



भौतिक अनुसंधान प्रयोगशाला
Physical Research Laboratory
(भारत सरकार, अंतरिक्ष विभाग की यूनिट)
A Unit of Dept. of Space, Govt. of India)
नवरंगपुरा, अहमदाबाद - 380009
Navrangpura, Ahmedabad 380009

निविदा सूचना (दो-भाग निविदा)
Tender Notice (TWO-PART TENDER)

पीआरएल/क्रय/जीटी-03/25-26
PRL/PURCHASE/GT-03/25-26

दिनांक Date: 07-05-2025

निदेशक, भौतिक अनुसंधान प्रयोगशाला, अहमदाबाद निम्नलिखित के लिए केवल डाक/कूरियर द्वारा दो भागों में (भाग-I तकनीकी और वाणिज्यिक बोली और भाग-II मूल्य बोली) कोटेशन आमंत्रित करते हैं।

The Director, Physical Research Laboratory, Ahmedabad invites quotation IN TWO-PART (PART - I TECHNICAL & COMMERCIAL BID & PART - II PRICE BID) by Post/Courier only for the following.

इच्छुक विक्रेताओं को एक सीलबंद लिफाफे में कोटेशन प्रस्तुत करना चाहिए जिसमें भाग-I तकनीकी और वाणिज्यिक बोली और भाग-II मूल्य बोली हो; सभी प्रकार से तकनीकी विनिर्देशों के साथ, जिसमें पैम्फलेट और कैटलॉग शामिल हों बोलियाँ केवल पोस्ट/कूरियर के माध्यम से प्रस्तुत की जानी हैं।

Interested vendors should submit quotations in ONE sealed envelope containing PART - I TECHNICAL & COMMERCIAL BID & PART - II PRICE BID; complete in all respects with technical specifications, including pamphlets and catalogues. Bids are to be submitted through post/courier only

| क्र.सं. Sr. No | बोली संख्या Bid No. | मदों का विवरण Item Description | नियत तिथि और समय Due Date and Time |
|-------------------|------------------------|---|---|
| 01 | PRAA 2024000168-01 | 6Kx6K सीसीडी डिटेक्टर के लिए सीसीडी ड्राइव नियंत्रक इलेक्ट्रॉनिक्स CCD DRIVE CONTROLLER ELECTRONICS FOR 6Kx6K CCD DETECTOR [Qty : 1 No.] | 26-05-2025 को 17:00 बजे |

Send us your quotation with bid. No. and due date (BEFORE DUE DATE) by POST/Courier ONLY at address aforementioned.

कृपया अपनी बोली संख्या (Bid No.) एवं नियत तिथि (Due Date) सहित कोटेशन (नियत तिथि से पहले) केवल डाक/कूरियर द्वारा उपरोक्त पते पर भेजें।

Please refer to the enclosures for more information.
अधिक जानकारी के लिए संलग्न दस्तावेजों को देखें।

प्रधान, क्रय और भंडार
Head, Purchase & Stores

Proposal Request for CCD Drive Controller Electronics for 6k x 6k CCD Detector

1.Introduction

1.1 Purpose

This document outlines the specifications and requirements for the procurement of CCD Detector Controller Electronics. The electronics must be specifically designed to control a 6k x 6k CCD array specifically CCD-231-C6



Fig1: 6k x 6k CCD, SiC buttable package with Flexi connector (pictorial representation)

1.2 Scope

The scope of this procurement includes the purchase of a high-performance controller electronics system capable of effectively managing and coordinating the operation of a 6k x 6k CCD detectors (SiC buttable package with 2 flexi connectors). The system should be suitable for scientific applications, providing precise control and data acquisition. The controller should contain all the necessary boards for control of Clocks, Analog to Digital converters, High and Low voltages required for the operation of these CCD's, Heater modules to maintain the CCD temperature at the desired -100°C to 115°C to minimise the dark noise (Dewar will be cooled to desired temperature by LN2). Differential amplifiers for buffering the analog signal very next to detector and interface connectors from controller to custom made vacuum Dewar.

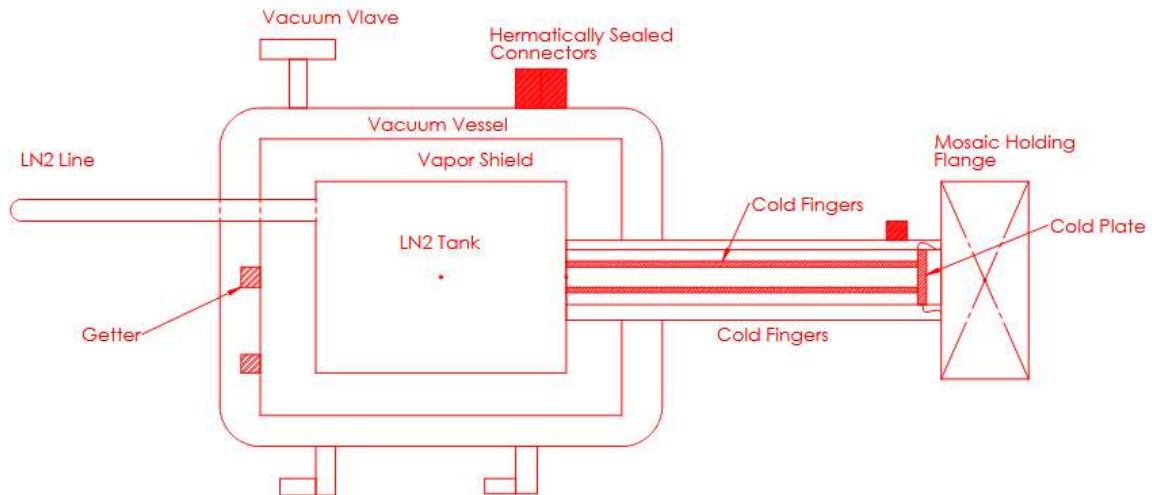


Fig2: Rough drawing of the cryogenic Dewar and CCD mounting plate

Primary Requirements:

1. Drive 6k x 6k CCD, specifically CCD-231-C6
2. Employ two differential amplifiers for buffering of CCD.
3. Digitize the video signal to 16 bits using Digital Correlated Double Sampling.
4. Achieve a readout noise of less than $7e^-$ rms at 1 MHz
5. Enable programming, control, and data transfer via Ethernet or fibre link.

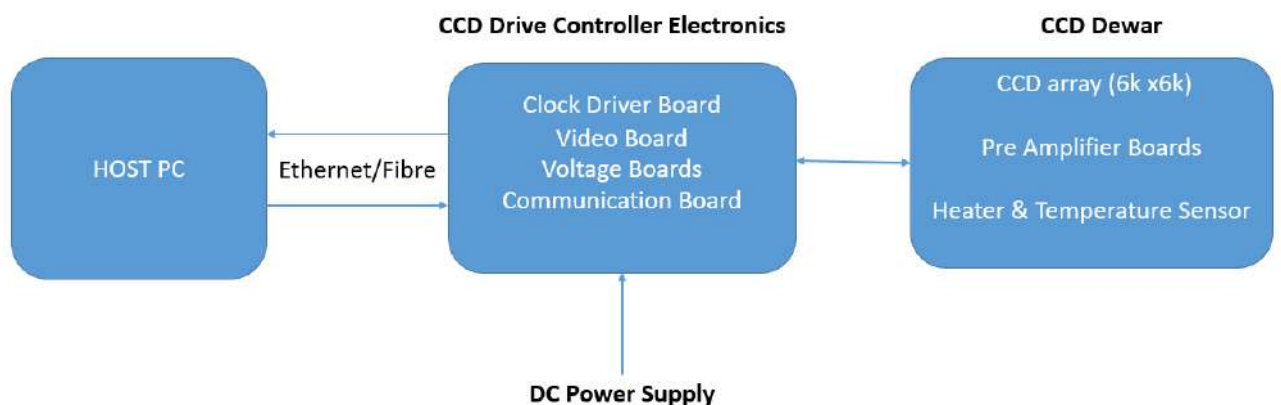


Fig3: Typical CCD drive controller electronics setup of subsystems

Few Important specifications of identified CCD:

- 6144 X 6160
- 15 μm pixels
- 4 x low noise high responsivity amplifiers $\sim 7.5 \mu\text{V/e}$
- Low noise typically $\sim 5\text{e- rms}$ at 1 MHz
- Dark noise 3 e-/pix/hr @-100C
- Image full well capacity $\sim 350\text{k e-}$
- Deep depletion silicon back-thinned for high QE at 900 nm.
- 4-side SiC buttable package with Flexi connector
- Attached the detailed specification sheet as Annexure-1

2. General Requirements

2.1 Array Configuration

2.1.1 Overview

The CCD detector controller electronics must be specifically engineered to handle the intricacies of a 6k x 6k CCD array.

2.1.2 Control Mechanism

The controller should incorporate an advanced coordination mechanism to ensure seamless operation of CCD detector. This includes synchronization of exposure times, readout speeds, and other relevant parameters.

2.2 Compatibility

The controller electronics should be compatible with a 6k x 6k CCD detector, specifically CCD-231-C6 ensuring optimal performance and synchronization.

2.3 Interface

The system should include standard communication interfaces (Ethernet or Fibre) for efficient integration with the CCD detector and other laboratory equipment. Speed of at least 100Mbps or better is required. Latency below 50milisecond or better is required

2.4 Real-Time Control

The controller should provide real-time control capabilities to adjust exposure times, readout speeds, gain, and other parameters for all the CCD detectors

3. Performance Requirements

3.1 Precision Control

The CCD detector controller should offer precise control over CCD detector, allowing for fine-tuning of parameters to achieve high-quality imaging and spectroscopy.

3.2 Synchronization

The system should provide synchronization capabilities for the a 6k x 6k CCD array for all port readout, ensuring simultaneous data acquisition and accurate alignment of images.

3.3 Data Transfer Speed

A high-speed data transfer capability is essential for efficient transfer of data from the CCD detectors to the controller and external storage devices. Up to 3MHz speed readout speed provision should be available

3.4 Calibration

Include features for easy calibration of the CCD detector to maintain consistent and accurate data across all the pixels of the detector.

4. Environmental and Physical Specifications

4.1 Operating Temperature

The controller electronics should be operable within a specified temperature range, suitable for use in a controlled laboratory environment. Operating temperature range -10C to 40C

4.2 Size and Form Factor

The physical dimensions and form factor of the controller should be suitable for integration into standard laboratory setups. Size not greater than 30cm x 30cm x 30cm and weight less than 12kg.

4.3 Robustness

The controller should be robust and capable of withstanding normal laboratory handling and environmental conditions.

5. Accessories and Software

5.1 Accessories

Accessories such as cables, power supplies, and mounting hardware, interface connectors between CCD controller and Dewar required for the proper functioning of the CCD detector controller must be provided by the vendor.

5.2 Software

Source code of the GUI must be provided by the vendor.

6. Error Handling

Robust error-handling mechanisms should be implemented to identify and address issues within individual detectors promptly. The controller should provide informative alerts or logs to aid in troubleshooting.

7. Documentation

Comprehensive documentation detailing the setup, configuration, and troubleshooting procedures for the 6k x 6k CCD array controller electronics should be provided by the manufacturer. This documentation aids users in effectively utilizing and maintaining the system.

8. Compliance and Certification

8.1 Safety Standards

The CCD detector controller should comply with relevant safety standards and regulations applicable to laboratory equipment.

8.2 Certification

Provide certification details, if any, confirming the performance and quality standards of the CCD detector controller.

9. Warranty and Support

9.1 Warranty Period

12 months' warranty period for the CCD detector drive controller electronics.

9.2 Technical Support

Vendor must provide support through offline /online during the initial configuration and imaging testing at least 10 hours

10. Delivery Time

5-6 months from the date of receipt of the Purchase order

Note: This specification document acts as a reference, and any variances from the outlined requirements must be explicitly emphasized in the proposals submitted.

Clock Driver:

Clock Driver modules should contain 12 channels featuring at least 14-bit DACs). The board should provide exceptional flexibility and precision in timing control. The board should have a provision of configurable slew rates per channel, coupled with the ability to switch between fast and slow rates at each clock tick, to allow for tailored optimization to extract maximum CCD performance

Board should provide -13V to 13V Output needed for the clocks and having output resolution of 2-3 mV and clocking resolution of 10ns or better. Clock timing generation, frequencies, phase relationship, and delays should be based on the CCD-231-C6 array and fine tuning option should be available to the user in order to optimise the performance of the system as whole.

| Feature | Specification |
|---|---|
| Number of Channels | 12 |
| DAC Resolution | At least 14 bits |
| Number of Clock Driver Modules Required | 1-2 for the CCD |
| Slew Rate Control | Configurable per channel, with fast/slow switching at each clock tick |
| Output Voltage Range | -13V to 13V |
| Output Resolution | 2-3 mV |
| Clocking Resolution | 10 ns or better |
| Timing Generation | Based on identified CCD array |
| Fine Tuning Option | Available for optimizing system performance |

ADC & Pre-Amplifier:

Module should feature four 100 MHz 16-bit channels, each equipped with preamps, making it specifically tailored for CCD pixel clocks of up to 3 MHz

- Should have Full differential configuration and AC-coupling.
- Software- should have selectable gain settings (2-3 values)
- Periodic activation of an integrated DC-restore clamp (typically once per line during over scan pixels or vertical transfer).
- Programmable clamp level for precise mapping of the CCD reset level near the top of the ADC range, enhancing signal processing accuracy.

- Correlated Double Sampling (CDS) digital execution within the FPGA for efficient noise reduction & averaging of multiple reset and video levels.
- Should support acquisition of 32 bits per pixel in the controller's high dynamic range mode.
- Should support Simultaneous capture of portions of the raw ADC data to a memory buffer.
- Must provide a detailed, low-noise oscilloscope view of the CCD output waveform during device tuning.
- Must facilitate in-depth analysis of clock feedthrough, reset level stability, and optimal CDS sample points.

| Feature | Specification |
|---------------------------------------|--|
| Number of Channels | 4 |
| Channel Frequency | 100 MHz |
| Channel Resolution | 16 bits |
| Preamps | Included |
| Compatibility | Tailored for CCD pixel clocks up to 1 MHz |
| Differential Configuration | Full |
| Coupling | AC |
| Gain Settings | Must support selectable settings, with 2-3 values |
| DC-Restore Clamp Activation | Must support periodic activation, typically once per line during overscan pixels or vertical transfer |
| Programmable Clamp Level | Must support programmable level for precise mapping of CCD reset level near the top of the ADC range |
| Digital Execution for Noise Reduction | Must support Correlated Double Sampling (CDS) within FPGA |
| ADC Data Acquisition | Must support acquisition of 32 bits per pixel in high dynamic range mode |
| Simultaneous Capture | Must support simultaneous capture of portions of raw ADC data to a memory buffer |
| Oscilloscope View | Must provide detailed, low-noise view of CCD output waveform during device tuning |
| Analysis | Must facilitate in-depth analysis of clock feedthrough, reset level stability, and optimal CDS sample points |

Non Exhaustive Technical Requirement Specification Sheet

| S No | Specification & Requirement | |
|-------------|--|--|
| 1 | Readout speed | Up to 3 MHz |
| 2 | Readout Noise of Controller Electronics | $\leq 3e$ at 100 kHz $\leq 5e$ at 500kHz $\leq 7e$ at 1MHz $\leq 15e$ at 3MHz |
| 3 | Communication with HOST PC | Fiber or Ethernet |
| 4 | Digitization | 16 bit or 18 bit |
| | Low and High Voltages required for the detector array | |
| 5 | FPGA based electronics | |
| 6 | Provision for Opto isolated BNC input & Output for triggering | |
| 7 | Timing boards should have at least 100MHz clock for at least 10ns clock resolution | |
| 8 | Heaters of at least 25W with 3 sensors for controlling the array required temperature | |
| 9 | GUI application along with source code need to be provided for Windows/OSX/Linux | |
| 10 | Temperature: Operating Range | -10C to 40C |
| 11 | Weight | $\leq 12\text{Kg}$ |
| 12 | Dimension | $\leq 30\text{cm} \times 30\text{cm} \times 30\text{cm}$ |
| 13 | Power | $\leq 80\text{W}$ |
| 14 | The system should be suitable for scientific applications, providing precise control and data acquisition | |
| 15 | The controller should contain all the necessary modules for control of Clocks, Analog to Digital converters, Pre-amplification, High and Low voltages required for the operation of these CCD's, Heater modules to maintain the CCD temperature at the desired -100°C to 115°C to minimise the dark noise. | |
| 16 | Differential amplifiers for buffering the analog signal very next to detectors and interface connectors from controller to custom made vacuum Dewar. | |
| 17 | Vendor must have prior experience in design, and development of CCD controller electronics at least 2-3 such detector electronics should have supplied to the reputable institutes. | |
| 18 | Vendor must clearly demonstrate their capability of in house development and testing of precise CCD drive controller electronics | |
| 19 | Before Shipping Controller Electronics evaluation and performance needs to be tested and a report need to be submitted to PRL | |

System Compliance Statement:

Vendors must fill up details against each of the requirements of the compliance statement. Along with that vendor has to provide comments and compliance on each on every paragraph of this document. Silence on any point shall be treated as non-compliance. Simple compliance without details, lack of information or information without proper explanation shall also be treated as non-compliance.

Hence, in order to strengthen the merit of the offer, please provide a detailed explanation about how the vendor intends to comply with each and every specification and paragraph of this tender document. This is an essential part of the offer and offer without detailed compliance report shall be treated as incomplete liable for rejection without assigning any reason thereof.

| S No | Specification & Requirement | Requirement | Comments/Remarks/ Offered specifications (To be filled by the Vendor) | Yes/No (To be filed by Vendor) |
|-------------|--|--|--|---|
| 1 | Readout speed | Up to 3 MHz | | |
| 2 | Readout Noise of Controller Electronics | $\leq 3e$ at 100 kHz $\leq 5e$ at 500kHz $\leq 7e$ at 1MHz $\leq 15e$ at 3MHz | | |
| 3 | Communication with HOST PC | Fiber or Ethernet | | |
| 4 | Digitization | 16 bit or 18 bit | | |
| | Low and High Voltages required for the detector array | | | |
| 5 | FPGA based electronics | | | |
| 6 | Provision for opto isolated BNC input & Output for triggering | | | |
| 7 | Timing boards should have at least 100MHz clock for at least 10ns clock resolution | | | |

| | | | | |
|----|--|-------------------|--|--|
| 8 | Heaters of at least 25W with 3 sensors for controlling the array required temperature | | | |
| 9 | GUI application along with source code need to be provided for Windows/OSX/Linux | | | |
| 10 | Temperature: Operating Range | -10C to 40C | | |
| 11 | Weight | ≤12Kg | | |
| 12 | Dimension | 30cm x 30cm x30cm | | |
| 13 | Power | ≤ 80W | | |
| 14 | The system should be suitable for scientific applications, providing precise control and data acquisition | | | |
| 15 | The controller should contain all the necessary modules for control of Clocks, Analog to Digital converters, Pre-amplification, High and Low voltages required for the operation of these CCD's, Heater modules to maintain the CCD temperature at the desired -100°C to 115°C to minimise the dark noise. | | | |
| 16 | Differential amplifiers for buffering the analog signal very next to detectors and interface connectors from controller to custom made vacuum Dewar. | | | |
| 17 | Vendor must have prior experience in design, and development of CCD controller electronics at least 2-3 such detector electronics should have supplied to the reputable institutes. | | | |
| 18 | The vendor must clearly demonstrate their capability of in house development and testing of precise controller electronics | | | |
| 19 | Before Shipping Controller Electronics evaluation and performance needs to be tested and a report need to be submitted to PRL | | | |
| 20 | Vendor must be an OEM or Authorised distributor of OEM (Authorisation certificated need to be submitted) during the submission of Technical Bid | | | |

| | | | |
|----|--|--|--|
| | | | |
| 21 | <p>Deliverables:</p> <ol style="list-style-type: none"> 1. Drive electronics (Should contain all necessary voltage boards, clock driver boards, and Timing boards) for the 6k x 6k CCD 2. Two differential amplifiers for buffering the CCD. 3. Video board module for digitizing the video signal to 16 bits using Digital Correlated Double Sampling. 4. Controller and Readout Electronics modules to achieve a readout noise of less than 7e- rms at 1 MHz 5. Accessories such as cables, power supplies, and mounting hardware, interface connectors between CCD controller and Dewar required for the proper functioning of the CCD detector controller. 6. Heater modules to maintain the CCD temperature at the desired -100°C to 115°C to minimise the dark noise. 7. GUI application along with source code 8. Electronics test evaluation and performance report at Factory 9. Compatible Interface connectors (controller and Dewar) and cables from controller to Dewar | | |

Instructions for Two Part Tender

The tender is invited as **TWO PART**.

- Part I: Technical and Commercial
- Part II: Price

All tenderers are requested to carefully follow the following instructions before preparing their offer.

1) Part-I: Technical & Commercial Bid (Without Prices)

1. This part should contain detailed specifications of the items quoted by you along with technical literature and leaflets if any.
2. A compliance statement showing the compliance of the item quoted by you with that of item tendered by us should be prepared and enclosed to this.
3. Any other information called for in the tender related technical and specifications can also come in this part.
4. The commercial terms such as delivery terms, delivery period, payment terms, warranty, validity of the offer, etc. applicable for the item quoted by you should be indicated in this part.

Note:

1. Please note that the **PRICE SHOULD NOT BE** indicated in this part.
2. Technical and Commercial part as described above shall be prepared and put it in a sealed cover and superscribed and addressed as below:

Ref. : **Tender for CCD Drive Controller Electronics for 6kX6k CCD Detector**
Due Date : 26th May, 2025

PART-I Technical & Commercial Bid

To: Senior Purchase & Stores Officer
Physical Research Laboratory
Department of Space, Government of India
Navrangpura, Ahmedabad – 380009
Gujarat, India
Phone: +91 079 2631 4115

From:

2) Part-II: Price Bid

1. The prices applicable for the items, item-wise in response to the tender shall come into this part.
2. Tenderer shall indicate very clearly item-wise prices with reference to their technical offer.
3. Price part prepared as above shall be enveloped and superscribed and addressed as below:

Ref. : **Tender for CCD Drive Controller Electronics for 6kX6k CCD Detector**
Due Date: 26th May, 2025

PART-I Technical & Commercial Bid

To: Senior Purchase & Stores Officer
Physical Research Laboratory
Department of Space, Government of India
Navrangpura, Ahmedabad – 380009
Gujarat, India
Phone: +91 079 2631 4115

From:

- 3) The Technical & Commercial envelope (Part-I) and Price cover (Part-II) prepared as above should be inserted in another envelope and superscribed and addressed as below:

Ref. : **Tender for CCD Drive Controller Electronics for 6kX6k CCD Detector**
Due Date : 26th May, 2025

PART-I Technical & Commercial Bid

To: Senior Purchase & Stores Officer
Physical Research Laboratory
Department of Space, Government of India
Navrangpura, Ahmedabad – 380009
Gujarat, India
Phone: +91 079 2631 4115

From:

Important Notes:

1. Being a Two-Part Tender, email quotations will not be accepted. Please ensure your offer is received by post before due date and time i.e. **26-05-2025, 1700 Hrs. (IST)**.
2. Quotations submitted contrary to above instructions are liable to be rejected.

GENERAL TERMS & CONDITIONS

1. DEFINITIONS

- a) The term 'Purchaser' shall mean the President of India or his successors or assignees.
- b) The term 'Contractor' shall mean the person, firm or company with whom or with which the "Purchase Order/Contract" for supply of stores/services is placed and shall be deemed to include the contractor's successors, representatives, heirs, executors and administrators unless excluded by the Purchase Order/Contract.
- c) The term 'Purchase Order / Contract' shall mean the communication signed on behalf of the Purchaser by duly authorized Officer intimating the acceptance on behalf of the Purchaser on the terms and conditions mentioned or referred to in the said communication accepting the tender or offer of the contractor for supply of stores, plant, machinery, equipment and services.
- d) The terms 'Stores' shall mean the goods and/or services as specified in the Purchase Order/Contract.
- e) Class-I Local Supplier means a supplier or service provider whose goods, services or works offered for procurement has local content equal to or more than 50%.
- f) Class-II Local Supplier means a supplier or service provider whose goods, services or works offered for procurement has local content more than 20% but less than 50%.
- g) Non-Local supplier means a supplier or service provider whose goods, services or works offered for procurement has local content less than or equal to 20%.
- h) Local content means the amount of value added in India which shall be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value in percent.
- i) 'Bidder' (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency, branch or office controlled by such person, participating in a procurement process.

- j) 'Agent' means a person employed to do any act for another or to represent in dealings with third persons.

2. ELIGIBILITY CRITERIA

- a) Any bidder from a country, which shares a land border with India, will be eligible to bid only if the bidder is registered with the Competent Authority in terms of Order (Public Procurement No.3) dt.23rd July 2020 and any amendments thereto issued by Public Procurement Division, Department of Expenditure, Ministry of Finance, Government of India.
- b) 'Bidder from a country which shares a land border with India' means,
- i) An entity incorporated, established or registered in such a country, or
 - ii) A subsidiary of an entity incorporated, established or registered in such a country, or
 - iii) An entity substantially controlled through entities incorporated, established or registered in such a country, or
 - iv) An entity whose beneficial owner is situated in such a country, or
 - v) An Indian (or other) agent of such an entity, or
 - vi) A natural person who is a citizen of such a country, or
 - vii) A consortium or joint venture where any member of the consortium or joint venture falls under any of the above.
- c) 'Beneficial owner' for the purpose of 'b' above will be as under:
- i) In case of a Company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.

Explanation:

'Controlling ownership interest' means ownership of or entitlement to more than twenty-five per cent of shares or capital or profits of the company.

'Control' shall include the right to appoint majority of the directors or to control the management or policy decisions, including by virtue of their shareholding or management rights or shareholders agreements or voting agreements.

- ii) In case of partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership.
 - iii) In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s) who, whether acting alone or together or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals.
 - iv) Where no natural person is identified under (i) or (ii) or (iii) above, the beneficial owner is the relevant natural person who hold the position of senior managing official.
 - v) In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
- d) Class-I Local Supplier/Class-II Local Supplier/ Non-Local Supplier are eligible to bid in terms of Public Procurement (Preference to Make in India), Order 2017 - Revision dated 04.06.2020 and revised 'Public Procurement (Preference to Make in India), Order 2017 dated 16.09.2020 issued by Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government of India.

3. EVALUATION CRITERIA

- a) Bids received should be evaluated against the specifications, terms and conditions incorporated in the bidding document.
- b) During evaluation and comparison of bids, the Purchaser may, at his/her discretion, ask the bidder for clarifications on the bid. Purchaser may request for any clarification and/or additional documents from the bidders. No change in the prices or substance of the bid shall be sought, offered or permitted. No post bid clarification at the initiative of the bidder shall be entertained. The shortfall information and/or documents shall be sought, by the Purchaser, only in case of historical documents which pre-existed at the time of tender opening and which have not undergone any change since then.

- c) Bidders shall not be permitted to alter or modify their bids after expiry of the deadline for receipt of bids.
- d) All responsive bids shall be evaluated with a view to select the lowest [L1] bidder who meets the qualification criteria, including terms and conditions of the tender. Techno-commercial aspects shall be compared on a common platform on the basis of total evaluated cost of each offer which will be arrived at by adding the basic price as well as other charges, and all statutory levies/taxes/duties. Maintenance charges shall be taken into account if it forms part of the tender for the purpose of cost comparison. The financial implication shall be considered as the all inclusive cost to the Purchaser. Evaluation of the bids shall be done on the basis of landing cost to the Purchaser.
- e) Purchaser discourages advance payment terms. In case of advance payment, for the purpose of evaluation, interest shall be loaded on the amount so paid as advance for the delivery period quoted as per MCLR of State Bank of India prevailing on the date of tender opening. Further, for any delay in executing the contract, Purchaser shall recover interest on the amount paid as advance for the delayed period at the MCLR of State Bank of India prevailing on the date of the payment besides other remedies available for breach of the contract.
- f) If the quoted prices are in different currencies, then for comparison purpose the offers in foreign currencies will be converted into Indian Rupees based on the exchange rate prevailing on the date of tender opening.
- g) If a bidder quotes “NIL’ charges/consideration, the bid shall be treated as unresponsive and will not be considered.
- h) Evaluation of the bids shall not be done on the basis of conditional discounts.
- i) Purchaser reserves the right to give preference for procurement of goods in terms of product reservation and preferential / mandatory purchase policy as notified by Government of India from time to time. Bidders claiming any preference shall submit relevant and valid registration certificate along with the tender in terms of the relevant Orders/Notifications issued by appropriate Authority/Government.
- j) Purchaser reserves the option to increase / decrease the quantity to the extent of 25% of the tendered quantity.
- k) Purchaser reserves the right to accept or reject any quotation in full or part thereof by recording the reasons. The Purchaser shall be under no obligation to accept the lowest or any tender and reserves the right to accept whole or any

part of the tender or part of the quantity offered and the bidders shall supply the same at the rates quoted.

- l) Purchaser reserves the right to enter into parallel contract unless the instructions are otherwise in the RFP.
- m) Purchaser also reserves the right to reject any offer in the event of noncompliance to tender terms and conditions or where the prices are not viable vis-a-vis the scope of the contract.
- n) A bidder can question the bidding conditions, bidding process and / or rejection of its bid.
- o) Any clarification on the tender shall be sought from the Purchaser well in advance of the tender closing date but in any case, it should not be within 7 days of bid closing date.
- p) Public Tenders shall be opened in the presence of the authorized representative of the bidders. In case the tenders cannot be opened due to holiday or technical reasons the tender will be opened on the next working day.

4. OFFER VALIDITY

The offer should be valid for a minimum number of days, as mentioned below, from the date of opening of the bids.

Single Part Tender: 90 days

Two Part Tender: Part-1: 120 days & Part-2: 90 days from price bid opening.

During the validity period the bidder shall not revoke or cancel or vary the bid except and to the extent required by Purchaser. Purchaser will make all efforts to finalize the contract within the original bid validity. However, in case the contract is not finalized during the original bid validity then the bidder shall be requested to extend the bid validity.

5. TERMS FOR TECHNICAL-BID & PRICE-BID

- a) The price quoted shall be firm and fixed. At the option of the Purchaser, in case of long term contracts where the input cost and other factors are subject to changes, price variation may be accepted as per price variation formula, if specifically mentioned in the RFP/Tender.

- b) In a two part tender [Part-1: Techno-commercial bid and Part-2: Financial bid], initially only the techno-commercial bids would be opened and evaluated. The financial bids will be opened only for the bids which successfully meet the qualification criteria and techno-commercial criteria. The bid will be rejected if price of any nature is included in Part-1 [Techno-commercial bid].
- c) Bidders shall note that the entries for rate, taxes & duties, freight and any other levy shall be entered only in the relevant fields as provided in the price bid form / vendor specified terms.
- d) If specifically mentioned in the tender document/RFP, only the authorized dealers/agents/representatives of original manufacturers shall submit the quotation with documentary evidence.
- e) All available technical literature, catalogues and other data in support of the specifications and details of the items shall be furnished along with the offer.
- f) Approximate net and gross weight of the items offered shall be indicated in your offer. If dimensional details are available, the same shall also be indicated in the offer.
- g) Stores offered shall strictly conform to the tender specifications. Deviations, if any, shall be clearly indicated by the bidder in the quotation. The bidder shall also indicate the Make/Model number of the stores offered. Test Certificates, wherever necessary, shall be forwarded along with supplies. Wherever options have been called for in our specifications, the bidder shall address all such options.
- h) Any drawings, specifications, end use, etc., which are part of the tender document shall not be disclosed by the bidder to any third party.
- i) Tender number shall be mentioned in all correspondence.

6. PAYMENT TERMS

- a) Normally 100% of the Contract/PO value will be made within 30 days of receipt, installation (wherever applicable) & acceptance of the material at Purchaser's site.
- b) Other terms of payment like Sight Draft/Letter of Credit may be considered by the Purchaser on such terms and conditions as may be agreed upon in case of foreign suppliers.

c) The Sight Draft / Letter of Credit will be operative on presentation of the under mentioned documents:

1. Original Bill of Lading / Airway Bill
2. Commercially certified invoices in triplicate, describing the stores delivered, quantity, unit rate and their total value. The invoice should indicate discounts, and Agency Commission if any separately.
3. Packing List showing individual dimensions and weight of packages.
4. Country of Origin Certificate in duplicate.
5. Test Certificate.
6. Declaration by the Seller that the contents in each case are not less than those entered in the invoices and the quality of the Stores are guaranteed as per the specifications asked for by the Purchaser.
7. Warrantee and guarantee Certificate/s.

d) For any Services, payment will be made after satisfactory completion of the services and certification to that effect from the Purchaser.

e) Our Bankers are State Bank of India (IFSC: SBIN0002651), Gujarat University Branch, Ahmedabad, Gujarat -380 009, India.

f) Any other payment terms offered by the bidders may be considered by the Purchaser provided that all such payments shall be against receipt of the items / completion of service / identified verifiable milestones. Advance payment, if any, shall not exceed 30% of the contract value to private firms and 40% of contract value to a State or Central Government agencies or a Public Sector Undertaking. In case of maintenance contracts, the advance payment shall not exceed the amount payable for 6 months under the contract. Advance payments shall be against Bank Guarantee of equivalent value from any Commercial Bank in India / International Bank of repute, valid till 60 days beyond the receipt and acceptance of the product / completion of service.

g) Purchaser shall bear the Bank charges payable to their Bank, the Contractor shall bear the Bank charges payable to their Bank.

h) Import Export Code: 0100000011

7. TAXES AND DUTIES

a) Taxes and Duties shall be distinctly shown in the offer.

b) Custom Duty Concession Certificate under Customs Notification No. 51/96 dated 23-07-1996 (as amended from time to time) applicable for Research Institutions

shall be provided by PRL on demand. The supplier has to provide clear details of bill of material as per contract. Copy of Import invoice and Airway bill to be provided for seeking the above certificate. Please state clearly in the offer that this certificate is required. Amount of duty payable after issuance of Custom Duty Concession Certificate shall be borne by the seller only.

8. INDIAN AGENTS

- a) Offers made by Indian Agents on behalf of their Principals should be supported by the Proforma Invoice of their Principals indicating the commission payable to the Indian Agent and nature of after sales service to be rendered by the Indian Agent.
- b) Indian Agents while quoting on behalf of their principals shall attach valid authorization certificate from their Principal/OEM along with the bid.
- c) If more than one agent/distributors are involved, a copy of certification from OEM mentioning the specific relationship among the vendors involved shall be submitted along with the bid.
- d) In a tender either the Indian Agent on behalf of the Principal/OEM or Principal/OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender.
- e) If an Indian agent submits bid on behalf of the Principal/OEM, the same Indian Agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product.
- f) Agency Commission: The percentage / amount of agency commission included in the quoted price and payable to the Indian Agent of foreign suppliers shall be paid directly to the Indian Agent in equivalent Indian Rupees worked out on the basis of Telegraphic Transfer buying rate of exchange prevailing on the date of placement of Purchase Order and within 30 days from the date of receipt and acceptance of stores. In no case the agency commission shall be paid in foreign exchange.

9. DELIVERY TERMS AND DELIVERY PERIOD

- a) The delivery terms are to be quoted in terms of latest INCOTERMS 2020. In case of imported stores the normal delivery terms shall be Ex-Works/FOB/FCA (*name of place*). Other terms can also be accepted based on need and suitability. In case of indigenous stores, the quotation should be on FOR Destination / Door delivery basis.

- b) Delivery period shall be specified. In case the tender calls for installation then the bidders shall mention the schedule for supply and installation separately.
- c) The date of delivery of the stores stipulated in the Purchase Order/Contract shall be deemed to be the essence of the Contract and delivery must be completed on or before the specified dates.
- d) Part shipment is not allowed unless specifically agreed by Purchaser.
- e) Where erection or assembly or commissioning is a part of the Contract, it should be done immediately on notification. The Contractor shall be responsible for any loss/ damage sustained due to the delay in fulfilling this responsibility.
- f) For items having shelf life, those with maximum shelf life should be supplied if order is placed.
- g) If the contractor fails to deliver the ordered items and/or services within the specified date / period, the Purchase Order / Contract does not *per se* hold good after expiry of such specified delivery date/period. The Purchaser may refuse to take delivery of the goods / services after the specified delivery date/period.

10. MODE OF DESPATCH:

Generally, stores should be despatched through Indian Flagged Vessel / Air India or through any other Agency nominated by the Purchaser.

11. PORT OF ENTRY:

For Air shipments: AHMEDABAD
For Sea Shipments: NHAVA SHEVA/Mumbai Seaport

12. ULTIMATE CONSIGNEE:

The Stores Officer,
Central Stores,
Physical Research Laboratory (PRL),
Near Gujarat University,
Navrangpura,
Ahmedabad-380 009

13. SHIPPING MARKS:

The mark on the shipping documents such as invoice, airway bill / bill of lading and on the packages should be as follow:

PURCHASE ORDER / CONTRACT NO. DATED

.....

GOVERNMENT OF INDIA

DEPARTMENT OF SPACE, PHYSICAL RESEARCH LABORATORY (PRL)

Destination:

Port of Entry:

14. DELAY IN COMPLETION / LIQUIDATED DAMAGES

The delivery period quoted should be realistic. The delivery period so quoted and mentioned in the order is the essence of the order/contract. If the Contractor fails to execute the Purchase Order within the time specified in the contract/purchase order or any extension thereof, the Purchaser shall recover from the Contractor as liquidated damages a sum of 0.5% of the PO/Contract value of the undelivered stores for each calendar week of delay or part thereof. The total liquidated damages shall not exceed 10% of the PO/Contract value. Stores will be deemed to have been delivered only when all their components, parts are also delivered. If certain components are not delivered in time, the stores will be considered as delayed until such time as the missing parts are delivered. Wherever, installation and commissioning is also involved, the supply will be deemed to have been completed only when the entire Stores is supplied, installed and accepted.

15. FORCE MAJEURE

- a) Neither party shall bear responsibility for the complete or partial non-performance of any of his obligations (except for failure to pay any sum which has become due on account of receipt of goods under the provisions of the present Purchase Order/Contract) if the non-performance results from such force majeure circumstances such as, but not restricted to, flood, fire, earthquake, civil commotion, sabotage, explosion, epidemic, quarantine restriction, strike, lock-out, freight embargo, acts of the Government either in its sovereign or Contractual capacity, hostility, acts of public enemy and other acts of God as well as war or revolution, military operation, blockade, acts or actions of State authorities or any other circumstance beyond the control of the parties that have arisen after the conclusion of the present Purchase Order/Contract.
- b) In such circumstances, the time stipulated for the performance of an obligation under the Purchase Order/Contract may be proportionately extended.

- c) The party for whom it has become impossible to meet the obligation under this Contract due to force majeure condition, will notify the other party in writing not later than twenty-one days from the date of commencement of the unforeseeable event. Unless otherwise directed by the Physical Research Laboratory in writing, the contractor/supplier shall continue to perform his obligations under the Purchase Order/Contract as far as is practical and shall seek all reasonable alternative means for performance not prevented by the force majeure event.
- d) Any certificate issued by the Chamber of Commerce or any other competent authority or organization of the respective country shall be sufficient proof of commencement and cessation of the above circumstances.
- e) In case of failure to carry out complete or partial performance of an obligation for more than sixty days, either party shall reserve the right to terminate the Contract totally or partially. A prior written notice of 30 days to the other party will be given informing of the intention to terminate without any liability. This is exclusive of any reimbursements for the goods received as provided for in the agreement.

16. PERFORMANCE SECURITY

- a) On award of the Purchase Order/Contract the successful bidder shall submit Performance Security along with the acknowledgement of Purchase Order/Contract, as per the format provided by the Purchaser, for 3% of the Purchase Order/Contract value through Bank Guarantee or Fixed Deposit Receipt or e-PBG or Insurance Bond for satisfactory execution of the Purchase Order/Contract. The Performance Security shall be valid for 60 days beyond the completion of the contractual obligations. Central PSUs / PSEs / Autonomous Bodies shall be exempted from submitting Performance Security. However, they shall be required to submit an Indemnity Bond in lieu of Performance Security.
- b) If the Contractor is called upon by the Purchaser to deposit, Security and the Contractor fails to provide the security within the period specified, such failure shall constitute a breach of the Contract, and the Purchaser shall be entitled to make other arrangements for the re-purchase of the stores Contracted at the risk of the Contractor. In case if Security Deposit is submitted and the contractor fails to execute the order, then the security deposit will be forfeited.
- c) Non-submission of Performance Security will entail cancellation of Purchase Order/Contract and any other action deemed fit by the Purchaser.

- d) The Performance Security will be returned to the Contractor, without any interest, after completion of all Contractual/Purchase Order obligations, including warranty period.
- e) Micro and Small Vendors are not exempted from the submission of Security Deposit. Only Govt Departments/PSUs/PSEs can submit Indemnity Bond instead of Bank Guarantee towards SD/PBG.

Note: SD, LD and PBG clauses are mandatory and offers of the vendors who have not agreed for the above conditions will be excluded from the procurement process.

17. ISSUE OF MATERIALS

If provided for in the PO/Contract, Purchaser may issue raw materials / semifinished products / equipment / any other product to the contractor for the purpose of fabrication / repairs / calibration / testing against Bank Guarantee equivalent to the value of the item being issued and valid till receipt of the item by Purchaser.

18. GUARANTEE / WARRANTY

- a) The guarantee / warranty period as mentioned in the tender shall be indicated along with the quote. Guarantee/Warranty shall commence from the date of installation and acceptance of the complete equipment supplied under the contract.
- b) The Contractor shall guarantee / warranty that the stores supplied shall comply fully with the specifications laid down, for material, workmanship and performance.
- c) If any defects are discovered therein or any defects therein are found to have developed under proper use, arising from faulty design, material or workmanship, the Contractor shall remedy such defects at their own cost provided the Contractor is called upon to do so by the Purchaser who shall state in writing in what respect the stores or any part thereof are faulty.
- d) If, in the opinion of the Purchaser, it becomes necessary to replace or rectify any defective stores, such replacement or rectification shall be made by the Contractor free of all costs to the Purchaser.

- e) Should the Contractor fail to rectify the defects, the Purchaser shall have the right to reject or repair or replace at the cost of the Contractor the whole or any portion of the defective stores.
- f) The decision of the Purchaser, notwithstanding any prior approval or acceptance or inspection thereof on behalf of the Purchaser, as to whether or not the stores supplied by the Contractor are defective or any defect has developed within the guarantee / warranty period or as to whether the nature of the defects requires renewal or replacement, shall be final, conclusive and binding on the Contractor.
- g) All the replacement stores shall have guarantee / warranty from the date of receipt & acceptance of the stores at Purchaser's site.

19. PACKING, FORWARDING & INSURANCE

- a) The Contractor shall pack and crate all stores for road / rail / sea / air shipment suitable for tropical humid climate in accordance with standard practices and in such a manner so as to protect it from damage and deterioration in transit. The contractor shall be held responsible for all damages due to improper packing.
- b) The Contractor shall ensure that each box / unit of shipment is legibly and properly marked for correct identification. A copy of the invoice and packing list should invariably be kept inside each of the packages. The failure to comply with this requirement shall make the Contractor liable for additional expenses involved.
- c) The Contractor shall notify the Purchaser the shipment details by fax / email.
- d) The Contractor shall give complete shipment information concerning the net & gross weight, size, content of each package, etc. to the Purchaser.
- e) Normally the Purchaser does not insure the goods. However, the necessity or otherwise of insurance will be as indicated in the Purchase Order/Contract.
- f) In tune with the requirement of international plant protection convention of the FAO, UN the following has become mandatory with immediate effect.
 - 1. All packing materials of any kind of plant origin used for packing shall require treatment including heat-kiln treatment at 56 degree centigrade for a minimum of 30 hours of methylbromide fumigation at 48g/cum for 32 hours of chemical impregnation as per international standards.

2. If the consignments are sent without the aforesaid certificate, all demurrages and other charges for treatment etc. will be to the account of the suppliers.
3. This aspect also should be taken care of while submitting the offers.
4. If the packaging material being used for your product does not come under the category “material of plant origin” (i.e. Leaves, grass, wood etc.) Please certify the same in your quote and ignore the above instructions. However, the same should be ascertained at the time of actual shipment if the order is awarded to you.

20. DESPATCH

- a) The Contractor is responsible for obtaining a clear receipt from the freight forwarder / airlines / transport authorities specifying the despatch of goods. The consignment should be despatched with Airway Bill / Bill of Lading / Railway / Lorry Receipt. Purchaser will take no responsibility for short deliveries or wrong supply of goods. Purchaser shall pay for only such stores as are actually received by them in accordance with the Contract.
- b) Wherever required, test certificates, warranty/guarantee certificate should be sent along with the despatch documents.
- c) The Invoice shall contain Purchase Order / Contract No., Invoice No., Invoice Date, Country of Origin.
- d) The description, part nos., extended warranty charges, discount, optional accessories, as the case may be, should be clearly mentioned in the invoice and packing list and should be in line with the purchase order. In addition to the ordered items, if any item(s) is supplied the same should also be stated in the invoice & packing list with appropriate remarks and its value shall be declared mentioning “for customs purpose only”.
- e) The Invoice/Packing list should also provide Item wise net weight (in K.G.) as well as gross weight (in K.G.) of each package.
- f) A copy of the Invoice/Packing List to be forwarded to the Purchaser, 5 days in advance before shipment, particularly when the shipment is through Supplier’s freight forwarder/courier.
- g) Any charges/penalty/demurrage due to non-compliance to the above instructions shall be recovered from the payment due to the Supplier.

21. DEMURRAGE

The Contractor shall bear demurrage/penalty charges, if any, incurred by the Purchaser due to delayed presentation of dispatch documents to the Bank / Purchaser or on account of incomplete documents like invoice, packing list, etc.

22. ACCEPTANCE OF STORES

- a) The Purchaser's representatives shall also be entitled at all reasonable times during manufacture to inspect, examine and test on the Contractor's premises the material and workmanship of all stores to be supplied under the Contract and if part of the said stores is being manufactured on other premises, the Contractor shall obtain for the Purchaser's representative permission to inspect, examine and test as if the equipment were being manufactured on the Contractor's premises. Such inspection, examination and testing shall not release the Contractor from the obligations under this Contract.
- b) For tests on the premises of the Contractor or of any of his sub- Contractors, the Contractor shall provide free of cost assistance, labour, material, electricity, fuel and instruments as may be required or as may be reasonably needed by the Purchaser's representative to carry out the tests efficiently.
- c) When the stores have passed the specified test, the Purchaser's representative shall furnish a certificate to the effect in writing to the Contractor. The Contractor shall provide copies of the test/s certificates to the Purchaser as may be required.

23. TRAINING:

The Contractor shall, if required by the Purchaser, provide facilities for the practical training of Purchaser's engineering / technical personnel and for their active association on the manufacturing processes throughout the manufacturing period of the Contract / stores. Number of such personnel to be mutually agreed upon.

24. CONTRACTOR'S DEFAULT LIABILITY

- a) The Purchaser may upon written notice of default to the Contractor terminate the Contract in whole or in part in circumstances detailed hereunder:
 - 1. If in the judgment of the Purchaser the Contractor fails to make delivery of stores within the time specified in the Purchase Order or within the period for which extension has been granted by the Purchaser to the Contractor.
 - 2. If in the judgment of the Purchaser the Contractor fails to comply with any of the other provisions of the Purchase Order.

- b) In the event the Purchaser terminates the Contract in whole or in part as provided in clause 24 (a), the Purchaser reserves the right to purchase upon such terms and in such a manner as Purchaser may deem appropriate, stores similar to that terminated and the Contractor shall be liable to the Purchaser for any additional costs for such similar stores and / or for liquidated damages for delay as defined in clause 14 until such reasonable time as may be required for the final supply of stores.
- c) If the contract is terminated as provided in clause 24(a), the Purchaser in addition to any other rights provided in the Contract, may require the Contractor to transfer title and deliver to the Purchaser under any of the following clauses in the manner as directed by the Purchaser:
 - 1. Any completed stores
 - 2. Such partially completed stores, drawing, information and contact right (hereinafter called manufacturing materials) as the Contractor has specifically produced or acquired for the performance of the Contract as terminated. The Purchaser shall pay to the Contractor the Contract price for completed stores and for manufacturing material delivered and accepted by the Purchaser.
- d) In the event the Purchaser does not terminate the Contract as provided in clause 24(a), the Contractor shall continue the performance of the Contract in which case the Contractor shall be liable to the Purchaser for liquidated damages for delay as set out in clause 14 until the stores are accepted.

25. REPLACEMENT

If the stores of any portion thereof is damaged or lost during transit the Purchaser shall give notice to the Contractor setting forth particulars of such stores damaged or lost during transit. The replacement of such stores shall be effected by the Contractor within a reasonable time to avoid unnecessary delay in the intended usage of the stores.

26. REJECTION

Rejected stores will remain at destination at the Contractor's risk and responsibility. If instructions for their disposal are not received from the Contractor within a period specified by the Purchaser, the Purchaser or their representative has, at their discretion, the right to scrap or sell or consign the rejected stores to Contractor's address at the Contractor's entire risk and expense, freight being payable by the Contractor at actuals.

27. ARBITRATION

If any dispute or difference or claims of any kind arises in connection with Contract, such dispute or difference or claim shall be referred by either party to the Arbitration. The Indian Arbitration and Conciliation Act, 1996 and any statutory modifications or re-enactment thereof, rules made there under and for the time being in force shall be applicable to the Arbitration. The arbitral tribunal shall consist of three arbitrators. Each party to the dispute shall appoint one arbitrator and the two arbitrators so appointed by the parties shall appoint the third arbitrator who shall act as the 'Presiding Arbitrator'.

Any party shall, after appointing an arbitrator within thirty days of arising of any dispute, request the other party in writing to appoint the second arbitrator. If such other party fails to appoint an arbitrator within thirty days of receipt of the written request to do so, such arbitrator shall at the request of the first party, be appointed in accordance with Arbitration and Conciliation Act, 1996. If the two arbitrators appointed by or on behalf the parties fail to agree on the appointment of the third arbitrator within thirty days of the appointment of second arbitrator and if the parties do not otherwise agree, at the request of either party, the third arbitrator shall be appointed in accordance with Arbitration and Conciliation Act, 1996. If any of the arbitrators fails or is unable to act, his successor shall be appointed by the party or person who originally appointed such arbitrator in the manner set out in this clause as if he was the first appointment.

The decision of the arbitral tribunal shall be pronounced within four months unless otherwise extended by the parties, and in case of difference among the arbitrators, the decision of the majority shall be final and binding on the parties. The right to arbitrate disputes under this Contract shall also survive even after expiry or the termination of this Contract. The venue of arbitration proceedings pursuant to this clause shall be India at Ahmedabad and shall be conducted in the English language. Pending the submission of and /or decision on a dispute, difference or claim or until the arbitral award is published; the parties shall continue to perform all their obligations under this Contract without prejudice to a final adjustment in accordance with such award. Regarding fee and any other expenses incurred in connection with the arbitral proceedings and the arbitral award, the arbitral Tribunal shall have the discretion to determine (a) whether costs are payable by one party to another; (b) the amount of such costs; and (c) when such costs are to be paid.

28. APPLICABLE LAW

The Purchase Order / Contract shall be governed by Indian Law and jurisdiction shall lie in the Courts of Ahmedabad, Gujarat, India.

29. COUNTER TERMS & CONDITIONS

Counter terms and conditions offered by the bidders shall not be deemed to have been accepted by the Purchaser unless specific written acceptance thereof is obtained from the Purchaser.

30. SECURITY INTEREST

On each item to be delivered under the Contract, including an item of work in progress in respect of which payments have been made in accordance with the terms of the Contract, Purchaser shall have a security interest in such items which shall be deemed to be released only at the time when the applicable deliverable item is finally accepted and delivered to the Purchaser in accordance with the terms of the Contract. Such security interest of the Purchaser shall constitute a prior charge as against any other charge or interest created in respect of such items by any entity.

31. RECOVERY OF SUM DUE

Whenever any claim for the payment of, whether liquidated or not, money arising out of or under the Contract against the Contractor, the Purchaser shall be entitled to recover such sum by appropriating in part or whole, the security deposited by the Contractor, if a security is taken against the Contract. In the event of the security being insufficient or if no security has been taken from the Contractor, then the balance or the total sum recoverable as the case may be, shall be deducted from any sum then due or which at any time thereafter may become due to the Contractor under this or any other Contract with the Purchaser. Should this sum be not sufficient to cover the full amount recoverable, the Contractor shall pay to the Purchaser on demand the remaining balance due. Similarly, if the Purchaser has or makes any claim, whether liquidated or not, against the Contractor under any other Contract with the Purchaser, the payment of all moneys payable under the Contract to the Contractor including the security deposit shall be withheld till such claims of the Purchaser are finally adjudicated upon and paid by the Contractor.

32. LANGUAGE AND MEASURES

All documents pertaining to the Purchase Order including specifications, schedule, notice, correspondence, operating and maintenance instructions, drawings or other writings shall be written in English language. The metric system of measurement shall be used in the contract.

33. INDEMNITY

The Contractor shall warrant and be deemed to have warranted that all stores supplied against this Contract are free and clean of infringement of any Patent, Copyright or Trademark, and shall at all times indemnify the Purchaser against all claims which may be made in respect of the stores for infringement of any right protected by Patent Registration of Design or Trade mark and shall take all risk of accidents or damage which may cause a failure of the supply from whatever cause arising and the entire responsibility for sufficiency of all means used by him for the fulfillment of the contract.

34. RISK PURCHASE

Where timely delivery of goods/services is of prime importance and where the vendor fails to fulfil their contractual obligations, the Purchaser shall have an option to complete the contract/procurement at the risk and expense of the contractor. Wherever the risk purchase clause is invoked by the Purchaser, the contractor will be liable to pay the additional amount, if any, incurred by the Purchaser as against the value of the Purchase Order/Contract. Prior to resorting to risk purchase the Purchaser shall consider impact of the default by the contractor, opportunities given to the contractor as available in the PO/Contract, proper notice to the contractor to invoke risk purchase clause and method of recovering the additional amount spent by the Purchaser.

35. TERMINATION

Under the normal circumstances, Termination/Short Closing of the Contract is not foreseen. However, PRL reserves the right to terminate the Contract in whole or in part by giving 30 days prior notice under the following circumstances:

1. For repeated non-performance in the execution of Contract.
2. If the contractor / Service Provider is found to have made any false or fraudulent declaration of statement to obtain the Contract or found to be indulging in unethical or unfair trade practices.
3. When both the Parties mutually agree for termination.
4. If the Contractor fails to perform any other obligations under the Contract.
5. If the Contractor becomes bankrupt or otherwise insolvent.
6. Owing to deficiency of service, breach of Contract.
7. For inefficiency, indiscipline, irregularity, insincerity, indifference in work, disobedience, doubtful credentials/ integrity, etc., at any point of time during the Contract period.
8. Any special circumstances, which must be recorded to justify the Cancellation of the Contract.

36. IMPORTANT NOTE

If any of the terms & conditions mentioned in this document is contrary to the RFP / Technical documents, then the terms mentioned in RFP / Technical documents shall prevail.

IT WILL BE DEEMED THAT BIDDERS HAVE NOTED AND ACCEPTED THE TERMS & CONDITIONS OF THE TENDER.