A' INVITATION TO TENDER AND TENDERING CONDITIONS

Part I – Techno – Commercial

All commercial & Technical aspects to be given in Part-I

Part – II – Only Price to be given

### TWO PART TENDER

#### SECTION - A

#### INVITATION TO TENDER AND TENDERING CONDITIONS

### **ELIGIBILITY CRITERIA:**

Vendor must satisfy following eligibility criteria to get their offer selected for the further evaluation. The vendor is required to submit the following details along with the quotation to get qualified for the bid.

1. Vendor must have experience in helium compressor and oil removal system integration and supply.
2. Vendor must have supplied compressors of capacity  $\geq 70$  g/s delivery flow rate (From single compressor) for the purpose of main process cycle of helium refrigerator/ liquefier plant within last five years.
3. The vendor must have an average annual turnover of  $\geq 12$  crores Rupees over the last 3 financial years.

Supporting documents to justify above eligibility criteria shall be submitted.

## 1.0 INVITATION TO TENDER

1.1 IPR, Invites sealed tenders in duplicate for supply of plant, machinery, equipment, component to the specifications detailed in Section 'C' to this tender document. The conditions of contract which will govern the contract pursuant to the tender are as contained in form no. IPR-FP-12 which is Section 'B' of this tender document. If you are in a position to quote for supply in accordance with the technical specifications indicated in Section 'C' to this tender document and as per conditions in this section and Section 'B' please submit your offer in a manner and method specified below:

## 1.2 MANNER AND METHOD FOR SUBMISSION OF OFFERS

### 1.2.1 LANGUAGE OF OFFERS

1.2.1.1 All tenders shall be made in ENGLISH in the prescribed form attached. Tenders submitted in any language other than English must be accompanied by English translation.

1.2.2 All tenders in response to this invitation shall be submitted in TWO-PARTS and in different envelopes. All technical specifications and technical details along with commercial aspects shall be included only in Part-I of the tender, which is hereinafter referred to as Part-I, while all details relating to price shall be included only in Part II which is hereinafter referred to as Part II (Price).

1.2.3 Part – I (Techno-commercial) should contain/include only technical specifications, technical details, literature, references to earlier supplies of similar equipment, drawings, quantity, time required for submission and approval of drawings, manufacturing and delivery schedule, inspection/testing procedures, etc. Itemised list of spares and the quantity recommended by the tenderer for purchase should also be included in Part-I (Techno-commercial) of the tender without their price details. However the itemized price of spare parts should be furnished only in Part- II (Price) of the tender. The Part-I (Techno-commercial) shall be enclosed separately, duly sealed and superscribed with Tender Number and the last date and time for receipt indicated in the instruction sheet of the tender document to reach on or before the last date and time indicated in the instruction sheet of this tender document. The tenderer shall take special care not to mix up price with Part-I (Techno-commercial).

1.2.4 All details relating to price, price break-up, formula for price variation/escalation, Inland transportation/documentation, freight charges, delivery term (F.O.B. / F.C.A.) mode and terms of payment, mode of dispatch and all related commercial terms and conditions should be included only in Part-II (Price)of the tender. Any violation of this condition will result in outright rejection of the tenders. This part of the tender i.e. Part II(Price) shall be enclosed separately and shall be sent duly sealed and superscribed with tender number and the last date and time for opening indicated in the instruction sheet of this tender document.

1.2.5 The tender will co-relate the prices in Part-II of the tender with the description of the stores indicated in Part-I (Techno-commercial) by allotting a running serial number in order to enable the Purchaser to identify the prices with the relative items in Part –I (Techno-commercial).

1.2.6 Part-I (Techno-commercial) and Part-II (Price) should be enclosed in a common envelope. This envelope should again be sealed and superscribed with tender number and last date and time for receipt indicated in the instruction sheet of this tender document and should reach the IPR.

### 1.3 OPENING OF TENDERS

1.3.1 Unless otherwise preponed, or postponed with advance intimation to the tenderers, tender will be opened in two stages at IPR on the date and time indicated in the instruction sheet of this tender document.

1.3.2 Both the tenders will be opened in the presence of the tenderers, who wish to participate in the opening of the tenders or their authorized representatives. Tenderers, who wish to participate in the opening of Part-I (Techno-commercial) may depute their representatives to IPR on the respective dates and time and venue as indicated in the instruction sheet of this document.

### 1.4 TECHNICAL CLARIFICATIONS

1.4.1 After opening of Part-I (Techno-commercial) of the tender, if it becomes necessary for IPR to seek clarifications from the tenderers, the same will be sought for from the tenderers. In such an event the tenderer shall furnish:

1.4.1.1 Any technical and commercial questions, information, clarifications etc. that may be required pertaining to this tender may be obtained from the Purchase officer. Bidder will send the request for such clarifications to the Purchase Officer minimum 10 working days prior to the due date to submit the bid.

1.4.2 Irrespective of the circumstances whether technical clarifications have been sought for or not from any other tenderers, the tenderers will be free to ask technical clarification concerning the scope details of the tender etc. if they so consider it necessary.

1.4.3 Copies of correspondence sent to the Purchase Officer, IPR relating to price and other related commercial terms and conditions should not be endorsed to the technical authorities.

### 1.5 VALIDITY OF OFFERS

1.5.1 Offers shall be kept valid for acceptance for a period of 120 (One Hundred Twenty) days from the date of actual opening of Part-II (Price) of the tender. Offers with shorter validity period will be liable for rejection.

### 1.6 CATALOGUES/TECHNICAL LITERATURE

1.6.1 All necessary catalogues/drawings technical literature data as are considered essential for full and correct evaluation of the offers shall invariably accompany the Part-I (Techno-commercial) of the tender.

## 1.7 TERMS AND CONDITIONS OF THE CONTRACT

1.7.1 It must be clearly understood that any contract concluded pursuant to this invitation to tender shall be governed by the General Conditions of the Contract as contained in form no IPR-FP-12 which is Section 'B' of this tender document. Tenderers must therefore take special care to go through these general conditions of contract and in exceptional cases if any deviations are proposed, these must be clearly indicated in the Part-I (Techno-commercial) of the tender as a separate annexure instead of merely enclosing their printed conditions of sale. Tenders made subject to counter conditions of far too many deviations from the general conditions of contract i.e. Section 'B' of this tender document are liable to be ignored. It should also be realized that failure to bring out deviations from the General Conditions of Contract contained in Section 'B' of this tender document will imply that the tenderer is willing to execute the contract as per the Purchaser's terms and conditions of contract.

## 1.8 PRICE

1.8.1 The prices quoted must be FIRM and preference will be given to such tenders. In exceptional cases (e.g. items involving substantial use of raw materials susceptible to sharp fluctuation in prices) if prices are quoted subject to variation it shall be on the basis of a standard Price Variation Formula. The basis for calculation shall be very clearly stated. Here again preference will be given to the tenders with a specific ceiling on escalation.

1.8.2 Prices quoted shall be in the currency of the country of origin and the offers linking the quoted currency with some other currency are liable to be ignored.

1.8.3 Prices quoted must be on the following basis:

1.8.3.1 F.O.B. / F. C. A. Port of Shipment (i.e. Free on Board the Vessel at the nearest Port of Shipment – packing, inland freight, charges towards loading the consignments on the vessel, documentation etc. included) Name of the Port (Sea/Air) proposed for shipment shall be clearly indicated.

## 1.9 SPARES AND ACCESSORIES

1.9.1 Tenders for Plant /machinery/equipment/component shall also indicate prices for essential accessories, optional accessories and spares necessary for satisfactory operation of the plant/machinery/equipment.

1.9.1.1 For a period of two years and

1.9.1.2 For a period of five years.

1.9.2 Prices for accessories and spares shall be itemized. Tenders where only lumpsum prices are indicated are liable to be ignored. Particular care must be taken to list out each item of spare and quantity recommended and also the individual price for these items. These details should be included only in Part-II (Price) of the tender. However, a list of spares and accessories without the price should be included in Part – I (Techno-commercial) of the tender.

## 1.10 QUANTITY

1.10.1 The Purchaser reserves the right to accept tenders for any quantity of his choice and the tenderers shall be bound to accept a contract for any quantity. The Purchaser also reserves the right to accept or reject lowest or any tender in full or part without assigning any reasons.

## 1.11 AUTHORITY OF AGENTS

1.11.1 In case where a tender is submitted by an Indian Agent on behalf of his foreign principal, such tender should be supported with a 'Letter of Authority' from such Principal that the Indian Agent has been authorized to submit the tender on behalf of the principal. Tenders not accompanied by such a Letter of Authority are liable to be ignored. However, acceptance of offer will be communicated only to the foreign principals directly. The Foreign Principal shall ensure that he submits offer only through one single Indian Agent.

## 1.12 AGENCY COMMISSION

1.12.1 Commission payable to the Tenderer's Agents in India, if any, shall be included in the price. Name and address of the Agents and the percentage of commission payable to them and included in the price shall be clearly indicated. The commission will be paid directly to the Indian Agents in equivalent Indian Currency. The Foreign Principal shall ensure that he submits offers only through one single Indian Agents.

## 1.13 STATUS OF INDIVIDUAL SIGNING THE OFFER

1.13.1 Individuals signing the tender form and other connected documents must specify the capacity in which they sign, like,

1.13.1.1 Whether signing as a 'sole Proprietor' of the firm or his attorney.

1.13.1.2 Whether signing as a 'Partner' of the firm or his attorney.

1.13.1.3 Whether signing for the firm 'As Agent'

## 1.14 TRAINING

The vendor should provide a training course to a group of IPR personnel regarding, components/elements and instruments and controls of the CORS. The training must cover operation process, troubleshooting during operations, assembly, disassembly, appropriate precautions and maintenance and repair requirements.

1.14.1 The contractor shall, in special cases, if required by IPR, provide facilities for the practical training of the Purchaser's engineers and technical personnel from India and for their active employment process of plant/machinery/equipment/instrument through the manufacturing period of the contract/stores. Such training would normally be required only in case of special plant/machinery/equipment/instrument and particularly manufactured equipment. In such



an event, the Purchaser shall bear travelling and billeting expenses of the trainees and the contractor will be required only to bear the cost of the training program. Wherever, himself would recommend such training, he should furnish the cost of such training and indicates clearly the number of trainees and the duration of the training that he would recommend.

#### 1.15 SUBMISSION OF DRAWINGS

1.15.1 The tenderer shall furnish all drawings pertaining to the plant/machinery/equipment/component to the Purchaser along with the tender for correct understanding and appreciation of the tender in duplicate. Besides, tenderers should also furnish general arrangement, schematic and such other drawings prescribed by the Purchaser within 4 weeks from the date of receipt of a Purchase Order for approval. Such drawing should be furnished along with Part – I (Techno-Commercial) of the tender. Tenderer's drawing will form part of the Purchase Order/Contract only after these are approved by the Purchaser.

#### 1.16 SUB-CONTRACTING/SUBLETTING

1.16.1 The tenderer in the event of his tender being accepted by the Purchaser shall not assign/sublet or delegate the contract or any part thereof without the prior written consent of the Purchaser which consent shall not be unreasonably withheld, but the tenderer may without the Purchaser's consent purchase such parts, accessories, raw materials, etc. from any of the leading and reputed manufacturers in case he does not normally manufacture such items. However the contractor shall be solely responsible for the satisfactory execution of the contract irrespective of the fact whether a part or a portion of a contract has been assigned or sublet by him to a sub-contractor even when such sub-contracting has been done with the prior written consent of the Purchaser.

#### 1.17 SHOP / FACTORY EVALUATION, QUALITY SURVEILLANCE/ INSPECTION AND SUBMISSION OF PROGRESS REPORTS.

1.17.1 The Purchaser or his technical authorities may at his option and prior evaluation of the tender depute his inspector or any quality surveillance of his choice to the factory/workshop of the tenderer to assess and establish the manufacturing Capability etc., of the tenderer. Similarly, the Purchaser may also depute his Inspector/Quality Surveillance agency of his choice for inspection of the plant/machinery/equipment/component during the various stages of manufacture. In such an event the tenderer/contractor shall

1.17.1.1 Allow reasonable facility and free access to his factory/works/records to the Inspector for the purpose of inspection or for ascertaining the progress of manufacture and delivery.

1.17.1.2 Provide the drawings, tooling, gauges, instruments etc. required for carrying out the inspection work.

1.17.1.3 Produce an inspection plan to the Purchaser's satisfaction notifying him when checkpoints on the plan are imminent.

1.17.1.4 Not supply or deliver the plant/equipment/machinery/component unless and until a Shipping Release or an authorization for despatch is obtained in a format provided by the Purchaser. Failure to comply with this instruction will not only result in withholding of the payment to the contractor/supplier but also hold the tenderer/contractor liable for payment of compensation to the Purchaser due to delay in clearance of the equipment/plant/machinery/ component from the carriers.

## 1.18 ERECTION AND COMMISSIONING

1.18.1 Tenderers must clearly and separately furnish in their offers the terms of supervision of erection and commissioning particularly in respect of plant/machinery/equipment.

## 1.19 INSTRUCTION MANUAL

1.19.1 In respect of plant/machinery/equipment/instruments/apparatus, where instruction/operation manual is normally necessary to enable the user to put the plant/machinery/equipment/instrument/apparatus to proper use, the Contractor shall furnish such an instruction/operation manual specific to the stores being supplied along with the plant/machinery/equipment /instrument/ apparatus. The Contractor shall clearly specify in the offer about his readiness to supply instruction/operation manual.

## 1.20 PACKING

1.20.1 Tenderers shall note that packing for shipment shall be in accordance with the instructions outlined in this tender document and each package shall be limited to the size and weights that are permissible under the existing Air and Sea limitations. Even when no packing specification is included in the invitation to tender, it will be Supplier's responsibility to provide appropriate packing depending upon the nature of the supply and the transportation and handling hazards.

1.20.2 The equipment shall be so packed and protected as not to suffer deterioration damage or breakage during shipment and storage in a tropical climate.

1.20.3 Each package shall be properly labelled to indicate the type and quantity of material it contains, the purchase order number, its dimensions and weight and any other necessary data to identify the equipment and relate it to contract.

## 1.21 MODE OF SUBMISSION OF TENDERS

1.21.1 All tenders in response to this invitation to tender should be submitted in a manner and method specified at clause Nos. 1.2 to 1.2.4. Late and delayed tenders WILL NOT (REPEAT) NOT at all be considered and therefore, it is in the interest of the tenderers to ensure that the tenders reach to Purchase Officer, IPR on or before the last date and time stipulated for receipt of tenders.

1.21.2 If any deviation or substitution from the technical specifications contained in Section "C" to this tender document is involved, such details should be clearly indicated in Part – I (Techno-

Commercial) and should be added as an annexure to Part-I (Techno-Commercial) of the tender as otherwise it shall be an admission on the part of the tenderer that he will supply the equipment as specified by the Purchaser. Part-I (Techno-Commercial) should be submitted in accordance with the format provided by the Purchaser at Section "D" of this tender document.

1.21.3 Part-II (Price alone) and other related commercial terms and conditions of contract should be furnished in accordance with the format provided by the Purchaser at Section "E" of this tender document.

## 1.22 DELIVERY

The complete CORS units with spare parts should reach IPR preferably within 8 months from the date of signing of contract.

1.22.1 Tenderers should note that no tender will be considered by the purchaser unless the tenderer can meet the delivery schedule specified by the purchaser. All equipments/machinery/plant/component covered by this tender document should be supplied on or before..... or ..... month from the date of approval of drawing.

## 1.23 ACCEPTANCE OF TENDERS

1.23.1 Acceptance of tenders by the Purchaser will be sent by fax, E-mail, letter etc. within the validity of the tender and such a fax, email, letter etc. would then be followed by a formal purchase order/contract. The tenderer whose offer is accepted will proceed with the execution of the contract on the basis of such advance acceptance of tenders without waiting for a formal purchase order/contract and will be responsible to seek and obtain whatever clarifications that are necessary from the Purchaser to proceed with the manufacture without waiting for a formal purchase order/contract and delivery period will be reckoned from the date of the Letter/ /Fax of Intent.

## 1.24 RESULT OF THE TENDERS

1.24.1 Unsuccessful tenderers will not be informed of the result of their tenders.

ADDITIONAL INSTRUCTIONS TO TENDERERS TO BE INCORPORATED IN THE  
EXISTING INSTRUCTIONS TO TENDERERS AND TENDERING CONDIIIONS.

1. Payment Terms:

The purchaser's standard payment terms as specified in Form No. IPR-FP-14 & IPR-FP-12, (i, e. the General Conditions of all Contracts and Special conditions of Contracts governing supplies of Plant and Machinery) are full payment after receipt and acceptance of the stores by the purchaser.

In case any of the tenderers seeking advance or progressive payment prior to delivery of the material, such requests can be considered only in exceptional cases of large value items, in which case, the tenderer will be required to furnish a Bank Guarantee for an equivalent amount of the advance/progressive payment sought for, valid till the execution of the contract. The Bank Guarantee shall be got executed as per the purchaser's format from any of the nationalized/scheduled Bank.

Besides, the offers of the tenderers seeking advance/progressive payment will be evaluated by loading 12% interest charges on the amount of advance desired, up to the delivery period quoted.

In case any of the tenderers quote pro-rata payment for the stores to be supplied, they should clearly mention in their offer the maximum number of instalments of supply. However, such instalment delivery and pro-rata payment will be considered only in respect of contracts involving large value and sizeable quantity of items, and the maximum number of instalments shall be normally restricted to four (4).

2. Interest for delay in supply beyond the contractual delivery date:

Wherever advance payments are sought for by the contractor and admitted in the contract, against Bank Guarantee for equivalent amount, in the event of any delay in supply beyond the contractual delivery date for reasons attributable to the contractor, interest charges @ 12% shall be levied for the period beyond the contractual delivery date, on the amount of balance advance payment to be adjusted.

3. Installation and commissioning

a) Wherever, the purchaser's invitation to tender calls for installation and commissioning or supervision of installation and commissioning of the instrument/equipment by the tenderer, the tenderer must clearly and separately quote the prices for the supply of the stores and the charges and the terms for installation and commissioning or supervision of installation and commissioning, as the case may be. The charges towards installation and commissioning should not be included in the price of the stores.

b) In respect of contracts involving installation and commissioning by the overseas supplier where identifiable charges for the same has been quoted by the tenderer, he shall bear the Income-tax liability as per the rates prevailing at the time of undertaking the job in accordance with the Income-tax Act in force in India, which at present is 20% on the installation and commissioning charges.

4. Performance Bond Bank Guarantee:

In the event of acceptance of the offer in respect of plant, machinery, equipment, instrument etc., the tenderer will be required to submit a Performance Bond Bank Guarantee for 10% of the value of the contract from a nationalized/scheduled bank on a non-judicial Stamp Paper of appropriate value, valid till the warranty period as per the purchaser's format, towards satisfactory performance of the plant, machinery, equipment, instrument etc. during the warranty period. In case of non-submission of the performance bond Bank Guarantee by the contractor; an amount equivalent to 10% of the total value of the contract will be retained till the expiry of the warranty period of the stores. The offers of the tenderers, who are not agreeable to furnish a Performance Bond Bank Guarantee or retaining of the 10% of the order value till the warranty period, are likely to be rejected.

5. Excise Duty :

IPR is also exempted from payment of Excise Duty under Notification No. 10/97-CE (Central Excise) dated 01-03-1997. Indian manufacturers should specify the applicable taxes and duties separately in the offer.

6. Custom duty:

IPR is exempted from payment of Customs Duty under Notification No.51/96-CUSTOM dated 23-7-1996 (GE21A) as amended by Notification No.93/96-CUSTOM dated 11-12-1996 (GE21A). Necessary Custom Duty Exemption Certificate, wherever applicable, and as per rules will be issued at the appropriate time.

7. TDS/Work Contract Tax/OR any other leviable taxes or duties :

- (i) Tax Deduction at Source (TDS): Applicable Income Tax will be deducted at source. In the case of Indian Bidders, applicable rate will be as per Section 194 of Income tax Act, 1961. In case of Overseas bidders it will be governed by Section 195 of Income Tax Act 1961 and Double Taxation Avoidance Agreement (DTAA) with the bidders Country.
- (ii) Work Contract Tax (WCT): Applicable WCT will be deducted at source as per Section 59 B of Gujarat Value Added Tax Act, 2005. Contracts having value less than Rs. 1 Crore are exempted.
- (iii) Any other leviable taxes or duties: If applicable, the same shall be recovered from the contractor/s bill and necessary certificate will be issued to the contractor.

8. Offers from Indian Agents on behalf of foreign suppliers:

Incase the tender is submitted by an Indian supplier/Indian agent on behalf of their foreign suppliers/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 Agents 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) Copy of Registration Certificate with DGS&D.
- c) 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.

9. Security Deposit Bank Guarantee:

In the event of acceptance of an offer, the tenderer will be required to submit a security deposit for 10% of the value of the order only in the form of Bank Guarantee valid till the satisfactory fulfilment of the entire contractual obligations, to be executed by a nationalized/scheduled Bank, on the requisite Non-judicial Stamp Paper, as per the purchaser's format.

**EXEMPTION FROM PAYMENT OF SECURITY DEPOSIT FOR INDIAN MANUFACTURERS SUBMITTING THEIR OFFER IN INR.**

**In case the tenderer registered with DGS&D, NSIC or MSME, they can be considered for exemption from Security Deposit to the extent of the monetary limit of such registration, provided the past performance of the Contractor is satisfactory. Bidder should submit latest and valid registration certificate issued by DGS&D, NSIC or MSME alongwith the Technical Bid (PART-I). In respect of contracts beyond the monetary limits of such registration, the Contractor shall furnish a Bank Guarantee of the excess value, towards security deposit.**

10. Conditional Discount:

In case the tenderer offers any conditional discount with regard to acceptance of their offer within a specific period or for the specific payment terms, delivery, quantity etc. the purchaser will not take into consideration such conditional discount while evaluating their offer.

11. Past Performance:

In case the past performance of the tenderer is not found to be satisfactory with regard to quality, delivery, warranty obligation and non-fulfilment of terms and conditions of the contract, their offer is liable to be rejected by the purchaser.

12. Capacity & Financial Standing:

In case it is found that the tenderer does not possess the requisite infrastructure, capacity, capability and their financial standing is not satisfactory, such tender is liable to be rejected by the purchaser.

13. EXPORT LICENCE / EXPORT PERMISSION:

It is entirely the responsibility of the suppliers who are quoting for materials of foreign origin to ensure obtaining export permission/licence/authorisation as required from the respective Government before arranging shipment. This Department would not accept post supply inspection by any agency/authority of any foreign country. It is, therefore, necessary that the vendors offering materials from foreign countries shall have thorough knowledge of export contract regulations in vogue in those countries. The vendors shall indemnify the purchaser against any consequences in respect of any end-use declaration they/their overseas Principals may furnish to the

government/government agencies of the country of origin of the materials, while seeking export permission/licence. Post supply inspection, contrary to the terms and conditions of purchaser's contract shall be deemed to be null and void. This Department reserves the right to reject any offer, which is not in conformity with the above instructions.

Whenever an End-use Certificate is desired by the contractor, the same shall be clearly mentioned in the offer and the purchaser shall provide an End-user Certificate as per the format given below. The Purchaser will not provide any other document/declaration in this regard.

END USER STATEMENT:

We hereby certify that the item/s i.e.....being procured from M/s..... against our Purchase Order No. IPR/..... dated..... will be used for.....

We also certify that the item/s will not be used in designing, developing, fabricating or testing of any chemical, biological, nuclear, or weapons of mass destruction or activities related to it.

It is further certified that we will not re-export the Item/s prior to obtaining permission from the concerned authorities as may be required".

14. Country of Origin:

Wherever the tenders are for imported stores, the Country of Origin of the stores must be clearly specified in the offer.

15. Confidentiality:

The drawings, specifications, prototypes, samples or any other correspondence/details /information provided by the Purchaser relating to the tender or the contract shall be kept confidential by the Contractor, and should not be disclosed or passed on to any other person/firm without the prior written consent of the Purchaser. This clause shall apply to the sub-contractors, consultants, advisers or the employees engaged by the contractor.

16. Compliance with the Security Requirements of the Purchaser:

The Contractor shall strictly comply with the Security Rules and Regulations of the Purchaser in force and shall complete the required formalities including verification from Police and any other authority and obtain necessary prior permission for entry into the Purchasers premises, wherever authorised by the Purchaser.

17. Rates to be Quoted in Figures & Words:

The tenderers shall ensure that the rates quoted by them are given both in figures and words failing which the tenders are liable to be rejected.

18. Permanent Account Number (PAN) :

Tenderers are required to submit a true copy of the PAN Card/Letter and copy of the factory Registration/Licence or shop establishment certificate as applicable with the quotation, failing which the tenders are liable to be rejected.

19. **FREE ISSUE MATERIAL:** *(This clause shall apply only to contracts for supply of fabricated equipment with purchaser's Free Issue Materials (FIM)).*

Wherever contracts envisage supply of Free Issue Material (FIM) by the Purchaser to the contractor for fabrication of the contracted equipment/stores, such Free Issue Material shall be safeguarded by an insurance policy to be provided by the Contractor at his own cost for the full value of such materials and the insurance policy shall cover, the following risks specifically and shall be valid for six months beyond the contractual delivery date:

1. **RISKS TO BE COVERED:** Any loss or damage to the Purchaser's materials due to fire, theft, riot, burglary, strike, civil commotion, terrorist act, natural calamities etc. and any loss or damage arising out of any other causes such as other materials falling on purchaser's materials.

2. **INSURED BY :** (Name of the Contractor)

3. **BENEFICIARY :** Institute for Plasma Research  
Nr. Indira Bridge  
Bhat, Gandhinagar-382428  
Gujarat  
INDIA

4. **AMOUNT FOR WHICH INSURANCE POLICY TO BE FURNISHED** The amount will be indicated in the respective Contract.

Free Issue Material (FIM) will be issued to the Contractor only after receipt of the Insurance Policy from the Contractor. The contractor shall arrange collection of the FIM from the Purchaser's premises and safe transportation of the same to his premises at his risk and cost.

Notwithstanding the insurance cover taken out by the Contractor as above, the Contractor shall indemnify the Purchaser and keep the Purchaser indemnified to the extent of the value of free issue materials to be issued till such time the entire contract is executed and proper account for the free issue materials is rendered and the left over/surplus and scrap items are returned to the Purchaser. The contractor shall not utilize the Purchaser's free issue materials for any job other than the one contracted out in this case and also not indulge in any act, commission or negligence which will cause/result in any loss/damage to the Purchaser and in which case, the Contractor shall be liable to the Purchaser to pay compensation to the full extent of damage/loss. The Contractor, shall be responsible for the safety of the free issue materials after these are received by them and all through the period during which the materials remain in their possession/control/custody. The free issue materials on receipt at the Contractor's works shall be inspected by them for ensuring safe and correct receipt of the material. The Contractor shall report the discrepancies, if any, to the Purchaser within 5 days from the date of receipt of the material. The Contractor shall take all necessary precautions against any loss, deterioration, damage or destruction of the FIMs from whatever cause arising whilst the said materials remain in their possession/custody or control. The free issue



materials shall be inspected periodically at regular intervals by the Contractor for ensuring safe preservation and storage. The Contractor, shall also not mix up the materials in question with any other goods and shall render true and proper account of the materials actually used and return balance remaining unused material on hand and scrap along with the final product and if it is not possible within a period of one month from the date of delivery of the final product covered by this purchase order. The Contractor, shall also indemnify the Purchaser to compensate the difference in cost between the actual cost of the free issue material lost/damaged and the claim settled to the Purchaser by the insurance company. The decision of the Director, IPR, as to whether the Contractor has caused any loss, destruction, damage or deterioration of the free issue materials while in his possession, custody or control from whatever cause arising and also on the quantum of damage suffered by the government, shall be final and binding upon the Contractor

20. This is a TWO PART Tender. Bidder should submit the bid in Two Parts,
  - (i) **PART – I** : Technical Bid & Commercial Terms and Conditions **Except price.**
  - (ii) **PART – II** : Price Bid (**Price Alone**)Bidders shall submit the bid in duplicate.
21. **PRICE BID FORMAT** : Bidder shall quote price on the Price Bid Format given in Section-E of tender documents.
22. Full details and specifications of the items and general instructions to be followed regarding submission of tenders are indicated in the tender documents.
23. **Proof for fulfillment of eligibility criteria mentioned above should be submitted along with the tender. If the tender is submitted without valid documents, Purchaser shall not consider your offer. Tenders received without proof of eligibility criteria will be rejected.**
24. While requesting for Tender Documents, such request shall indicate the **“REQUEST FOR TENDER DOCUMENTS AGAINST TENDER NOTICE NO. IPR/TPT/TN/PUR/F/16-17/9 DATED 26-08-2016”.**
25. **Tender Fee: The tender fee (non refundable) of USD 15.00 (US Dollar Fifteen only) OR EURO 13.00 (EURO Thirteen only) OR Indian Rs. 1000.00 (Indian Rupees One Thousand only) should be made in the form of DEMAND DRAFT drawn in favour of Institute for Plasma Research and payable at Ahmedabad, Gujarat (India). Vendor’s name and tender number shall be indicated on the reverse side of the Demand Draft.**
26. **DD should not be prior dated to the date of advertisement. Separate request letter and separate Demand Draft shall be sent for each tender.**
27. **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. This envelope should be marked as “TENDER FEE”.**
28. No request for the extension of due date will be considered.
29. Late/Delayed offers will not be accepted.
30. **Earnest Money Deposit:** Bid must be submitted along with Earnest Money Deposit (EMD) for USD 6921.00 (US Dollars Six Thousand Nine Hundred Twenty One only) OR EURO 6098.00 (EURO Six Thousand Ninety Eight only) OR Indian Rs. 4,70,000.00 (Rupees Four Lacs Seventy Thousand only) by way of Demand Draft drawn in favour of **Institute for Plasma Research**

payable at **Ahmedabad**, Gujarat, INDIA. EMD of unsuccessful bidder(s) will be returned after finalization of the contract.

Exemption from payment of EMD: The firms registered with DGS&D, NSIC and registered MSME's are exempted from payment of EMD subject to submission of valid registration certificate. In the case of foreign bidders, payment of EMD is exempted if they submit their bid directly or through their Indian agent in Foreign Currency, so that the order can be placed directly on their Principals.

**The EMD shall be forfeited in case the Bidder fails to comply with any of the terms and conditions stipulated in the tender documents, after submission of Bid.**

30.1 The Tender Fee/EMD in case of INR shall be from State Bank of India (SBI)/any Nationalized Bank or any one of the Banks mentioned in bracket (ICICI, IDBI, HDFC, AXIS)

30.1.1 In case the Tender Fee/EMD is from any foreign Bank, it should be from a first class bank of international repute.

31. **Due date to submission of Tender: Tender in a sealed envelope (Part-I, Tender Fee & EMD in one envelope and Part-II in another envelope) superscribing the envelope with the above tender no., date, due date and brief description of tendered item should be submitted by 13.00 Hrs. I.S.T. on-26<sup>th</sup> October, 2016 to the *Purchase Officer, IPR* at the following address**

Purchase Officer  
Institute for Plasma Research  
Near Indira Bridge, Bhat  
Gandhinagar – 382428.  
Gujarat, INDIA.

**Part-I (Techno-Commercial Bid :- Except Price) will be opened on the same day at 14:30 Hrs. I.S.T. in the presence of attending tenderers.**

**Part-II (Price Bid) : Date of opening of Price Bid of eligible Bidder/s will be intimated to them later on.**

32. The representative who attends the tender opening should carry an authorization letter from the organization for participation in the tender opening failing which he/she may not be allowed to participate in the tender opening. However one representative only will be allowed to participate in the tender opening process.
33. **The tenderers representative, who reaches the venue of 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.**
34. In the event of any date indicated above is declared as a Holiday, the next working day shall become operative for the respective purpose mentioned herein.
35. IPR will not be responsible for any delay/loss of Tender or documents in transit.
36. Bidders should furnish/enclose full technical details/literature, delivery period and confirm the terms and conditions attached with the tender.
- 37. Bids received without the prescribed Tender Fee and EMD will not be considered.**
38. Bidder will submit technical bid, commercial bid and all supporting documents pertaining to this tender in English.
39. **Specifications :** Technical Specifications & drawings are given in Section-C.

40. **Rejection of bid:**

Non compliance of tender specifications and/or tender documents including terms and conditions will lead to rejection of quotations received.

41. All communications related to this tender must be sent to,

Purchase officer,  
Institute for Plasma Research  
Near Indira Bridge, Bhat  
Gandhinagar – 382428.  
Gujarat, INDIA.  
Phone: 079 23962022  
Fax : 079 23962277  
e-mail : [bkbsrao@ipr.res.in](mailto:bkbsrao@ipr.res.in)/[alpesh@ipr.res.in](mailto:alpesh@ipr.res.in)/[pinto@ipr.res.in](mailto:pinto@ipr.res.in)

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

## GENERAL CONDITIONS OF CONTRACT

Form No IPR-FP-12

GENERAL CONDITIONS OF CONTRACT  
APPLICABLE TO PURCHASE ORDER / CONTRACTS FOR IMPORTED STORES  
PLACED BY THE INSTITUTE FOR PLASMA RESEARCH

## SECTION – I

## 1. PEAMBLE

- 1.1 While the conditions contained in Section I will apply to all contracts. Section II will also apply to contracts for Plant/Machinery/Equipment/Instrument.

## 2.0 GENERAL CONDITIONS OF CONTRACT

## 2.1 DEFINITIONS AND INTERPRETATION

- 2.1.1 In the contract and the general and special conditions governing it, unless the context otherwise requires
- 2.1.2 “PURCHASER” means the shall mean the Institute for Plasma Research, acting through the Director or his authorized representative [herein after called as “IPR”]
- 2.1.3 “DIRECTOR”, means the Director of IPR, for the time being in the administrative charge of the Director, IPR and includes the Senior Purchase Officer, Purchase Officer or Assistant Purchase officer or any other officer authorized for the time being to execute contracts relating to the purchase and supplies of stores on behalf of the Purchaser.
- 2.1.4 “CONTRACTOR” or “SUPPLIER” means the individual firm or company with whom or with which the contract/purchase order for supply of Stores is placed and shall be deemed to include his successors, heirs, executors, administrators and permitted assignees, as the case may be.
- 2.1.5 “CONTRACT” or “PURCHASE ORDER” means and comprises of a Letter or \*Cable or \*Telex or \*Fax(\*followed by a written confirmation) conveying acceptance of Contractor’s offer and invitation to tender, tender containing offer, advance acceptance of the offer, acceptance of offer, general and special conditions of contract specified in the acceptance of offer and any subsequent amendments/alterations thereto made on the basis of mutual agreement.
- 2.1.6 “STORES” OR “MATERIAL” means the goods specified in the contract/purchase order which the contractor has agreed to supply under the contract.

- 2.1.7 "SUB-CONTRACTOR" or "SUB-SUPPLIER" means any contractor or supplier engaged by the contractor or the supplier with the prior approval of the Purchaser in relation to the contract/purchase order.
- 2.1.8 "INSPECTOR" or "QUALITY SURVEYOR" means any Engineer nominated and deputed by the purchaser or their appointed Consultants or quality Surveillance Agency or any other person from time to time authorized by the Purchaser to act as his representative for the purpose of inspection of stores under the contract/purchase order.
- 2.1.9 PARTIES
- 2.1.9.1 The parties to the contract are the Contractor and the Purchaser and the Purchaser named in the Contract/Purchase Order.
- 2.2 AUTHORITY OF PERSON SIGNING THE CONTRACT ON BEHALF OF THE CONTRACTOR
- 2.2.1 The person signing the contract or the purchase order or any other document in respect of the contract or purchase order on behalf of the contractor shall deemed to warrant that he has the authority to bind the contractor
- 2.3 SUB-CONTRACTING
- 2.3.1 The contractor/supplier shall not assign, sublet or delegate the contract or any part thereof without the Purchaser's prior written consent, which consent shall not be unreasonably withheld, but he may without the Purchaser's consent purchase such parts, accessories or associated equipment as he does not normally manufacture.
- 2.4 DRAWINGS AND SPECIFICATIONS
- 2.4.1 The drawings and specifications are intended to be complementary and to provide for and comprise everything necessary for the completion of supply. Any material shown on the drawing even if not particularly described in specifications or vice versa is to be supplied by the Contractor as if it were both shown and specified.
- 2.4.2 Should any discrepancy be noted in the drawings and/or specifications and should any interpretation of the same be required, the matter shall be referred to the Purchaser for clarification which shall be binding upon the contractor. Otherwise, the contractor shall assume responsibility for the interpretation of the drawings and specifications including interpretation by his sub-contractors.
- 2.4.3 Should any difference or dispute arise with regard to the true intent and meaning of drawings or specification or should any portion of the same be obscure or capable of more than one interpretation, the same shall be decided by the Purchaser whose decision shall be final.
- 2.4.4 All lettering on the drawings is to be considered as part of the specification and contract. In all cases figured dimensions are to be followed rather than those indicated by scale. Large scale drawings will take precedence over smaller scale drawings.

2.4.5 The contractor's drawings shall, when approved by the Purchaser, be deemed to be included in the list of drawings which form part of the contract. The contractor shall not proceed with fabrication until all drawings associated therewith have been duly approved by the Purchaser.

2.4.6 The Contractor shall be responsible for and shall pay for any alterations of the stores and shall indemnify the Purchaser for any consequentious expenditure incurred by the Purchaser due to any discrepancies, errors, omissions in the drawings or other particulars supplied by him whether such drawings or specifications have been approved by the Purchaser or not, provided that such discrepancies, errors or omissions be not due to inaccurate information or specifications furnished to the contractor on behalf of the Purchaser.

## 2.5 GENERAL WARRANTY

2.5.1 The stores supplied by the contractor under the contract shall be of best quality and workmanship. The contractor shall supply the stores in accordance with the contract specifications unless any deviation has been expressly specified in the contract and any amendments agreed thereto.

2.5.2 The contractor's offer to supply stores in accordance with the tender specifications shall be deemed to be in admission on his part that he has fully acquainted himself with the details thereof and no claim shall lie against the Purchaser on the ground that the contractor did not examine or acquaint himself fully with the tender specifications.

## 2.6 ALTERATIONS

2.6.1 The Purchaser may, from time to time, make changes in the drawings specifications and issue additional instructions without altering the purchase order in any manner provided that no changes shall have been ordered which materially alter the character and scope of the supply under the contract.

2.6.2 It shall be lawful for the parties to the contract to alter by mutual consent at any time and from time to time the drawings and specifications and as from the dates specified by him stores to be supplied shall be in accordance with such altered drawings and specifications provided that if any such alterations involve increase or decrease in the cost of or in the period required for production, a revision of the contract price and/or the period prescribed for delivery shall be made by mutual agreement in respect of the stores to which the alteration applies. In all other respects, the contract shall remain unaltered.

## 2.7 PACKING

2.7.1 The contract shall pack the stores at his own cost sufficiently and properly for transit by sea/air as the case may be so as to ensure their being free from loss or damage while in transit to the ultimate destination specified in the contract.

2.7.2 Unless otherwise provided in the contract all containers (including packing cases, boxes, tins, drums and wrappings) in which the Stores are supplied by the contractor shall be considered as property of the Purchaser and their cost as having been included in the contract price.

2.8 INSPECTION

2.8.1 The contractor shall be responsible for and perform all inspection and testing required in accordance with the contract/purchase order and specifications included therewith.

2.8.2 The Purchaser may at his option depute his representative for Inspection of the stores to be supplied under the contract or authorize and nominate a Quality Surveillance Agency of his choice for the purpose hereinafter called, in either case, the inspection.

2.8.3 The supplier shall give notice of readiness for inspection to the Inspector (deputed under clause 2.8.2 above) so that the Inspector can be present at the requisite time. In such an event delivery shall not be effected until an authorization or shipping release is obtained from the Purchaser's Inspector.

2.8.4 The contractor shall allow reasonable facility and free access to his work/factory and records to the inspector for the purpose of inspection or for ascertaining the progress of delivery under the contract.

2.9 MARKING

2.9.1 Each package delivered under the contract shall be marked by the contractor at his own expense on three sides of the package and such markings shall be distinct and shall clearly indicate the description and quantity of stores, name and address of the consignee, gross and net weight of the package, name of the contractor, ultimate destination, port of discharge etc.

The marking shall generally be as under

|                                   |  |
|-----------------------------------|--|
| Name and address of the consignee | Purchase Officer,<br>Institute for Plasma Research,<br>Nr. Indira Bridge<br>Bhat, Gandhinagar-382428<br>Gujarat,<br>India. |
| Contract Number and Date          | No. _____<br>Date _____  |
| Brief Description of Goods        |  |
| Weight                            |  |
| Dimension                         |  |
| Ultimate Destination              |  |
| Port of Discharge                 |  |
| Package Number                    |  |

2.9.2 Each package shall contain a packing note specifying the name and address of the contractor, the number and date of the contract/purchase order, name and address of the consignee, description of the stores and the quantity contained in such package.

2.9.3 The inspector, wherever deputed by Purchase under clause 2.8.2 may reject the stores of the stores are not packed and/or Marked as aforesaid and in case where the packing materials are specifically prescribed, if such materials are not in accordance with the terms of the contract.

2.10 TIME FOR AND DATE OF DELIVERY – THE ESSENCE OF CONTRACT.

2.10.1 The time for and date of delivery of the stores stipulated in the contract shall be deemed to be of the essence of the contract and delivery must be completed not later than date/dates stipulated.

2.10.2 EXTENSION OF DELIVERY SCHEDULE / LIQUIDATED DAMAGES

2.10.2.1 If any delay in delivery shall have arisen from any cause such as strike, lockouts, fire, accidents, riot or the like which the purchaser may admit as reasonable ground for grant of extension of delivery schedule, the purchaser will allow such additional period for the purpose as he may consider necessary taking the circumstances into consideration.

2.10.2.2 If the contractor fails to deliver the stores or any instalment or part thereof within the period fixed for such delivery or such additional period allowed by the purchaser in accordance with foregoing para or any time before the expiry of such period repudiates the contract, the Director, IPR may without prejudice to the rights of the purchaser.

2.10.2.2.1 recover from the contractors as agreed liquidated damages and not by way of penalty a sum equivalent to two percent of the price of any stores which the contractor has failed to deliver within the period fixed for delivery in the contract or such additional period as mentioned in para 2.10.2.1 for each month or part of the month during which the delivery of such stores, may be in arrears where delivery thereof is accepted after expiry of the aforesaid period. (For the purpose of computing the damages for delayed supplies under the clause, the cost of the entire plant/machinery/equipment/instrument will be taken into consideration if the plant/machinery/equipment/instrument cannot be put to the intended use for want of delayed portion of supply). OR

2.10.2.2.2 Purchase or authorise the purchase elsewhere without notice to the contractor, on the account and at the risk of the contractor of the stores not so delivered or others of a similar description (where stores exactly complying with the contract specification are not in the opinion of the Director, IPR whose opinion shall be final, readily procurable) without cancelling the contract in respect of the portion instrument not yet due of delivery. OR

2.10.2.2.3 Cancel the contract or portion thereof and if so desired purchase or authorise purchase of the stores not so delivered or others of a similar description (where stores exactly complying with the contract specification are not in the opinion of the Director, IPR whose opinion shall be final, readily procurable) at the risk and cost of the contractor, if the



contractor had defaulted in the performance of the original contract, the purchaser shall have the right to ignore his offer in response to risk purchase enquiry even though the lowest.

2.10.3 Where action is taken under sub-clause 2.10.2.2.2 or sub-clause 2.10.2.2.3 above the contractor shall be liable for any loss which the purchaser may sustain on that account provided the purchaser or, if there is an agreement to purchase such agreement is made, in case of failure to deliver the stores within the period fixed for such delivery within six months from the date of such failure and in case of repudiation of the contract before the expiry of the aforesaid period of delivery, shall not be entitled to any gain on such purchase and the manner and method of such purchase shall be in the entire discretion of the Director, IPR. It shall not be necessary for the purchaser to serve a notice of such purchase on the contractor.

## 2.11 RECTIFICATION AND REPLACEMENT OF DEFECTIVE STORES

2.11.1 If the inspector find that the contractor has executed any unsound or imperfect work, the inspector shall notify such defects to the contractor and the contractor on receiving the details of such defects or deficiency, shall at his own expenses, within seven days or otherwise within such time as may be mutually agreed upon as reasonably necessary, proceed to alter, reconstruct or remanufacture the stores to the requisite standard and specifications as called for by the tender specification.

## 2.12 INSPECTOR'S AUTHORITY TO CERTIFY PERFORMANCE

2.12.1 The Inspector, where ever deputed by the Purchaser under Clause 2.8.2 shall have the power:

2.12.1.1 Before any stores or parts thereof submitted for inspection to certify that they cannot be in accordance with the contract owing to the adoption of any unsatisfactory method of manufacture.

2.12.1.2 Reject any stores submitted for inspection or part thereof as not being in accordance within the specification.

## 2.13 CONSEQUENCE OF REJECTION

2.13.1 If on the store being rejected by the inspector or consignee at the destination the contractor fails to make satisfactory supplies within the stipulated period of delivery, the Director, IPR may:

2.13.1.1 Allow the contractor to submit for inspection fresh stores in replacement of those rejected, within specified time, the contractor bearing the cost of freight on such replacement without being entitled to any extra payment on that account. OR

2.13.1.2 purchase or authorise the purchase of quantity of the stores rejected or others of similar description (where stores exactly complying with the contract specification are not in the opinion of the Director, IPR which opinion shall be final, readily available) without notice to the contractor at his risk and cost and without affecting the contractor's liability as regards further supply of stores due under the contract.

2.13.1.3 Cancel the contract and purchase or authorise the purchase of stores or others of a similar description (where stores exactly complying with the contract specification are not in the opinion of the Director, IPR which opinion shall be final, readily available) at the risk and cost of the contractor. In the event of action being taken under sub clause 2.13.1.2 above of this sub-clause, the provision of Clause 2.10.2 shall apply as far as applicable.

## 2.14 WARRANTY

2.14.1 The contractor warrants that stores to be supplied under the contract shall be free from all defects and faults in materials, workmanship and manufacture and shall be of the highest grade and consistent with the established and generally accepted standards for stores of the types under the contract in full conformity with the specifications, drawings or samples, if any and shall if operable, operate properly. This warranty shall expire (except in respect of complaints notified to the contractor prior to such date) 24 (twenty four) calendar months or 8000 hours starting from the date of site acceptance of the plant/machinery/equipment/instruments at IPR Or 30 (thirty) calendar months from the date of arrival of CORS system at IPR, whichever is earlier, after the date of receipt of the last lot of stores under the contract at the ultimate destination stipulated in the contract.

2.14.2 Should any defect or deficiency in the stores supplied by the contractor under the contract appear to be discovered within 24 months from the date of receipt of the stores in India, the contractor upon notification of such defects or deficiency by Purchaser, shall forthwith take measure to rectify every such defect, deficiency or failure without cost to the Purchaser. If the contractor after such notification shall make default or delay in diligently rectifying all such defects, deficiencies or failure to the satisfaction of the Purchaser, the Purchaser may take recourse to the remedies provided for in clause 2.10.2.2.2 as applicable.

## 2.15 PERMIT AND LICENCES

2.15.1 The contractor shall secure and pay for all licences and permit at his end which he may be required to comply with all laws ordinances and regulations of the public authorities in connection with the performance of his obligations under the contract. The contractor shall be responsible for all damages and shall indemnify and save the purchaser harmless from against all claims for damages and liability which may arise out of the failure of the contractors to secure and pay for any such licences and permits or to comply fully which any and all applicable laws ordinances and regulations.

## 2.16 PATENT INDEMNIFICATION

2.16.1 The Contractor shall indemnify and keep indemnified the Purchaser from and against any and all claims, actions, costs, charges and expenses arising from or for infringement of patent rights, copy right or other protected rights, of any design plans, diagrams, drawings in respect of the stores supplied by the contractors or any of the manufacturing methods or process adopted by contractor for the stores supplied under the contract.

- 2.16.2 In the event of any claim being made or action being taken against the purchaser in respect of the matter referred to clause 2.16.1 above, the contractor shall promptly be notified thereof and he shall at his own expense, conduct all negotiations for the settlement of the same and any litigation that may arise therefrom.
- 2.16.3 In the event of any designs, drawing, plans or diagrams or any manufacturing methods or process furnished by the contractor constituting infringement of patent or any other protected rights and use thereof is restrained, the contractor shall procure for Purchaser, at not cost to the letter, the rights to continue using the same or to the extent it is possible to replace the same so as to avoid such infringement and subject to approval by the Purchaser or modify them so that they become noninfringing, but such modifications shall otherwise be to the entire satisfaction of the Purchaser.
- 2.16.4 The provision of the clause remain effective and binding upon the Contractor even after the completion, expiration or termination of the contract.

## 2.17 MODE AND TERMS OF PAYMENT

*The Payment Schedule for the tender is given hereunder:*

- *Through Wire Transfer:*

*10% of the FOB/FCA value (excluding installation and commissioning charges) will be paid as advance against submission of Invoice alongwith Advance Bank Guarantee for an equivalent amount. This payment will be made only after signing of the contract and on submission of Security Deposit. A format for advance bank guarantee is attached herewith (refer appendix 'C').*

- *Through Wire Transfer:*

*10% of the FOB/FCA value (excluding installation and commissioning charges) will be paid after approval of all related designs and drawings by IPR and on receipt of Advance Bank Guarantee for an equivalent amount valid till the delivery of the system at IPR. A format for advance bank guarantee is attached herewith (refer appendix 'C').*

- *Through Letter of Credit:*

*60% of the FOB/FCA value (excluding installation and commissioning charges) will be paid against presentation of clear & unconditional shipping documents together with the shipment clearance letter issued by IPR to the negotiating Bank.*

- *Through Wire Transfer:*

*20% of the FOB/FCA value Plus Installation & Commissioning will be paid within 30 days after installation and commissioning and completion of satisfactory acceptance tests at IPR site and on submission of the Invoice with 10% Performance Bank guarantee of the contract value from a first class foreign bank/nationalized/scheduled bank, valid throughout the warranty period and the grace period of 3 months. (A format for performance bank guarantee is*

*attached herewith (refer appendix 'A').*

- 2.17.1 Unless otherwise specified in the contract, payment in full (excluding the amount of the commission included in the price payable directly by the Purchaser to the Indian Agent) shall be made within fifteen days from the date of presentation of the following documents to the Purchaser's Bank specified in each contract:
- a. Negotiable Bill of Lading or Airway Bill as the case may be evidencing shipment
  - b. Invoice for the shipment : Four Copies
  - c. Packing List : Four copies
  - d. Certificate of country of origin : Two copies
  - e. Shipping release from Inspector or Quality Surveillance Agency nominated by the Purchaser for the purpose of inspection: Four copies
  - f. Certificate of Quality including work test certificates of Chemical Analysis where applicable: Two copies
  - g. Shipping authorization from purchaser wherever required.
  - h. Bank Guarantee for the 10 percent of the value of contract in respect of plant/machinery/equipment/instrument towards performance bond as provided for in Clause 2.22.8 of Section II

An advance copy of invoice along with details of documents forwarded through bank should be sent to the Paying Authority mentioned in the Purchase Order to enable him to verify the claim and honour the documents is in order without delay.

- 2.17.2 The contractor shall be responsible to make available to the purchaser the documents which are essential for arranging customs clearance in India. The contractor shall arrange through his bank to have the documents air mailed to the Purchase's bank without any delay. He shall also arrange to forward directly to the Director, IPR, three copies of non-negotiable Bill of lading or Airway Bill as the case may be, along with a copy of the invoice and packing list. If the purchaser incurs any extra expenditure by way of penalty payable to the Port Trust authorities in India or any other such expenditure due to delay in receipt of shipping documents specified by him, the contractor shall be responsible for making good such extra expenditure incurred by the Purchaser.

#### 2.17.3 BANK CHARGES

- 2.17.3.1 While the Purchaser shall bear the bank charges payable to his Bankers in India (State Bank of India, Ahmedabad) the Contractor shall bear all the bank charges payable outside India including the charges towards advising/amendments commission.

#### 2.17.4 AGENCY COMMISSION

- 2.17.4.1 The amount of commission included in the price and payable to the Indian Agents of the Contractor shall be paid directly to the Indian Agents by the Purchaser in equivalent Indian Rupees on the basis of an Invoice from the Indian Agent. "Payment will be released to the Indian Agents after receipt and final acceptance of the goods by the Purchaser and the exchange rate will be the one based on which payment is made to the Contractor".

- 2.17.4.2 The contractor shall send invoice only for the net amount payable to him after deducting the amount of agency commission included in the invoice which would be paid to

the Indian Agents directly by the Purchaser. However the contractors invoice should separately reflect the amount of commission payable to his Indian Agent.

## 2.18 INSURANCE

2.18.1 Transit insurance from warehouse to warehouse shall be arranged by the purchaser through his underwriters unless this responsibility is specifically entrusted to the contractor in any particular case.

## 2.19 WITH-HOLDING AND LIEN IN RESPECT OF SUMS CLAIMED

2.19.1 Whenever any claim or claims for payment of a sum of money arises out of or under the contract against the contractor, Purchaser shall be entitled to withhold and have a lien to retain to the extent of the such claimed amount, from any sum or sums found payable or which at any time thereafter may become payable to the contractor under the same contract or any other contract with the Purchaser or any person contracting through the Director, IPR pending finalisation of any such claims.

2.19.2 It is an agreed term of the contract that the sum of money or money so withheld or retained under the lien referred to above by the purchaser will be kept withheld or retained as such by the purchaser till the claim arising out of or under the contract is determined by the Arbitrator and that the contractor will have no claim for interest or damage whatsoever on any contract in respect of such with-holding or retention under the lien referred to supra and duly notified as such to the contractor.

## 2.20 LIEN IN RESPECT OF CLAIMS IN OTHER CONTRACTS

2.20.1 Any sum of money due and payable to the Contractor (including the security deposit returnable to him) under contract may be withheld or retained by way of lien by the Purchaser or any other person or persons contracting through the Director, IPR against any claim of the Purchaser or such other person or persons in respect of payment of a sum of money arising out of or under any other contract made by the contractor with the Purchaser or with other such person or persons.

2.20.2 It is an agreed term of the contract that the sum of money so withheld or retained under this clause by the Purchaser will be kept withheld or retained as such by Purchaser till this claim arising out of in the same contract or any other contract is either mutually settled or determined by the arbitrator, and that the contractor shall have no claim for interest or damages whatsoever on this account or on any other ground in respect of any sum of money with-held or retained under this clause and duly notified as such to the contractor.

## 2.21 ARBITRATION

2.21.1 All disputes arising in connection with the present contract shall be finally settled under the Rules of Conciliation and Arbitration of the International Chamber of Commerce by one or more Arbitrators appointed in accordance with the said Rules.



## SECTION II

In addition to the General Conditions of Contract contained in Section I above the following Special conditions shall apply to contracts for supply of plant/machinery/equipment/manufactured equipment. These special conditions in Section I shall override the letter.

### 2.22 SPECIAL CONDITIONS OF CONTRACT

#### 2.22.1 RESPONSIBILITY FOR COMPLETENESS

2.22.1.1 All fittings or accessories which may not be specifically mentioned in the tender specifications of the contract but which are necessary, are to be provided by the contractor without extra charge and the plant/machinery/equipment/instruments must be completed in all respect.

#### 2.22.2 FINAL TEST

2.22.2.1 The final tests as to performance and guarantee shall commence within one month of completion of successful installation

#### 2.22.3 REJECTION OF DEFECTIVE PLANT

2.22.3.1 If the completed plant or any portion thereof before it is finally accepted is found to be defective or fails to fulfil the requirements of the contract, the Purchaser shall give the Contractor notice setting forthwith the details of such defects or failure and the contractor shall forthwith rectify the defective plant or alter the same to make comply with the requirement of the contract. Should the contractors fail to do so within a reasonable time the Purchaser may reject and replace at the cost of the Contractor, the whole or any portion of the Plant as the case may be, which is defective or fails to fulfil the requirement of the contract. Such replacement shall be carried out by the Purchaser within a reasonable time and at reasonable price and where reasonably possible to the same specifications and under competitive conditions. The Contractor shall be liable to pay to the Purchaser the extra cost, if any, of such replacement delivered and or erected as provided for in the contract such extra cost being the difference between the price paid by the Purchaser under the provisions above mentioned for such replacement and the contract price for them. Contractor shall refund to Purchaser any sum paid by the Purchaser to the Contractor in respect of such defective plant.

#### 2.22.4 WARRANTY

2.22.4.1 For a period of twenty four calendar months or 8000 hours starting from the date of site acceptance of the plant/machinery/equipment/instruments at IPR Or 30 calendar months from the date of arrival of CORS system at IPR, whichever is earlier (or a suitable mutually agreed longer period to be reckoned from the date of last major shipment depending upon the nature of the plant/machinery/equipment/instrument) the Contractor shall be responsible for any defects that may develop under conditions provided for the contract and under proper use, arising from the faulty materials, design or workmanship in the plant or from faulty erection of the plant by the Contractor, but otherwise and shall rectify such

defects at his own cost when called upon to do so by the Purchaser who shall state in writing such defects.

2.22.4.2 If it becomes necessary for the Contractor to replace or renew any defective portions of the plant for purpose of rectification under this clause, the provisions of this clause shall apply to the portions of the plant so replaced or renewed under the expiration of six months from the date of such replacement or renewal or until the end of the above mentioned period of twenty four months whichever may be earlier. If any defects not rectified within reasonable time, the purchaser may proceed to get the work done at contractor's risk and expenses but without prejudice to any other rights which the Purchaser may have against the Contractor in respect of such defects.

2.22.4.3 All inspections adjustments, replacements or renewals carried out by the Contractor during the warranty period shall be subject to the same conditions as in the contract.

2.22.5.1 All contractor shall under that before going out of production of the spare parts he will give adequate advance notice to the Purchaser so that the letter may order his requirement of spares in one lot if he so desires.

2.22.5.2 The contractor shall further guarantee that if he goes out of production of spare parts, then he will make available blue prints, drawings of spare parts and specifications of material at no cost to the Purchaser, if and when required in connection with the equipment to enable Purchaser to fabricate or procure spare parts from other sources.

2.22.5.3 The provision of this clause shall remain effective and binding upon the Contractor even after the completion or expiration of the contract and till the plant/machinery/equipment supplied under the contract is in use by the Purchaser.

#### 2.22.6 ERECTION AND COMMISSIONING

2.22.6.1 In all cases where contracts provide for supervision of erection and commissioning or for test at the Purchaser's premises the Purchaser except where otherwise specified, shall provide free of charge, such labour, Materials, fuels, stores, apparatus and instruments as may be required from time to time and as may reasonably be demanded by the contractor to carryout efficiently such supervision of erection and commissioning and for the requisite test. In case of contracts requiring electricity for the completion of erection, commissioning and testing at site, such electricity shall be supplied free to the Contractor.

#### 2.22.6.2 TIME FOR COMPLETION OF ERECTION

2.22.6.2.1 The time agreed for completion of erection and commissioning shall be the essence of the contract and should any delay or default occurs on the part of the Contractor, the Purchaser, shall have the right to make alternative arrangement to carry out erection and commissioning of the Plant / Machinery / Equipment / Instrument and the Contractor shall be liable to pay to extra expense that may be incurred by the Purchaser on this account.



2.22.6.2.2 Action by the Purchaser under the clause shall not relieve the contractor of his warranty obligations under the contract.

#### 2.22.7 TRAINING

2.22.7.1 The Contractor shall, if required by the Purchase, provide facilities for the practical training of purchaser's engineering or technical personnel from India and 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.

#### 2.22.8 SECURITY DEPOSIT AND PERFORMANCE BOND

2.22.8.1 The Contractor shall at the opinion of the Purchaser and within the period prescribed by him shall furnish Security Deposit not exceeding 10% of the contract value in the form of:

a) Bank Guarantee from the State Bank of India (as per Appendix 'B')

OR

b) Demand draft drawn infavour of IPR, on the State Bank of India, Ahmedabad.

If the contractor fails to provide Security Deposit as above within the stipulated time limit or within the extended time granted by the Purchaser shall constitute a breach of the contract and the Purchaser shall be entitled to make other arrangements for the repurchase of the Stores / Equipment contracted for at the risk and expense of the Contractor and or to recover from the Contractor damages arising from such cancellation. The Bank Guaranteeing Bank without any reference to Contractor.

In the event the supplier's failure to perform the Contract satisfactorily, Purchaser shall be at liberty to retain the Security Deposit either in full or in part as the circumstances may warrant.

#### 2.22.8.2 PERFORMANCE BOND

The Contractor shall furnish a performance bond in the form of a bank guarantee as per the specimen at Appendix "A" to this section for an amount equal to ten percent of the total value of the contract valid till expiration of the warranty period as a security for the satisfactory performance of the plant/machinery/equipment/instrument supplied under the contract

APPENDIX 'A'  
TO  
PORTION II, SECTION B SPECIAL CONDITIONS OF CONTRACT  
PERFORMANCE BOND  
(TO BE EXECUTED BY THE CONTRACTOR'S BANK On non-judicial stamp paper of appropriate value)

Institute for Plasma Research  
Nr. Indira Bridge  
Bhat, Gandhinagar-382428  
Gujarat  
INDIA

WEHREAS on or about the \_\_\_\_\_ day of \_\_\_\_\_ 200\_\_\_\_ M/s. \_\_\_\_\_ having its registered Office at \_\_\_\_\_ (hereinafter called 'The Contractor') entered into an Agreement No. \_\_\_\_\_ dated \_\_\_\_\_ for manufacture and supply of \_\_\_\_\_ hereinafter called 'The Contract') with the Director, IPR (hereinafter called 'The Purchaser')

AND WHEREAS under the terms and conditions of the contract final payment amounting to --under the contract is to be made against a performance bond in the form of bank guarantee furnished by the Contractor for a sum \_\_\_\_\_ of equivalent to 10% (Ten per cent) of the value of the contract towards satisfactory performance of the \_\_\_\_\_ (hereinafter called the equipment) valid for a period of 12 months from the date of putting into operation of the said equipment or \_\_\_\_\_ months from the date of receipt of the last lot of consignment whichever is earlier.

NOW We, (bank) in consideration of the promises and payment of the final/balance amount of \_\_\_\_\_ under the contract to the contractor hereby agree and undertake to pay on demand and without any demur to the Director, IPR of the contractor a sum not exceeding \_\_\_\_\_ against any loss or damage that may be suffered by the Purchaser by the reasons of any unsatisfactory performance of the said equipment.

AND we, \_\_\_\_\_ (Bank) hereby also agree that the decision of the said Director, IPR as to whether the said equipment is giving satisfactory performance or not and as to the amount of loss or damages suffered by the Purchaser on account of unsatisfactory performance of the said equipment shall be final and binding on us.

AND We (bank) hereby further agree that our liability hereunder shall not be discharged by virtue of any agreement between the Purchaser & the Contractor whether with or without knowledge and/or consent or by reason of the Purchaser showing any indulgence or forbearance to the contractor whether as to payment, time performance or any other matter whatsoever relating to the contract which but for this provision would amount to discharge of the surety under the law.

Our guarantee shall remain in force until \_\_\_\_\_ and unless a claim under the guarantee is lodged with us within six months from the date (i.e. \_\_\_\_\_), all rights of the Purchaser under the Guarantee shall be forfeited and we shall be relieved and discharged from all our liabilities hereunder.

Our liability under this guarantee shall not be affected by any change in our constitution or the constitution of the contractor.

(Stamp & Signature)  
FOR AND ON BEHALF \_\_\_\_\_ (BANK)  
DATED AT \_\_\_\_\_ THE \_\_\_\_\_ 200

APPENDIX 'B'

TO  
PORTION II, SECTION B SPECIAL CONDITIONS OF CONTRACT  
SECURITY DEPOSIT

(TO BE EXECUTED BY THE CONTRACTOR'S BANK - On non-judicial stamp paper of appropriate value)

THIS DEED OF GUARANTEE MADE AT \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_ between \_\_\_\_\_ having its registered office at \_\_\_\_\_ and one of its branches at \_\_\_\_\_ (hereinafter called "the Bank" which expression shall mean and include the said \_\_\_\_\_ and its successors and assigns) of the one part AND IPR (INSTITUTE FOR PLASMA RESEARCH) Near Indira Bridge, Bhat, Gandhinagar 382 428, Gujarat, India (hereinafter called "the purchaser" which expressions shall mean and include the said INSTITUTE FOR PLASMA RESEARCH, ANDHINAGAR and its successors and assigns) of the other part.

WHEREAS \_\_\_\_\_ (hereinafter called "the Contractor/Supplier") having its registered office at \_\_\_\_\_ have entered into a Contract having order/ contract value of Rs./USD/Euro \_\_\_\_\_ (Rupees/USD/Euro \_\_\_\_\_) with the purchaser being \_\_\_\_\_ Purchase order/Contract No. \_\_\_\_\_ Dated \_\_\_\_\_ for \_\_\_\_\_ in accordance with the terms, specifications and conditions contained therein.

AND WHEREAS under the terms of the aforesaid order/contract, the contractor/Supplier is to furnish to the Purchaser a Bank guarantee for an amount of Rs./USD/Euro \_\_\_\_\_ (Rupees/USD/Euro \_\_\_\_\_) being 10% of the total value of the purchase order/contract by way of security for fulfilment of the Contractual obligations on the part of the Contractor/Supplier thereunder.

AND WHEREAS the Contractor/Supplier has requested the Bank to guarantee the due payment of the aforesaid amount by the contractor/supplier to the purchaser in case the contractor/supplier fails to fulfil any of the aforesaid contractual obligations.

NOW THIS DEED WITNESSES AS FOLLOWS:

1. The Bank hereby agrees unequivocally and unconditionally to pay within 48 hours, on demand, in writing from the purchaser or any officer authorised by it in this behalf and without demur, any amount upto and not exceeding Rs./USD/Euro \_\_\_\_\_ (Rupees/USD/Euro \_\_\_\_\_) to the Purchaser on behalf of the Contractor /Supplier.
2. This guarantee is valid and binding upon the Bank till final acceptance of the ordered item/s by the Purchaser and fulfilment of all the contractual obligations to the satisfaction of the Purchaser and shall not be terminable or affected by notice of any change in this constitution of the Bank or of the firm of Contractor or on account of any reason whatsoever.
3. The liability of the Bank hereunder shall not be impaired or discharged by any extension of time or variations or alterations made or conceded or agreed within or without the knowledge or consent of the Bank or by or between the parties to the said Purchase order.
4. The liability of the Bank under this deed is restricted to the sum of Rs./USD/Euro \_\_\_\_\_ (Rupees/USD/Euro \_\_\_\_\_) and same shall remain in force till final acceptance of the ordered item/s covered in the Purchase order (two months beyond final acceptance date). In case any further extension of the present guarantee is required the same shall be granted on receiving instructions in writing there for from the contractor/supplier on whose behalf this guarantee is issued.

5. Unless proceeding for enforcing this guarantee is commenced against the Bank within two months from the expiry of the aforesaid period or such extended period or period as aforesaid all the rights of the Purchaser under this guarantee shall be extinguished and the Bank shall be relieved and discharged from all liabilities hereunder.
6. The neglect or forbearance of the Purchaser in enforcement of any of its rights under the aforesaid purchase order against the contractor/supplier shall in no way relieve the Bank of its liability under this deed.

In witness whereof, we the \_\_\_ have executed this. This the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

Witnesses:       (1)  
                          (2)

## APPENDIX 'C'

### BANK GUARANTEE (ADVANCE PAYMENT)

(TO BE EXECUTED BY THE CONTRACTOR'S BANK - On non-judicial stamp paper of appropriate value)

BANK GUARANTEE NO. \_\_\_\_\_ DATE: \_\_\_\_\_

1. WHEREAS on or about the \_\_\_\_\_ day of \_\_\_\_\_ M/s \_\_\_\_\_, a company registered under the companies act and having its registered office at \_\_\_\_\_ (hereinafter referred to as "the Contractor/Supplier") entered into an Agreement/Contract/Purchase Order bearing No. \_\_\_\_\_ date \_\_\_\_\_ with IPR (INSTITUTE FOR PLASMA RESEARCH), Near Indira Bridge, Bhat, Gandhinagar 382 428, Gujarat, India (hereinafter referred to as "The Purchaser") for the supply of \_\_\_\_\_ (hereinafter referred to as "the Equipment").

2. AND WHEREAS under the terms and conditions of the contract an amount of Rs./USD/Euro \_\_\_\_\_ (Rupees/USD/Euro \_\_\_\_\_ only) representing \_\_\_\_\_ percent advance payment out of the contract value of Rs./USD/Euro \_\_\_\_\_ (Rupees/USD/Euro \_\_\_\_\_ only) is to be paid by the Purchaser.

3. AND WHEREAS IPR has agreed in pursuance of the said terms and conditions of the contract to make an advance payment of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) to the contractor on the Contractor furnishing a Bank Guarantee in the manner herein contained.

4. NOW WE, \_\_\_\_\_ (Name and Address of the Bank) in consideration of the Purchaser having agreed to pay to the Contractor an advance payment of Rs./USD/Euro \_\_\_\_\_ (Rupees/USD/Euro \_\_\_\_\_ Only) do hereby agree and undertake to indemnify the Purchaser and keep the Purchaser indemnified to the extent of a sum not exceeding the said sum of Rs./ USD/Euro \_\_\_\_\_ (Rupees/ USD/Euro \_\_\_\_\_ Only) against any damage or loss that may be suffered by the Purchaser by reason of non-fulfillment of any of the terms and conditions of the contract by the Contractor.

5. WE, \_\_\_\_\_ (Bank) do hereby undertake to pay the amount due and payable under this guarantee without any demur merely on a demand from the Purchaser stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the Purchaser by reason of breach by the said Contractor(s) of any of the terms and conditions contained in the said Agreement/Contract/Purchase Order or by reason of the Contractor(s)'s failure to perform the said Agreement/Contract/Purchase Order. Any such demand made on the bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs./USD/Euro \_\_\_\_\_ (Rupees/ USD/Euro \_\_\_\_\_ Only).

6. WE, \_\_\_\_\_ (Bank) undertake to pay to the Purchaser any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this present guarantee being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment thereunder and the Contractor(s) shall have no claim against us.

7. AND WE, \_\_\_\_\_ (Bank) hereby further agree that the decision of the said Project Director, IPR as to whether the Contractor has committed breach of any such terms and conditions of the contract or not and as to amount of damage or loss assessed by the said Project Director as damage or loss suffered by the Purchaser/IPR on account of such breach would be final and binding on us.

8. WE \_\_\_\_\_ (Bank) further agree with the Purchaser that the Purchaser shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Agreement/Contract/Purchase Order or to extend time of performance by the said Contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Purchaser against the said Contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement/Contract/Purchase Order and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said Contractor(s) or for any forbearance, act or commission on the part

of the Purchaser or any indulgence by the Purchaser to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have the effect of relieving us.

9. THIS GUARANTEE will not be discharged due to the change in the constitution of the Bank or the Contractor(s).

10. OUR GUARANTEE shall remain in force until \_\_\_\_\_ (two months beyond the contract completion date) and unless a claim under the guarantee is lodged on or before the above date, all rights of Purchaser under the guarantee shall be forfeited and we shall be relieved and discharged from all liabilities thereunder.

In witness whereof, we the \_\_\_\_\_ have executed this.

Dated the \_\_\_\_ day of \_\_\_\_\_ 20 \_\_\_\_.

For \_\_\_\_\_  
(Indicate the name of bank with Postal address, Fax  
Number & email address)

Witnesses: (1)

(2)

TECHNICAL SPECIFICATIONS OF STORES AND DRAWINGS.

SPECIFICATIONS OF HELIUM COMPRESSOR AND OIL REMOVAL SYSTEM FOR CRYOGENIC TEST FACILITY AT IPR

SUPPLY, INSTALLATION & COMMISSIONING, SITE ACCEPTANCE TESTS AND TRAINING

FOR PERSONNEL OF HELIUM COMPRESSOR AND OIL REMOVAL SYSTEM FOR

CRYOGENIC TEST FACILITY AT IPR SITE

BHAT, GANDHINAGAR, GUJARAT, INDIA

(TWO PART TENDER)



INSTITUTE FOR PLASMA RESEARCH

NEAR INDIRA BRIDGE, BHAT

GANDHINAGAR: 382428

GUJARAT STATE

(INDIA)

# Tender Document

SUPPLY, INSTALLATION & COMMISSIONING, SITE ACCEPTANCE TESTS AND TRAINING

FOR PERSONNEL OF HELIUM COMPRESSOR AND OIL REMOVAL SYSTEM FOR

CRYOGENIC TEST FACILITY AT IPR SITE

BHAT, GANDHINAGAR, GUJARAT, INDIA



INSTITUTE FOR PLASMA RESEARCH

NEAR INDIRA BRIDGE, BHAT

GANDHINAGAR: 382428

GUJARAT STATE

(INDIA)



## Table of Contents

1. INTRODUCTION
2. OPERATIONAL REQUIREMENTS AND MAIN SPECIFICATION
  - 2.1 GENERAL DESCRIPTION
  - 2.2 OPERATIONAL REQUIREMENTS
  - 2.3 MAIN SPECIFICATION FOR CORS
  - 2.4 INFORMATION NEED TO BE CONSIDERED/PROVIDED BY VENDOR
3. SCOPE OF WORK AND SUPPLY
  - 3.1 SCOPE OF WORK
  - 3.2 SCOPE OF SUPPLY
4. ESSENTIAL INFORMATION NEEDED ALONG WITH THE OFFER
5. GENERAL SUPPLY
6. CODES AND STANDARDS
7. QA, QC, TESTS, INSTALLATION, COMMISSIONING, TRAINING, GUARANTEE/WARRANTY, SPARE PARTS
  - 7.1 GENERAL CONDITIONS
  - 7.2 PRESSURE AND LEAK TESTS
    - 7.2.1 PRESSURE TESTS
    - 7.2.2 HELIUM LEAK TESTS
  - 7.3 FACTORY ACCEPTANCE TESTS (FAT) AT THE VENDOR'S SITE
  - 7.4 INSTALLATION, COMMISSIONING AND ACCEPTANCE TESTS AT IPR SITE
  - 7.5 TRAINING FOR IPR PERSONNEL AT IPR
  - 7.6 SPARE PARTS
  - 7.7 LIST OF THE ITEMS TO BE PROVIDED BY IPR AS FREE ISSUE MATERIALS/UTILITIES AT IPR SITE
  - 7.8 ACCEPTANCE AND GUARANTEES/WARRANTY
8. ITEMS NOT IN THE SCOPE OF WORK/SUPPLY
9. DOCUMENTATION TO BE DELIVERED
10. GENERAL INFORMATIONS
11. DELIVERY PERIOD

## 1. INTRODUCTION

This document provides specifications for supply, installation & commissioning, site acceptance tests and training to IPR personnel of helium Compressor and Oil Removal System (CORS) for cryogenic test facility at IPR site. It will be used for testing of cryogenic plate-fin heat exchangers and cryo-components using compressed helium gas in the cryogenic test facility. Later it will be used for turbine based helium refrigerator/liquefier (HRL) plant for liquid helium production. The CORS should have high reliability for uninterrupted operation for at least two months. It should have sufficient instruments & sensors for monitoring, operation and control with appropriate fault diagnosis and interlocks for safe operations.

The Compressor and Oil Removal System (CORS) should mainly be composed of:

1. One single stage screw compressor block equipped with appropriate electric motor.
2. Oil Removal System with bulk oil separator, oil coalescers, removal of trace oil vapour from helium gas, oil re-circulation provision, oil cooler and helium cooler.
3. Suitable interconnecting piping (Material SS304) among different components of CORS with compatible terminations at both ends keeping requirements of easier assembly and disassembly.
4. The CORS shall be equipped with suitable by-pass control valve, control valves for gas intake from/ return to buffer tank and safety valves at appropriate locations for efficient helium gas management among helium buffer tank, CORS and cold box with cold applications
5. Instrumentations, controls, safety interlocks, control logics and electric control cabinet along with PLC(Programmable Logic Controller), its software, and necessary fault finding gadgets.
6. Electric power distribution cabinet.
7. The system is to be mounted on appropriate support stands without any special preparation for the floor.

## 2. OPERATIONAL REQUIREMENTS AND MAIN SPECIFICATION

### 2.1 GENERAL DESCRIPTION

This CORS will be used to run a cryogenic test facility having closed loop helium gas circulation. In the test facility, cryogenic plate-fin heat exchangers and other cryo-components will be tested, for which, it is required to have compressed helium gas at 14 bar (a) pressure and ~310 K temperature with flow rate 70 g/s as nominal requirement. Later CORS will be used in a closed loop with the turbine based HRL plant. Compressed helium at the outlet of the CORS should have oil impurity  $\leq 1$  ppm by weight and this should comply for the long duration operation of HRL plant.

### 2.2 OPERATIONAL REQUIREMENTS

At first, pure helium approx. ambient pressure and temperature is fed to the compressor suction and compressed to the required discharge pressure. The high pressure stream is fed to its own bulk oil separator or primary oil separation system. The secondary oil removal system or final oil removal is achieved by coalescing filters arranged in series and an oil adsorber bed with filters installed downstream of the primary oil separation system. All these components are part of scope of supply (also a part of this specification). Following operational requirements should be included in standard CORS product besides the other obvious requirements of a helium CORS meant for HRL.

1. Provision of independent conditioning (purging of impurities and filling with pure helium gas) of different parts of CORS as and when required. This, as an example could be replacement of charcoal in the adsorber and conditioning required for filling pure helium gas after the replacement of charcoal. The vendor shall include the necessary equipments/elements like vacuum pumps, associated piping and valves, etc.

2. Removal of pressurized helium from different parts of the CORS as and when required. This, as an example, could be removal of pressurized helium gas from the charcoal bed before opening it for maintenance. The vendor shall include the necessary equipments/elements like valves, pressure measuring elements/gauges and associated piping, etc.
3. Regeneration of charcoal bed: Appropriate heater, piping, insulation, valves, temperature sensors, gauges, flow meters, should be provided to use dry warm nitrogen gas for regeneration of moisture adsorbed in the adsorber bed. Warm nitrogen pipe line at pressure about 2 bar (a) (maximum 5 bar (a)) will be supplied from external dry nitrogen generators. Piping connection provision should be provided for connection to the piping of this external system.
4. Oil filling and oil drainage: appropriate arrangements should be available in CORS for drainage and replacement of the oil, as and when required. Oil tank should include clearly visible appropriate level indicators
5. CORS should have independent component removal for repairing and maintenance for different components like, compressor block, motor, oil cooler, helium cooler, oil pumps, charcoal bed, oil coalescers, filters, valves, etc.
6. Operation of CORS unit in bypass mode without connection to application for compressor performance test should be possible.
7. Operation locally (using the PLC cabinet display panel which will have provision for different operation through appropriate controls) and remote (from a distance of about 200 m using a desktop display screen and mimic diagrams of PID) should be possible and appropriate interface with external PLC should be provided with protocol details.
8. Helium CORS should be compatible for uninterrupted operation of turbine-based HRL plant for 2 months at a stretch and about 7000 hours of operations in a year without need of general maintenances, like, lubricating oil refilling, greasing of bearings, adsorbent replacements, coalescer and filter replacements, etc.

### 2.3 MAIN SPECIFICATION FOR CORS

Table-1 gives the main data required for Oil flooded/oil injected helium screw compressors. Only screw type compressor will be considered

Table-1: Main design data for helium compressor and oil removal system

| Sr. No. | Parameter  | Unit                    | Nominal operating condition               | Off-nominal operating condition  |
|---------|--|-------------------------|---|--|
| 1       | Suction pressure of helium   | bar (a)                 | 1.05                                      | 0.9 to 1.2<br>(0.9 bar(a) will be for few seconds during start-up of the compressor) |
| 2       | Suction temperature of helium  | °C                      | 35  | 5 to 45  |
| 3       | Discharge pressure of helium at the outlet of whole CORS unit going to the application               | bar (a)                 | 14  | 12 to 15   |
| 4       | Discharge temperature of helium at the outlet of whole CORS unit going to the application            | °C                      | 35  | 20 to 40   |
| 5       | Discharge flow rate of helium, at the outlet of the whole unit of CORS                               | g/s                     | 70±2                                      | ~20 to 75  |
| 6       | Capacity control (Step less Part Loading - Unloading )   | -                       | -   | ≤ 30 to 100 % of nominal flow rate with sliding valve or Variable frequency drive    |
| 7       | Number of compressors  | Number                  | 1(No standby)                             | --   |
| 8       | Maximum total (or global) helium Leak Rate for whole unit with operating pressure                    | Nm <sup>3</sup> per day | <0.1                                      | <0.1   |
| 9       | Maximum local helium leak rate at any point in the CORS unit with 14 bar (a) internal pressurization | mbar l/s                | <1x 10 <sup>-3</sup>                      | <1x 10 <sup>-3</sup>   |
| 10      | Type of compressor   | --                      | Oil flooded/oil injected screw compressor | --   |
| 11      | Single stage or double stage compression   | --                      | Either type is accepted                   | --   |
| 12      | Level of oil impurity in the helium stream at the outlet of the whole CORS unit.                     | PPM by weight           | <1  | <1   |
| 13      | Type of cooling (air-cooled or water-cooled) for helium cooler and oil cooler                        | --                      | Water cooling                             | --   |

2.4 INFORMATION NEED TO BE CONSIDERED/PROVIDED BY VENDOR

1. Starting method: Soft starter (soft starter is in the scope of work and supply)
2. Motor Power: Compatible to compressor load as per the main design data in table-1. Compression process should be efficient and power consumption by motor should be minimized.
3. Type and configuration required: Oil flooded/oil injected, Skid mounted, single stage or double with shock absorbers.
4. Fluid to be supplied during site acceptance test from IPR's gas storage cylinder or tank for compression can have composition : pure helium (99.995 (Grade A) by Volume % dry Helium Gas, remaining is nitrogen, oxygen, Argon, moisture, hydrocarbon and hydrogen) :
5. Operation Period (24 hours x 7 days on continuous basis for about 2 months continuously) will be of ~7000 hours per year.
6. Cooling water for the oil cooler and helium cooler: Vendor should provide inlet/outlet and flow rate of cooling water with detailed information.
7. Available electrical power : a) 415 V  $\pm$  10%, 50 Hz  $\pm$  5% , 3 phase, 5 wire (without back up) for heavy loads and b) 230 V  $\pm$  1%, 50 Hz  $\pm$  1Hz , single phase, 3 wire (regulated & uninterrupted with 30 minutes battery support) for control, this electrical power as per Indian standard.
8. DC Power & UPS Requirements should be provided by vendor.
9. Ambient conditions : temperatures : maxi 40°C – mini +15°C
10. Humidity: 65% $\pm$ 15%
11. Noise: Less than 90 dB (A) at approximately 1 meter apart from compressor station. As optional, enclosures to reduce noise level to 80 dB (A) at a distance of 1 m from the unit, should be included with separate price for it.
12. The unit will be located/used indoor.
13. Design pressure of the high pressure parts of the system should be at least 20 bar (a).
14. Design pressure for low pressure parts should be at least 5 bar(a).
15. Safety valves at appropriate locations should be included to release accidental pressure rises.
16. If oil pump is used for recirculation of oil, no. of oil pumps should be 2, while one is in operation other one is in standby.
17. CORS shall be designed for mean time between maintenance of more than 7000 hrs of operational time and design should be such that, at a stretch CORS can be operated continuously for 2 months. Absorber bed should have capacity of operation of 7000 hours before regeneration.
18. Appropriate filters should be included to safe-guard compressor system and HRL in which this compressed helium will be used.
19. Vendor should provide required compressed air pressure and flow rate for valve operations.
20. Rotary vacuum pump of suitable capacity with suction filters should be included for purging and pumping of internal space of piping, vessels and other equipment of CORS.
21. Vendor should provide the load bearing capacity of floor required for installation of its supplied system.
22. Appropriate electrical safety and interlocks should be incorporated in the CORS like phase reversals, overload, over voltage, grounding, earthing etc...

### 3. SCOPE OF WORK AND SUPPLY

#### 3.1 SCOPE OF WORK

The offer must include the following works, whose details are given in the respective sections in this document.

1. Supply of helium compressor and oil removal system with all accessories as per this document.
2. Quality controls, inspections, installation on the test bed and performance tests (factory acceptance tests for pre-dispatch inspection) at vendor's factory.
3. Appropriate packing for handling as well as transport.
4. Installation of CORS with its instrumentations, control valves, control units and other accessories and performing the Site Acceptance Tests (SAT) at IPR site.

5. Documentations related to quality controls and tests done at vendor's site and tests and commissioning done at IPR site.
6. Documentations related to design, drawing, codes and standards used for different parts.
7. Documentations related to instrumentation, control units and control logics
8. Documentations required for trouble shooting during operation, maintenance and repair.

### 3.2 SCOPE OF SUPPLY

The offer must include the following main components

1. One Compressor unit with electrical motor.
2. Variable Frequency Drive (VFD) or slide valve mechanism for part load.
3. Oil management system with bulk oil separator, oil cooler, oil pump for oil recirculation (if needed), coalescers, adsorber beds, filters, etc.
4. Helium cooler
5. Helium gas management system for controlled gas intake from /return to helium buffer tank and bypass control valve, so that compressor unit can be operated without connection to applications. Helium Buffer tank is not in the scope of vendor. IPR will provide buffer tank at IPR site which can store helium gas at 14 bar (a).
6. Structural Frame for whole systems
7. Electric Control cabinet and power supply cabinet. Ideally these two cabinets would be close to the compressor skid. IPR would provide total power required to vendor's electrical cabinet.
8. Instrumentation and Control System which should include PLCs and its software, operational and control of CORS with protocol details for external communication with PLC.

### 4 ESSENTIAL INFORMATION NEEDED ALONG WITH THE OFFER

Vendor should include following information, besides other informations, along with the quotations;

1. For each system, sub-system and components, there should be a list of elements/equipments/instruments/sensors included in the offer. This should also include main performance parameters/capacities of these parts and also as whole system.
2. Tentative dimensions and weight of the whole skid and also that of the major components like the compressor block and different vessels.
3. Noise levels of the system at a distance of 1 meter from the unit. It is preferable that noise level of the compressor shall be as minimum as possible.

### 5 GENERAL SUPPLY

The general supply includes:

1. Flanges and counter-flanges must be provided for all interfaces and interconnections between skids (if supplied with more than one skid). Vendor should supply inlet and outlet piping terminations with flanges for connections to the cooling water, helium gas and compressed air as per industry standard practices. IPR will do the cooling water, helium gas and compressed air piping connections to these terminations. Vendor must provide these details, like, pipe diameters, thickness, flange dimensions along with system overall dimensions and drawings to IPR before manufacturing.
2. All instrumentations necessary for operations, fault diagnosis and acceptance test & commissioning of CORS at IPR;
3. Pressure and temperature switches for protections;
4. The manpower, equipment and materials needed for installation and commissioning of the specified CORS on site at IPR, India;
5. The complete technical documentation in English for the compressor station including all individual technical items and elements;

6. Two sets of all documents inclusive of drawings, installation data, operation and maintenance manuals, spares lists and maintenance schedules.

## 6 CODES AND STANDARDS

The applicable codes and standards specified by IPR for integration, manufacturing and inspection as well as testing are following:

1. All the pressure vessels, piping, heat exchangers (i.e. the oil separator, the oil cooler, piping and the helium cooler), welding and materials must be conformed to ASME or equivalent standard. All electrical equipment must be conformed to IEC or equivalent standard.
2. Structural steel and miscellaneous structures: according to ISO standard.
3. Test certificates for material, components and elements should be produced for all above cases.
4. Equivalent standards may be followed, after obtaining approval from IPR. Vendor should justify with documentation during integration phase and before manufacturing, that followed standards/codes are equivalent to or more stringent than the requirement as per the codes asked in the tender document.
5. Vendor should comply with ISO9001 or equivalent.

## 7 QA, QC, TESTS, INSTALLATION, COMMISSIONING, TRAINING, GUARANTEE/WARRANTY, SPARE PARTS

### 7.1 GENERAL CONDITIONS

The vendor must deliver a detailed Quality Assurance (QA) and Quality Control (QC) plan listing all the manufacturing and quality control operations. The vendor will be responsible for carrying out this plan. All material or manufacturing faults detected during the tests are to be remedied by the vendor at its own cost. Deviations have to be described into non-conformity sheets.

For all pressure vessels and pipework, the supervision and tests during manufacturing should be done as per ASME standard or equivalent. Vendor shall provide supporting proof for the oil contents after the oil removal system which should be  $\leq 1$  PPM by weight

All the tools required for the complete installation and commissioning of CORS shall be arranged by the vendor, except the items specified and agreed upon by IPR.

Lubricating oils, greases and consumables required during installation and commissioning should be provided by vendor.

A detailed time schedule QA/QC plan has to be supplied within 30 days after the placement of the order for IPR's review and suggestions if any. After acceptance by IPR, manufacturing process can be started.

The plan should include two visits for inspection/witness by IPR and/or IPR approved 3<sup>rd</sup> party personnel for some critical tests and manufacturing processes at vendor's site which will be mutually agreed during execution of the project. IPR will bear travel and accommodation expenditure.

### 7.2 PRESSURE AND LEAK TESTS

#### 7.2.1 PRESSURE TESTS

A final pneumatic pressure test shall be carried out with dry nitrogen gas on the completed skid assembly before shipment as per ASME or equivalent code. Before shipment it should be ensured that it is filled with dry nitrogen and closed properly, so that until the final assembly at IPR site, no atmospheric gas goes inside.

### 7.2.2 HELIUM LEAK TESTS

The vendor is requested to demonstrate in its factory that the finished compressor set is in accordance with the specified leak rates. The leak test shall be carried out with pure helium (or mixture of 50% pure helium+50% dry nitrogen and test result need to be appropriately extrapolated for actual leak rate) under the pressure of 14 bar (a) (or at a lower pressure with appropriate extrapolation of result for pressure 14 bar (a)). All the pipe works and vessels have to be perfectly flushed with pure helium or a known mixture of helium and nitrogen after preliminary evacuation (down to a vacuum of approximately 30mbar). Vendor shall make all the necessary arrangements for the evacuation, helium filling and leak testing. A sniffer connected to calibrated helium leak detector may be used to check all the welds and connections.

Data on integrated leak tightness in terms of integrated leak rate per unit time of CORS operation i.e. cubic meters of helium gas lost per hour should be recorded based on the volume, pressure and temperature of helium gas buffer tank to which CORS will be connected. Vendor can also suggest a method for finding the integrated leak rate which can be used after it is approved by IPR.

### 7.3 FACTORY ACCEPTANCE TESTS (FAT) AT THE VENDOR'S SITE

It includes:

1. Test under pressure (Pneumatic test) with nitrogen as per ASME or equivalent code and checking of pressure evolution (recording pressure and temperature);
2. Helium Leak tightness test with sniffer probe: The allowed local helium leak tightness is  $<1 \times 10^{-3}$  mbar.l/s, while helium pressure is 14 bar (a); this test reports will be reviewed by IPR and approval on this will be given by IPR.
3. check of final documentations as per this document specification, quality files, tests and inspection reports including in particular : test certificates of the compressors (test runs at Vendor premises), Hydraulic/Pneumatic pressure tests of all pressure vessels and piping, certified by qualified inspector, Standard manufacturers test certificates for the total equipment (heat exchangers, motors, etc...).

These above tests will be done as pre-dispatch inspection. Other critical test requirements will be decided during technical bid evaluation. Vendor should provide reports/certificates of these inspections to IPR for review and dispatch clearance from IPR

### 7.4 INSTALLATION, COMMISSIONING AND ACCEPTANCE TESTS AT IPR SITE

All installation works, interconnecting piping, cabling, wiring works, if any, in the compressor system, all performance tests and commissioning runs for acceptance tests must be carried out by the vendor's personnel and under the responsibility of Vendor. The details of the test procedure including site preparation, power, water, space requirements should be supplied by vendor to IPR for approval before 1 month of delivery of CORS at IPR.

During installation and commissioning following tasks will be performed and test results should match as per specifications agreed by the vendor within +/- 5% deviation:

1. Checking of motor/compressor alignments as per standard alignment requirement which vendor must provide in the maintenance manual.
2. Test of all the sequential procedures for starting the compressor unit, nominal operations for at least 2 days continuously, off-nominal operations, shut-down of the compressor unit.
3. Helium output pressure and temperature.
4. All compressor and motors parameters (pressures, temperatures etc...).



5. Functional test of all the valves including the slide valve for capacity control (if included).
  6. Power consumptions for different slide valve positions/speed of VFD.
  7. Radiography tests of welds made at IPR site during installation should be provided by the vendor.
  8. Person performing NDT activities (eg, radiographic tests, leak tests) shall be qualified at least level 2 as per ASNT/EN(European)/ISO 9712 and persons performing welding shall be qualified as per ASME/EN code.
  9. Local helium leak tests at critical locations by helium leak detectors.
  10. Global helium leakage test by operating the compressor for longer time in a closed loop and noting down the pressure change in the system. The detailed procedure will be discussed and agreed by IPR and vendor.
- All the test results should conform to that specified by the vendor within +/- 5% deviation.

During above tests, compressor unit will remain connected to the application. Vendor must also provide a procedure, without considering connection with the IPR's application, to do all the above mentioned tests effectively which can be used after approval of IPR, in case application is not available.

#### 7.5 TRAINING FOR IPR PERSONNEL AT IPR

The Vendor should provide a training course to a group of IPR personnel regarding, components/elements and instruments and controls of the CORS. The training must cover operation process, troubleshooting during operations, assembly, disassembly, appropriate precautions and maintenance and repair requirements.

#### 7.6 SPARE PARTS

Vendor should provide following spare parts required for at least 2 years operation with price list for each item separately

1. Lubricating Oil
2. Sealing material (O-rings, etc.)
3. Lubricating Greases
4. Safety valves
5. Temperature sensor
6. Pressure sensor
7. Coalescing filter element

Vendor shall provide spares list and consumables list other than mentioned above if any, which for the operation of CORS for 2 years.

#### 7.7 LIST OF THE ITEMS TO BE PROVIDED BY IPR AS FREE ISSUE MATERIALS/ UTILITIES AT IPR SITE

The following items will be supplied by IPR during the various stages of integration, assembly, installation as a part of Free Issue Materials (FIM) and other help/services without any charge to the vendor.

1. A mobile crane of 15-ton capacity.
2. Service for unskilled labor can be provided, if requested well in advance.
3. Slings for crane handling.
4. Electrical power 230/415V AC, water, air, argon, He gas, LN2 and ready indoor site for Installation.
5. He-leak detector, sniffer probe, helium, dry nitrogen gas.
6. One Megger (0-5 kV range) set for insulation test.
7. Helium gas buffer tank or cylinders with piping for gas transfer to compressor unit, when needed during operation.

#### 7.8 ACCEPTANCE AND GUARANTEES/WARRANTY

On successful completion of onsite performance tests and reception of all specified documents, the IPR will issue a certificate of acceptance. The vendor must guarantee/warranty the equipment he has supplied for a period of 24 months or 8000 hours of operation, starting from the date of this site acceptance or 30 months from the date of arrival of CORS system at IPR, whichever is earlier.

The vendor must guarantee that all the equipment supplied will continue to conform to the requirements of this specification and in particular will maintain the performance defined there. The vendor is therefore to undertake to restore at his cost any variation from the specification or loss of performance which occurs or becomes evident during the guarantee period, whether the fault lies in equipment of their own manufacture or that of their subcontractors.

#### 8 ITEMS NOT IN THE SCOPE OF WORK/ SUPPLY

1. Civil works and masonry: foundations, basements, drillings, sealings, etc...
2. Equipment for helium leakage detection at IPR Site ;
3. Instrument air piping ;
4. All electrical cables and cable trays on site for power supply up to CORS's power supply cabinet.
5. Consumable items/materials on site, during erection and tests: helium, N2, Ar, water, electricity.

#### 9 DOCUMENTATION TO BE DELIVERED

The documentation has to be prepared in accordance with the relevant standards and codes (ISO, or equivalent etc.). Details on the application of these codes will be defined jointly between IPR and Vendor.

The documents specified below must be provided by the Vendor and must be written in English (2 copies) – soft copy and print copy.

1. Piping and Instrumentation Diagrams (PID) and Process Flow Diagrams(PFD);
2. Documentation related to design, drawing, codes and standards used for different parts.
3. Instrumentation list with specifications and technical details;
4. General arrangement drawing per skid (if more than one skid) with required installation and handling guide plans with load indications
5. Control Unit technical data sheets, control architecture and control logics with codes;
6. Instrumentation equipment specifications and technical handbooks ;
7. Electrical like wiring diagrams, list of input/output with identifying numbers and control elements ;
8. Piping drawings inside battery limits;
9. Compressor, motor, heat exchangers, primary and secondary oil removal system, PLC technical details, manuals and data sheets ;
10. Fabrication file with all inspection and test reports and quality assurance reports during fabrication.
11. Material test certificates, completed quality plan (list of manufacture and control operations) and non-conformity reports, if any.
12. List of equipment/elements, quality plans, level 2 certificates of persons performed leaks and radiographic tests, detailed schedule of the contract execution including hold points, warranty and gaurranty certificates.
13. Manual for operation, installation and maintenance ;
14. Definition of manpower required for installation and start-up including technical resources at IPR site;
15. List for spare parts with price;
16. Manual for operation, assembly, disassembly, maintenance and trouble-shooting during operation.

*All the documents shall be supplied in English language also in addition as digital files in a standard format (AutoCAD, Catia, and MSWord).*

## 10 GENERAL INFORMATIONS

The above specifications have been made with the considerations of Variable Frequency Drive (VFD) and Slide Valve Mechanism (SVM) for part-load operations. Hence as per the supply, either VFD or SVM related specs should be considered by the vendor, whatever vendor can supply

Price quotations and technical quotations should be made separately, so that once the technical proposals are discussed and agreed than the price quotations can be opened for comparison.

Please give para-wise response in the similar format with detailed quantitative values/specifications and clearly mention the inclusions and exclusions, if any. Vendor must provide/respond against all the specification values in the format mentioned/specified in this document, besides which vendor may provide other convincing information in other formats to help decide the suitability of proposal. In case, there is no response to any of the requirements mentioned in this documents, then the offer may be ignored at the IPR's option, or it may be assumed that the offer does not meet that particular requirement.

## 11 DELIVERY PERIOD

The complete CORS unit with spare parts should reach IPR preferably within 8 months from the date of signing of contract.

FORMAT FOR SUBMISSION OF PART-I (TECHNO-COMMERCIAL) OF THE TENDER.

## TENDER FORM

Telephone Nos. : PART-I (TECHNO-COMMERCIAL)  
 OF TENDER NO. IPR/TPT/TN/PUR/F/16-17/9  
 Last date for receipt 26<sup>th</sup> October, 2016  
at 13:00 hrs. IST.  
 Fax No. : Due date for opening 26<sup>th</sup> October, 2016  
 E-mail : at 14:30 Hrs. IST  
 Tenderer's Offer No. \_\_\_\_\_ Date \_\_\_\_\_

FROM

M/s. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

To  
 The Purchase Officer  
 Institute for Plasma Research  
 Nr. Indira Bridge  
 Bhat, Gandhinagar-382428  
 Gujarat  
 INDIA

Dear Sir,

1. I/We have gone through the tendering conditions pertaining to the Two-Part Tender and General Conditions of Contract and Special Conditions of Contracts contained in Form No. IPR-FP-12. I/we hereby agree to supply the stores conforming to the tender specifications incorporated in Section "C" of the tender documents.
2. You will be at liberty to accept any one or more of the items of stores offered by us and I/we shall be bound to supply you the stores as may be specified in the Purchase Order/Contract.
3. Deviations to Technical specifications contained in Section 'C' of the tender documents are detailed in annexure-A to the tender form while deviations proposed to the General Special Conditions of Contract are detailed in Annexure-B to this tender. Price applicable for the stores are indicated separately in a sealed envelope marked as Part-II (Price) of the tender.
4. I/We are also enclosing herewith all the leaflets catalogue etc. pertaining to the stores offered.

Encl:

Yours faithfully

Stamp and Signature of the Tenderer

FORMAT FOR SUBMISSION OF PART-II – PRICE BID (PRICE ALONE) OF THE TENDER.

**PRICE BID FORMAT**

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

**TENDER NOTICE No. IPR/TPT/TN/PUR/F/16-17/9 DATED 26-08-2016**

“Supply, Installation & Commissioning, Site Acceptance Tests and Training for Personnel of Helium Compressor and Oil Removal System from Cryogenic Test Facility at IPR, Bhat, Gujarat, INDIA.”

*(specify the currency)*

| Sr. No  | Description   | Quantity     | Unit cost | Total price |
|---|---|--------------|-----------|-------------|
| 1   | “Supply, Installation & Commissioning, Site Acceptance Tests and Training for Personnel of Helium Compressor and Oil Removal System from Cryogenic Test Facility at IPR, Bhat, Gujarat, INDIA.” | 1 System     |           |             |
| 2.  | Recommended Spares / Accessories (if any)<br>(add separate sheet as required)   |              |           |             |
| <b>Total FOB/FCA named Airport/Seaport/Place Price.....</b> |   |              |           |             |
| 3.  | <b>Installation and Commissioning Charges (Lumpsum) (if any)</b>  | <b>1 Job</b> |           |             |
| <b>Total Offered / Quoted Price .....</b>                   |   |              |           |             |

|                        | Indicate percentage (Except Freight)<br><i>(specify the currency)</i> |          |          |                |
|------------------------|---|----------|----------|----------------|
|                        | Percentage  | Included | Excluded | Not Applicable |
| Packing and Forwarding |   |          |          |                |
| Excise Duty            |   |          |          |                |
| Customs Duty           |   |          |          |                |
| Sales Tax / VAT        |   |          |          |                |

**Place :**

**Date :**

**Signature of Bidder with Seal**

TENDER FORM

Telephone Nos. :

Tenderer's Offer No. \_\_\_\_\_ Date \_\_\_\_\_

PART-II (PRICE)

OF TENDER NO. IPR/TPT/TN/PUR/F/16-17/9

Fax No. :

E-mail :

FROM

M/s. \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

To

The Purchase Officer  
Institute for Plasma Research  
Nr. Indira Bridge  
Bhat, Gandhinagar-382428  
Gujarat  
INDIA

Dear Sir,

In response to your invitation and as per your tendering and contracting conditions, the price and other related commercial conditions applicable for the scope of supply contained in Part-I (Techno-Commercial) of our tender are indicated in the format at annexure "A" to this tender.

We hereby agree to abide by your terms and conditions of contract contained in section 'B' of this tender document. Deviations to your contract conditions are brought out separately in Annexure 'B' to this tender.

We hereby agree to keep the price valid for your acceptance for a period of 120 days from the date of actual opening of Part-II (Price) of the tender.

Yours faithfully,

Stamp and Signature of the Tenderer