

ANNUAL RATE CONTRACT FOR SUPPLYING & REFILLING OF VARIOUS GASES & GAS CYLINDER



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

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SECTION 1 – BID SCHEDULE

Sealed Tenders are invited by the Indian Institute of Technology Bombay from reputed manufactures / suppliers for the supply of the Gases & Gas Cylinder for following categories :-

(A) High Purity Gases (B) Low Purity Gases and (C) Liquid Nitrogen. The suppliers will be empanelled category wise.

Tender No.	MMD/GAS/RC/2020-21
Tender Date	14 th February 2020
Advt. No.	MMD-26/2019-20
Item Description	Annual Rate Contract for Supplying & Refilling of various Gases & Gas Cylinder
Tender Type and Submission	Two Bid System: Tender should be submitted on the schedule with your covering letter in the enclosed form duly signed. Your quotation must be submitted in two envelopes Technical Bid and Commercial Bid superscripting on both the envelopes the tender no. and the due date and both these sealed covers are to be put in a bigger cover which should also be sealed and duly superscripted with our Tender No. & Due Date.
Pre-bid Meeting Date and Time	12 th March 2020 at 11.00 am
Pre-bid Meeting Place	Conference Room, Materials Management Division, Main Building, Ground Floor, IIT Bombay, Powai, Mumbai 400 076
Last date & time of submission of Tender	26 th March 2020 at 01.00 pm
Place of Submission	Materials Management Division, IIT Bombay, Powai, Mumbai 400 076.
Opening Date & Time of Tender	26 th March 2020 at 03.00 pm
Place of Opening Tender	Conference Room, Materials Management Division, IIT Bombay, Powai, Mumbai 400 076.
Earnest Money Deposit	Earnest Money Deposit (EMD) of Rs. 10,000/- (Rs. Ten Thousand Only) in the form of Demand Draft in the favor of 'The Registrar, IIT Bombay' payable at Mumbai to be submitted in Technical Bid.
Any Clarification	Name : Joint Registrar Dept : Materials Management Division, IIT Bombay Email : drmm@iitb.ac.in Contact No. : 022-2576 8805
Signing Authority	Joint Registrar (MM)

SECTION 2 – ELIGIBILITY CRITERIA

CATEGORY “A”

ELIGIBILITY CRITERIA FOR HIGH PURITY GASES

- 1.** The Bidder should have existence of the firm for the minimum period of 5 years (Certificate of Incorporation/Registration Certificate of the firm to be submitted in the technical bid).
- 2.** Copy of PAN CARD of the firm to be submitted in the technical bid.
- 3.** Copy of GST Registration Certificate of the firm to be submitted in the technical bid.
- 4.** The Bidder should have Gas Chromatograph, Moisture Analyser, Oxygen Analyser, Hydro-Carbon Analyser etc. machines in order to analyse the purity of gases. (It is mandatory to enclose List and details of machinery in the technical bid). The committee may visit eligible qualified bidder's manufacturing unit for inspection. The bidder can be disqualified if the committee finds their machines are not proper for analysing the purity of gases.
- 5.** The Bidder must not be blacklisted/suspended/debarred or any service related dispute with any Govt. organisation/Semi Govt. Organisation/ Institutions in India or outside India or any litigation pending. Annexure A-1 to be submitted in the technical bid.
- 6.** The Bidder should accept Terms & Conditions in the tender document- Annexure A-2 to be submitted in the technical bid.
- 7.** Client Experience – The bidders should have experience in execution of orders in the other IITs/ Govt. organizations/ Semi Govt. Organisations/ PSUs/ private companies for the similar items. Copies of at least 3 purchase orders of past 3 years must be enclosed and details as per Annexure A-3 to be submitted in the technical bid. Please note that, total amount of enclosed purchase orders should be atleast of Rs. 2 lakhs.
- 8.** The Bidder should have Annual Business Turnover of minimum 2 crores for the last two financial years each i.e. 2017-18 & 2018-19. Details as per Annexure A-4 and Copy of Audited Annual Accounts for the last two years to be submitted in the technical bid.
- 9.** The Bidder should have filed Income Tax Returns for last two years i.e. A. Y. 2018-19 (F.Y. 2017-18) & A. Y.2019-20 (F.Y. 2018-19). Details as per Annexure A-4 and Copy of filed copy of Acknowledgments ITR to be submitted in the technical bid.
- 10.** Valid Explosive Licenses for manufacturing and storing till safe delivery of Industrial Gases on Rate contract. Copy of the same to be enclosed in the technical bid.

CATEGORY "B" & CATEGORY "C"

ELIGIBILITY CRITERIA FOR LOW PURITY GASES & LIQUID NITROGEN

1. The Bidder should have existence of the firm for the minimum period of 5 years (Certificate of Incorporation/Registration Certificate of the firm to be submitted in the technical bid).
2. Copy of PAN CARD of the firm to be submitted in the technical bid.
3. Copy of GST Registration Certificate of the firm to be submitted in the technical bid.
4. The Bidder must not be blacklisted/suspended/debarred or any service related dispute with any Govt. organisation/Semi Govt. Organisation/ Institutions in India or outside India or any litigation pending. Annexure A-1 to be submitted in the technical bid.
5. The Bidder should accept Terms & Conditions in the tender document- Annexure A-2 to be submitted in the technical bid.
6. Client Experience – The bidders should have experience in execution of orders in the other IITs/ Govt. organizations/ Semi Govt. Organisations/ PSUs/ private companies for the similar items. Copies of at least 3 purchase orders of past 3 years must be enclosed and details as per Annexure A-3 to be submitted in the technical bid. Please note that, total amount of enclosed purchase orders should be atleast of Rs. 1 lakhs.
7. The Bidder should have Annual Business Turnover of minimum 1 crores for the last two financial years each i.e. 2017-18 & 2018-19. Details as per Annexure A-4 and Copy of Audited Annual Accounts for the last two years to be submitted in the technical bid.
8. The Bidder should have filed Income Tax Returns for last two years i.e. A. Y. 2018-19 (F.Y. 2017-18) & A. Y.2019-20 (F.Y. 2018-19). Details as per Annexure A-4 and Copy of filed Acknowledgments ITR to be submitted in the technical bid.
9. Valid Explosive Licenses for manufacturing and storing till safe delivery of Industrial Gases on Rate contract. Copy of the same to be enclosed in the technical bid.

SECTION 3 – INSTRUCTIONS TO BIDDERS

A) SUBMISSION OF OFFER:

1. Tender must be put in the Tender Box kept in the office of Joint Registrar (MM) at Materials Management Division, Ground floor, Main Building, IIT Bombay, Mumbai-76.
2. No tender is to be handed over to our staff personally.
3. The Quotation MUST BE ENCLOSED IN A SEALED COVER superscripting Tender number/due date & should reach the undersigned on or before the due date mentioned in the tender notice. If the quotation cover is not sealed, it will be rejected.
4. **Bidders should quote for all the items of the applying category.**
5. PRICE BID MUST BE SUBMITTED IN ENCLOSED PRICE BID FORMAT ONLY.
6. Any bidder currently engaged in litigation with other Organizations, must be inform their status in writing to IIT Bombay in writing.

B) COST OF BIDDING:

1. The Bidder shall bear all costs associated with the preparation and submission of its Bid and the Purchaser shall not be responsible or liable for those costs.

C) VALIDITY OF THE BID:

1. 180 Days from the date of submission of bid.

D) AMENDMENT OF BIDDING DOCUMENTS:

1. At any time prior to the deadline for submission of bids, IIT Bombay may, for any reason, whether on its own initiative or in response to the clarification requested by a prospective BIDDER may modify the bid document.
2. All prospective BIDDERS who have downloaded the bidding document may visit IIT Bombay website for amendments / modifications which will be binding on them.

E) DEADLINE FOR SUBMISSION OF BIDS:

1. Bids must be received by IIT Bombay before the due date and time at the address specified in the tender document. In the event of the specified date for the submission of bids being declared as a holiday for IIT Bombay the bid-closing deadline will stand extended to the next working day up to the same time.

F) BID OPENING PROCESS:

1. In case of two bid system, the technical bid will be opened in the first instance in the presence of department, Technical Evaluation Committee (TEC), MMD, representatives of the bidders at IIT Bombay.
2. Commercial bids of only those bidders, whose bids are found technically qualified, by the Technical Evaluation Committee, will be opened in the presence of department, Technical Evaluation Committee (TEC), MMD, representatives of the bidders subsequently at a later date for further evaluation. Date and Time of commercial bid opening shall be intimated to technically qualified bidders only.
3. One authorized representative of each of the bidder would be permitted to be present at the time of opening of the bids.
4. The authorized representative of bidders, present at the time of opening of the bids shall be required to sign an attendance register as a proof of having attended the Technical/Commercial bid opening session.

G) LATE BIDS:

1. IIT Bombay will not be responsible:
 - (a) For delayed / late quotations submitted / sent by post / courier etc.
 - (b) For submission / delivery of quotations at wrong places other than mentioned in the tender.
 - (c) Any bid inadvertently received by IIT Bombay after the deadline i.e. due date & time for submission of bids, will not be accepted and returned.

H) SUPPLEMENTARY OFFER/MODIFICATION OF ORIGINAL BID:

1. Tender submitted against above mentioned tender shall not be returned in case the tender opening date is extended/ postponed. BIDDER desirous of modifying their offer/terms may submit their revised / supplementary offer (s) within the extended Tender Opening Date (TOD) by clearly stating the extent of updating done to the original bid. The purchaser reserves the right to open the original offer along with the revised bid.

I) CONFIDENTIALITY:

1. Information relating to the evaluation of Bids, and recommendation of Contract award, shall not be disclosed to Bidders or any other person not officially concerned with such process until information on Contract award is communicated to all Bidders.
2. Any attempt by a Bidder to influence the Purchaser in the evaluation of the Bids or Contract award decisions may result in the rejection of its Bid.
3. Notwithstanding, from the time of Bid opening to the time of Contract award, if any Bidder wishes to contact the Purchaser on any matter related to the bidding process, it shall do so in writing.

J) DEVIATION, RESERVATIONS AND OMISSIONS:

1. During the evaluation of Bids, the following definitions apply:
 - (a) "Deviation" is a departure from the requirements specified in the Bidding Documents;
 - (b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Documents;And
 - (c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Documents.

K) CORRECTION OF ARITHMETICAL ERRORS:

1. Provided that the Bid is substantially responsive, the Purchaser shall correct arithmetical errors on the following basis:
 - (a) If there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected;
 - (b) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
 - (c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.
2. Bidders shall be requested to accept correction of arithmetical errors. Failure to accept the

correction in accordance with the same shall result in the rejection of the Bid.

L) EVALUATION OF BID:

1. IIT Bombay evaluates technical and Price acceptable offers on landed net Price basis.
2. Offer which deviates from the vital conditions (as illustrated below) of the tender shall be rejected:
 - a) Non- submission of complete offers.
 - b) Receipt of offers after due date and time and or by email / fax (unless specified otherwise).
 - c) Receipt of offers in open conditions.
3. In case any BIDDER is silent on any clause mentioned in this tender document, IIT Bombay shall construe that the BIDDER has accepted the clauses as per the invitation to tender. No further claim will be entertained.
4. No revision in the terms and conditions quoted in the offer will be entertained after the last date and time fixed for receipt of tenders.

M) COMMERCIAL BID: (Price Bid)

Price bid will be opened only from technically qualified bidders and the following terms and conditions will be applicable:

1. Quoting of Price (s): Price quoted should be in Indian Rupees.
2. PRICE BID must be submitted in enclosed Price Bid Form only.
3. If the price is not quoted in Price Bid Form only provided in tender document then, IIT Bombay will reject bid.
4. If supplier wishes to give pricing details it may be attached in separate sheet.
5. In case of multiple options of same product, bidders are requested to quote only one best option and not multiple options.
6. Quantity: The quantity mentioned in the tender can be increased or decreased to any extent depending upon the actual requirement.

N) CORRUPT & FRAUDULENT PRACTICES:

1. IIT Bombay requires that bidders, suppliers, contractors and consultants, if any, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy,
 - (a) The terms set forth below are defined as follows:
 - I. "Corrupt practice "means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence the action of a public official in the procurement process or in contract execution;
 - II. "Fraudulent practice "means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;
 - III. "Collusive practice "means a scheme of arrangement between two or more bidders, designed to establish bid prices at artificial, non- competitive levels; and
 - IV. "Coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract;
 - (b) IIT Bombay will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question.

O) TRANSFER AND SUBLETTING:

1. The seller shall not sublet, transfer, assign or otherwise part with the acceptance of the tender or any part thereof, either directly or indirectly, without the prior written permission of the Purchaser.

P) CANCELLATION OF TENDER:

1. Notwithstanding anything specified in this tender document, Purchaser / IIT Bombay in his sole discretion, unconditionally and without assigning any reasons, reserves the rights:
 - a) To accept OR reject lowest tender or any other tender or all the tenders.
 - b) To accept any tender in full or in part.
 - c) To reject the tender offer not conforming to the tenders terms.
2. To give purchase preference to Public Sector undertakings when applicable as per Govt. Policy/ Guidelines.
3. Offer which deviates from the vital conditions (as illustrated below) of the tender shall be rejected:
 - a) Non-submission of complete offers.
 - b) Receipt of offers after due date and time and or by email / fax (unless specified otherwise).
 - c) Receipt of offers in open conditions.
4. Conditional Tenders and Unsigned Tenders will be rejected.
5. If the quality of product and service provided is not found satisfactory, IIT Bombay reserves the right to cancel or amend the contract.

SECTION 4 – TERMS AND CONDITIONS

A) AWARD OF CONTRACT:

1. A panel of bidders/suppliers shall be selected for rate contract.
2. The Empanelled suppliers will abide by all the Terms & Conditions of the Tender Document.
3. Empanelment of vendors will be category wise L1 bidder. L2 bidder will be allowed to match L1 rates and if L2 does not agree to match L1 then L3 bidder will be allowed to match L1.
4. The Performance of the empanelled suppliers will be reviewed by a committee during contract period and IITB reserves right to add or delete suppliers in rate contract based on their performance if necessary without intimation.
5. Initially the contract will be awarded for one year thereafter; the contract may be extended for two years subject to annual revision, if their performance is found satisfactory.
6. The tendering firms must confirm in their tender that it will be their responsibility to possess valid Explosive Licenses for all Industrial Gases on Rate contract for manufacturing and storing till safe delivery of industrial gases to the IITB's entire operation of the rate contract.
7. Manufacturers' Test Certificate and Purity Certificate to be submitted along with every supply.
8. Transit Insurance Clause: The purchaser will not pay separately for transit insurance and the supplier will be responsible till the entire stores contracted for, arrive in good condition at destination. The transit risk in this respect may be covered by the supplier by getting the stores duly insured, if he so desires. The supplier in his own name and not in the name of consignee shall obtain the insurance cover.
9. IIT Bombay reserves the right to enter into parallel Rate contract with more than one supplier for any location.
10. In emergency, supplier has to supply cylinders as per requirement.

B) EARNEST MONEY DEPOSIT:

1. Earnest Money Deposit (EMD) of Rs. 10,000/- (Rs. Ten Thousand Only) in the form of Demand Draft in the favor of 'The Registrar, IIT Bombay' payable at Mumbai to be submitted in Technical Bid. Failing which, submitted bid will be rejected.
2. EMD of unsuccessful bidders will be returned within 30 days after the award of the contract.
3. EMD of a tenderer will be forfeited, if the tenderer withdraws or amends its tender or derogates from the tender in any respect within the period of validity of its tender. Further, if the successful tenderer fails to furnish the required performance security within the specified period, its EMD will be forfeited.

C) SECURITY DEPOSIT:

1. For successful bidder, EMD will be converted into security Deposit and will be retained with IIT Bombay till the expiry / termination of rate contract without interest.
2. In case there are losses or damages to the material or unsatisfactory services provided to IIT Bombay by the bidder then such losses will be adjusted from the Security deposit.
3. Security deposit will be refunded after satisfactory performance of the work and on completion of all obligations by empaneled bidder.

C) PAYMENT TERMS:

1. 100% Payment will be made within 45 days from the date of submission of bill and acceptance from concerned department/section/Materials Management Division.

D) DELIVERY SCHEDULE:

1. Tenderer should collect the empty cylinders from IITB user's department and deliver the refilled cylinders to the concerned departments without any extra charges.
2. Free delivery at IIT Bombay. Delivery should be within 10 days from the date of issue of Purchase order. Non-availability of the stock should be informed in writing immediately. No part-supply will be allowed. Defective items or items not as per given brands or samples, if any, must be taken back and replaced with no additional cost.

E) PENALTY:

1. **Supplier should provide Purity Certificate for each cylinder and if the gas cylinder is not found complying with the certificate then actual damage will be recovered as penalty.**
2. Timely delivery is essence of the contract and hence if any consignment be delayed, liquidated damages at the rate 0.5% of the price of the delayed consignment, for each week or part thereof shall be levied and recovered subject to a maximum of 5% of total purchase order value.

F) FORCE MAJEURE:

1. Force Majeure will be accepted on adequate proof thereof.

G) LEGAL MATTER:

1. In the event of any dispute over this contract, IIT Bombay's decision shall be final and binding.
2. Jurisdiction of Mumbai Courts only.

H) SAFETY MEASURES:

1. The LPG Cylinders shall be guaranteed by the tenderer for a period of 24 months from the date of manufacture, against manufacturing defects. Quality certificate must be provided along with the supply.
2. All cylinders are required to be examined/tested periodically as per the Gas Cylinder Rules, 1981. Responsibility for compliance with this rests with the Vendor, who will carry out test as may be required.
3. All gas cylinders are required to be painted as and when necessary to the appropriate color – code specified in the Gas Cylinder Rules, 1981. Responsibility for compliance with this rests with the Vendor, who will carry out test as may be required.
4. Last hydrotest date along with safe working pressure should be stamped on the cylinder or in report form.
5. The gas cylinders should always have the protective cap covering the valve when transporting the cylinder. Cylinder valves should not be bend and cylinder opening knob to be proper.
6. Specification for Gas Cylinder: Gas Cylinders shall conform to Gas Cylinder Rules, 1981, any other rules as current and to specifications approval by the Chief Controller of Explosive, Government of India.
7. Only gas cylinders with clearly legible shoulder or body labels are to be used. If this is not the case, cylinders will not be accepted and arrangements to return and replace the cylinder to be made by the supplier.
8. Cylinders are not to be rolled along its base and trolley to be brought along with the cylinders for shifting the same to the laboratories.
9. Cylinders must not be dropped from the vehicle on to the road while unloading

NOTE: If the supplier fails to adhere to the delivery rules the contract may stand cancelled.

SECTION 5 – BIDDER'S INFORMATION

1.	Name of the Bidder	
2.	Address of the Bidder	
3.	Status of the Company (Public Ltd. / Pvt. Ltd.)	
4.	Details of the Incorporation of the Company	Date:
5.	Valid GST No.	Ref. Document-
6.	State of Registration	
7.	Permanent Account No. (PAN)	
8.	Name & Designation of the Contact person to whom all references shall be made regarding this tender	
9.	Telephone No. (with STD Code)	
10.	Email Address of the contact person	
11.	Fax No. (with STD Code)	
12.	Website	

SECTION 6 – TECHNICAL BID
CATEGORY “A”
HIGH PURITY GASES

Sr. No.	Item Description (Impurity Details in PPM Level)	Compliance (Yes/No)
1	Argon (Grade 5.5 Purity 99.9995%) (Type 1) Cylinder – 47 Ltrs. C.S O2<=1.0, H2O<=1.0, CO+CO2<=0.5, THC<=0.2, H2<=0.2, N2<=2.0	
2	Argon (Type 2) Gas Purity - 99.9995% O2 <=1, H2O<=1, THC(as CH4)<=0.2, CO+CO2<=0.5, N2 <=2, H2 Not Detectable	
3	Argon (Type 3) Purity - 99.9995% Grade -5.5 O2<0.5ppm, N2<2ppm, THC<0.5ppm, H2O<1ppm	
4	FG (Grade 5.5 Purity 99.9995%) (Type 1) 8% H2 Purity 99.9995% + 92% N2 Purity 99.9995% PT = +/-5%, CA = +/-2% Cylinder – 47 Ltrs C.S. O2<=1.0, H2O<=1.0, CO+CO2<=0.5, THC<=0.2	
5	Helium (Type 1) Purity – 99.9995% Grade – 5.5 O2≤1ppm, N2≤2ppm, H2O≤2ppm, CnHm≤0.1ppm	
6	Helium (Grade 5.5 Purity 99.9995%)(Type 2) Cylinder - 47 Ltrs C.S. O2<=0.1, H2O<=0.1, CO+CO2<=0.5, CH4<=2.0, N2<=5	
7	Helium (Type 3) Gas Purity – 99.9995% O2<=1, H2O<=1, THC(as CH4)<=0.2, CO+CO2<=0.5, N2<=2, H2 Non Detectable	
8	Hydrogen(Type 1) Purity – 99.9995% Grade – 5.5 H2O<3ppm, O2<2ppm , CnHm<0.2ppm, CO<1ppm, CO2<1ppm, N2<5ppm	
9	Hydrogen (Grade 5.5 Purity 99.9995%)(Type 2)	

	Cylinder - 47 Ltrs C.S. O ₂ ≤1.0, H ₂ O≤1.0, CO+CO ₂ ≤0.5, THC≤0.2, N ₂ ≤3.0	
10	Hydrogen (Type 3) Gas Purity - 99.9995% O ₂ ≤1, H ₂ O≤1, THC(as CH ₄)≤0.2, CO+CO ₂ ≤0.5, N ₂ ≤2	
11	Oxygen (Type 1) Purity - 99.9995% Grade - 5.5 H ₂ O<1.5ppm, CO<0.10ppm, CO ₂ <0.10ppm, THC<0.10ppm, H ₂ <0.20ppm, N ₂ <2.0ppm, Ar<1ppm	
12	Oxygen (Type 2) Gas Purity - 99.9995% H ₂ O≤1, THC(as CH ₄)≤0.2, CO+CO ₂ ≤0.5, N ₂ ≤3, H ₂ Non Detectable	
13	Oxygen (Grade 5.5 % Purity 99.9995%)(Type 3) Cylinder – 47Ltrs C.S H ₂ O≤0.5, CO+CO ₂ ≤0.6, THC≤0.1, N ₂ ≤3.0	
14	Oxygen (99.9000%)(Type 1) Cylinder – 47Ltrs C.S. H ₂ O≤5.0, CO+CO ₂ ≤1.0 , THC≤2.0, H ₂ ≤5.0, Argon≤ 5.0	
15	Nitrogen (Type 1) Purity – 99.9995% Grade – 5.5 O ₂ <1ppm, H ₂ O<2.50ppm, CO<1ppm, CO ₂ <1ppm, THC<1ppm, H ₂ <1ppm	
16	Pure Nitrogen (Type 2) Gas Purity - 99.9995% O ₂ ≤1, H ₂ O≤1, THC(as CH ₄)≤0.2, CO+CO ₂ ≤0.5, H ₂ ≤0.5	
17	Pure Nitrogen (Grade 5.5 Purity 99.9995% (Type 3) Cylinder – 47Ltrs C.S O ₂ ≤1.0, H ₂ O≤1.0, CO+CO ₂ ≤0.5, THC≤0.2	
18	Nitrogen (Grade 6.0 Purity 99.9999% (Type 1) Cylinder – 47Ltrs C.S O ₂ ≤0.3, H ₂ O≤0.5, CO+CO ₂ ≤0.5, THC≤0.2	
19	Nitrogen (Type 2) Purity – 99.9999% O ₂ ≤0.3, H ₂ O≤0.5, THC (as CH ₄)≤0.1, CO+CO ₂ ≤0.05, H ₂ ≤0.05	

20	Nitrogen(Type 3) Purity - 99.9999% Grade - 6.0 H2O<0.5 ppm , O2<0.5ppm, CnHm<0.1ppm, CO<0.1ppm, CO2<0.1ppm, H2<0.5ppm	
21	Oxygen(Type 1) Purity - 99.9999% Grade -6.0 H2O<0.5ppm, CnHm<0.1ppm, CO<0.1ppm, CO2<0.1ppm, N2<0.5ppm, Ar<1ppm	
22	Oxygen(Grade 6.0 Purity 99.9999%)(Type 2) Cylinder – 47Ltrs C.S H2O<=0.5, CO+CO2<=0.6, THC<=0.1, N2<=3.0	
23	Oxygen (Type 3) Gas Purity% - 99.9999% H2O<=0.5, THC(as CH4)<=0.1, CO+CO2<=0.1, N2<=0.3, H2 Non Detectable	
24	Helium (Type 1) Purity – 99.9999% Grade – 6.0 O2<0.5ppm, N2<0.5ppm, H2O<0.5ppm, CnHm<0.1ppm, CO<0.1ppm, CO2<0.1ppm	
25	Helium(Grade 6.0 Purity 99.9999%)(Type 2) Cylinder – 47Ltrs C.S O2<=0.1, H2O<=0.5, CO+CO2<=0.1, THC<=0.1, N2<=0.1	
26	Helium (Type 3) Gas Purity - 99.9999% O2<=0.1, H2O<=0.1, THC (as CH4)<=0.2, CO+CO2<=0.5, N2<=0.1, H2 Non Detectable	
27	Argon(Type 1) Purity – 99.9999% Grade – 6.0 O2<0.5ppm, N2<0.5ppm, H2O<0.5ppm, CnHm<0.1ppm, CO<0.1ppm, CO2<0.1ppm	
28	Argon (Grade 6.0 Purity 99.9999%)(Type 2) Cylinder – 47Ltrs C.S O2<=0.2, H2O<=0.2, CO2<=0.1, CO<=0.1, THC<=0.1, H2<=0.1, N2<=0.5	
29	Argon – (Type 3) Gas Purity - 99.9999% O2<=0.2, H2O<=0.2, THC (as CH4)<=0.1, CO+CO2<=0.1, N2 <=0.4, H2 Non Detectable	
30	Hydrogen(Type 1)	

	Purity – 99.9999% Grade – 6.0 H2O<0.5ppm, O2<0.5ppm, CnHm<0.1ppm, CO<0.1ppm, CO2<0.1ppm, N2<0.5ppm	
31	Hydrogen(Grade 6.0 Purity 99.9999%)(Type 2) Cylinder – 47 Ltrs C.S O2<=0.2, H2O<=0.2, CO2<=0.1, CO<=0.1, THC<=0.1, N2<=0.5	
32	Hydrogen – (Type 3) Gas Purity - 99.9999% O2<=0.5, H2O<=0.5, THC (as CH4)<=0.1, CO+CO2<=0.1, N2<=0.5	
33	Nitrogen with Cylinder (Type 1) Gas Purity – 99.9999% O2<=0.3, H2O<=0.5, THC (as CH4)<=0.1, CO+CO2<=0.05, H2<=0.05	
34	Oxygen with Cylinder (Type 1) Gas Purity - 99.9999% H2O<=0.5, THC (as CH4)<=0.1, CO+CO2<=0.1, N2<=0.3, H2 Non Detectable	
35	Oxygen(Grade 6.0 Purity 99.9999%) with cylinder (Type 2) Cylinder – 47 Ltrs C.S H2O<=0.5, CO+CO2<=0.6, THC<=0.1, N2<= 3.0	
36	Helium (Grade 6.0 Purity 99.9999%)with Cylinder(Type 1) Cylinder – 47 Ltrs C.S O2<=0.1, H2O<=0.5, CO+CO2<=0.1, THC<=0.1, N2<=0.1	
37	Helium Gas Purity – 99.9999% with Cylinder (Type 2) O2<=0.1, H2O<=0.1, THC (as CH4)<=0.2, CO+CO2<=0.5, N2<=0.1, H2 Non Detectable	
38	Argon(Grade 6.0 Purity 99.9999%) with Cylinder((Type 1) Cylinder – 47 Ltrs C.S O2<=0.2, H2O<=0.2, CO2<=0.1, CO<=0.1, THC<=0.1, H2<=0.1, N2<=0.5	
39	Argon with Cylinder (Type 2) Gas Purity - 99.9999% O2<=0.2, H2O<=0.2, THC (as CH4)<=0.1, CO+CO2<=0.1, N2<=0.4, H2 Non Detectable	
40	Hydrogen (Grade 6.0 Purity 99.9999%)with	

	Cylinder(Type 1) Cylinder – 47 Ltrs C.S O ₂ ≤0.2, H ₂ O≤0.2, CO ₂ ≤0.1, CO≤0.1, THC≤0.1, N ₂ ≤0.5	
41	Hydrogen with Cylinder (Type 2) Gas Purity - (99.9999%) O ₂ ≤0.5, H ₂ O≤0.5, THC (as CH ₄)≤0.1, CO+CO ₂ ≤0.1, N ₂ ≤0.5	
42	Nitrogen (Grade 7.0 Purity 99.99999%) (Type 1) Cylinder – 47 Ltrs C.S O ₂ ≤0.3, H ₂ O≤0.5, CO+CO ₂ ≤0.5, THC≤0.2	
43	Nitrogen - Along with purifier and its certificate indicating the outcome impurities(Type 2) Gas Purity - (99.99999%) O ₂ ≤0.04, H ₂ O≤0.04, THC (as CH ₄) Non Detectable, CO+CO ₂ ≤0.01, H ₂ ≤0.01	
44	Oxygen - Along with purifier and its certificate indicating the outcome impurities (Type 1) Gas Purity - 99.99999% H ₂ O≤0.05, THC (as CH ₄) Not Detectable, CO+CO ₂ ≤0.05, N ₂ Not Detectable, H ₂ Not Detectable	
45	Oxygen (Grade 7.0 Purity 99.99999%) (Type 2) Cylinder – 47 Ltrs C.S H ₂ O≤0.5, CO+CO ₂ ≤0.1, THC≤0.1, N ₂ ≤0.1	
46	Nitrogen(Grade 7.0 Purity 99.99999%)with Cylinder (Type 1) Cylinder – 47 Ltrs C.S O ₂ ≤0.3, H ₂ O≤0.5, CO+CO ₂ ≤0.5, THC≤0.2	
47	Nitrogen with cylinder – Along with purifier and its certificate indicating the outcome impurities Gas Purity - (99.99999%) (Type 2) O ₂ ≤0.04, H ₂ O≤0.04, THC (as CH ₄) Not Detectable, CO+CO ₂ ≤0.01, H ₂ ≤0.01	
48	Oxygen (Grade 7.0 Purity 99.99999%)with Cylinder(Type 1) Cylinder – 47 Ltrs C.S H ₂ O≤0.5, CO+CO ₂ ≤0.1, THC≤0.1, N ₂ ≤0.1	
49	Oxygen – Along with purifier and its certificate indicating the outcome impurities (Type 2) Gas Purity - 99.99999% with Cylinder H ₂ O≤0.05, THC (as CH ₄) Not Detectable, CO+CO ₂ ≤0.05, N ₂ Not Detectable, H ₂ Not Detectable	

Note:

- 1) Bidders should comply for all items of the applying category.**

PAN No:

GST Registration No:

Signature.....

Company Name & Address:.....

Date:

Place:

Affix Rubber Stamp:.....

CATEGORY "B"
LOW PURITY GASES

Sr. No.	Item Description (Impurity Details in PPM Level)	Compliance (Yes/No)
1	Argon Comm. (Grade 4.5 Purity 99.995%)with Cylinder(Type 1) Cylinder – 47 Ltrs C.S O2<=5.0, H2O<=5.0, THC<=2.0	
2	Argon Commercial (Type 1) Gas Purity - 99.5% O2 - 1000, H2O - 500, THC (as CH4) - 500, CO+CO2 – 500, N2 – 500, H2 - 250	
3	FG (Propane) (Type 1) Gas Purity - 99.999% O2<=1, H2O<=2, THC(as CH4)<=3, CO+CO2<=1, N2<=2, H2 Non Detectable	
4	Carbon Dioxide (Grade 4.0 Purity 99.99%)with Cylinder(Type 1) Cylinder – 47 Ltrs C.S O2<=10.0, H2O<=10.0, THC<=1.0	
5	Carbon Dioxide per kg(Type 1) Gas Purity - 99.5% O2 – 1000, H2O – 500, THC (as CH4) – 500, CO+CO2 – 500, N2 – 500, H2 - 250	
6	Dissolved Acetylene(Type 1) Gas Purity - 96.0% O2 – 5000, H2O – 5000, THC (as CH4) – 5000, CO+CO2 – 500, N2 – 5000, H2 -Not Detectable	
7	Dissolve Acetylene(Type 1) Cylinder – 41 Ltrs C.S O2<=50.0, N2<=4000.0	
8	Dissolved Acetylene (Type 1) Purity – 98.000% Cylinder Size(Ltr) – 41, Volume (M3) – 5.6, Valve Specification - BS 04 Internal Thread (5/8 BSP)	
9	Helium (Grade 4.5 Purity 99.995%)(Type 2) Cylinder – 47 Ltrs C.S O2<=6.0, H2O<=6.0, CO+CO2<=1.0, THC<=1.0	
10	Helium(Type 1) Gas Purity - 99.5% O2 - 1 000, H2O – 500, THC (as CH4) – 500, CO+CO2 – 500, N2 – 500, H2 - 250	

11	Hydrogen Commercial (Grade 4.5 Purity 99.995%)(Type 1) Cylinder – 47 Ltrs C.S O2<=4.0, H2O<=4.0, CO+CO2<=1.0, THC<=1.0	
12	Hydrogen Commercial (Type1) Gas Purity - 99.5% O2 – 1000, H2O – 500, THC (as CH4) – 500, CO+CO2 – 500, N2 - 500	
13	Nitrogen Commercial (Grade 4.5 Purity 99.995%)(Type 1) Cylinder – 47 Ltrs C.S O2<=4.0, H2O<=1.0, CO+CO2<=1.0, THC<=0.5	
14	Nitrogen Commercial(Type 1) Gas Purity – 99.5% O2 – 1000, H2O – 500, THC (as CH4) – 500, CO+CO2 – 500, N2 – 500, H2 - 250	
15	Nitrogen(Grade 6.0 Purity 99.999%)with Cylinder(Type 1) Cylinder – 47 Ltrs C.S O2<=0.3, H2O<=0.5, CO+CO2<=0.5, THC<=0.2	
16	Oxygen (Grade 4.5 Purity 99.995%)(Type 1) Cylinder – 47 Ltrs C.S H2O<=5.0, CO2<=1.0, THC<=2.0, Argon<=5.0	
17	Oxygen (Type 1) Gas Purity - 99.5% H2O – 500, THC (as CH4) – 500, CO+CO2 – 500, N2 – 1000, H2 - 250	
18	Oxygen (Type 1) Gas Purity – 99.9% H2O <=100, THC(as CH4)<=100, CO+CO2<=100, N2<=200, H2<=50	
19	Oxygen (Type 1) Purity - 99.900% O2 - NA , H2O – 2.50, THC – 15.00, CO+CO2 - 0.50 , N2 – 100.00, Argon – 500.00, Cylinder size(ltr) – 47, Pressure (Bar) – 140.00, Volume(M3) – 7.0, Valve Specification- BS 03 Internal Thread (5/8 BSP)	
20	Nitrogen (Type 1) Purity - 99.999% O2 – 2.00, H2O – 2.00, THC – 0.50, CO+CO2 – 0.50, NA-NA, Argon – 5.00, Cylinder Size(Ltr) – 47, Pressure(Bar) – 140.00, Volume (M3) – 6.5, Valve Specification - Bs 03 Internal Thread (5/8 BSP)	

21	Nitrogen (Grade.5.0 Purity 99.999%) (Type 2) Cylinder – 47Ltrs C.S O ₂ ≤2.0, H ₂ O≤2.0, CO+CO ₂ ≤0.5, THC≤0.5	
22	Nitrogen (Type 3) Gas Purity - 99.999% O ₂ – 2, H ₂ O – 2, THC (as CH ₄) – 0.5, CO+CO ₂ – 0.5, H ₂ - 1	
23	Oxygen (Type 1) Purity - 99.999% O ₂ – NA, H ₂ O -1.00, THC – 0.50, CO+CO ₂ – 0.50, N ₂ – 7.00, Argon – 1.00, Cylinder Size(Ltr) – 50, Pressure(Bar) – 200, Volume (M ³) – 10.0, Valve Specification - BS 03 Internal Thread (5/8 BSP)	
24	Oxygen (Type 2) Gas Purity - 99.999% H ₂ O – 2, THC (as CH ₄) – 0.5, CO+CO ₂ – 0.5, N ₂ – 7, H ₂ - 0.5	
25	Oxygen (Grade 5.0 Purity 99.999%)(Type 3) Cylinder – 47 Ltrs C.S H ₂ O≤1.0, CO+CO ₂ ≤0.5, THC≤0.5, N ₂ ≤8.0	
26	Helium (Type 1) Purity -99.999% O ₂ – 2.00, H ₂ O – 1.00, THC – 0.50, CO+CO ₂ – 0.50, N ₂ – 6.00, Argon – NT, Cylinder Size(Ltr) – 50, Pressure(Bar) – 200.00, Volume (M ³) – 9.1, Valve Specification - IS3224 Srno 20, External thread	
27	Helium (Grade 5.0 Purity 99.999%)(Type 2) Cylinder – 47 Ltrs C.S O ₂ ≤2.0, H ₂ O≤2.0, CO+CO ₂ ≤0.5, THC≤0.5	
28	Helium (Type 3) Gas Purity - 99.999% O ₂ – 2, H ₂ O – 2, THC (as CH ₄) – 0.5, CO+CO ₂ – 0.5, N ₂ – 4, H ₂ - 0.5	
29	Argon (Type 1) Purity – 99.999% Grade – 1.0 O ₂ <1ppm, N ₂ < 5ppm, THC<0.5ppm, H ₂ O<1ppm	
30	Argon (Grade 5.0 Purity 99.999%)(Type 2) Cylinder – 47 Ltrs C.S O ₂ ≤2.0, H ₂ O≤2.0, CO+CO ₂ ≤0.5, THC≤0.5	
31	Argon (Type 3) Gas Purity% - 99.999% O ₂ – 2, H ₂ O – 2, THC (as CH ₄) – 0.5, CO+CO ₂ – 0.5, N ₂ – 4, H ₂ - 0.5	

32	Argon (Type 4) Purity -99.999% O2 – 2.00, H2O – 2.00, THC – 0.50, CO+CO2 – 0.50, N2 – 5.00, Argon-NT, Cylinder Size(Ltr)- 47, Pressure(Bar)-140.00, Volume (M3)-7.0, Valve Specification - IS3224 Srno 20, External thread	
33	Hydrogen (Type 1) Purity - 99.999% O2 – 2.00, H2O – 2.00, THC – 0.50, CO+CO2 – 0.50, N2 – NT, , Argon – NT, Cylinder Size(Ltr) – 47, Pressure(Bar) – 140.00, Volume (M3) – 6.0, Valve Specification - BS 04 Internal Thread (5/8 BSP)	
34	Hydrogen(Grade 5.0 Purity 99.999%)(Type 2) Cylinder – 47 Ltrs C.S O2<=2.0, H2O<=2.0, CO+CO2<=0.5, THC<=0.2	
35	Hydrogen (Type 3) Gas Purity - 99.999% O2 – 2, H2O – 2, THC (as CH4) – 0.5, CO+CO2 – 0.5, N2 - 4	
36	5% Foaming Gas Mixture (5% Hydrogen and 95% Nitrogen (Type1) Gas Purity - 99.999% O2 – 2, H2O – 2, THC (as CH4) – 0.5, CO+CO2 – 0.5, N2 - 4	
37	5% Foaming Gas Mixture (5% Hydrogen and 95% Nitrogen) (Type 2) PT= +/-5%, CA=+/- 2% Purity 99.999% Cylinder – 47 Ltrs C.S O2<=2.0, H2O<=2.0, CO+CO2<=0.5, THC<=0.5	
38	8% Foaming Gas Mixture (8% Hydrogen and 92% Nitrogen) (Type 1) Gas Purity - 99.999% O2 – 2, H2O – 2, THC (as CH4) – 0.5, CO+CO2 – 0.5, N2 - 4	
39	8% Foaming Gas Mixture (8% Hydrogen and 92% Nitrogen (Type 2) PT= +/-5%, CA=+/- 2% Purity 99.999% Cylinder – 47 Ltrs C.S O2<=2.0, H2O<=2.0, CO+CO2<=0.5, THC<=0.5	
40	10% Foaming Gas Mixture (10% Hydrogen and 90% Nitrogen) (Type 1) PT= +/-5%, CA=+/- 2%	

	Purity 99.999% Cylinder – 47 Ltrs C.S O ₂ ≤2.0, H ₂ O≤2.0, CO+CO ₂ ≤0.5, THC≤0.5	
41	10% Foaming Gas Mixture (10% Hydrogen and 90% Nitrogen) (Type 2) Gas Purity - 99.999% O ₂ – 2, H ₂ O – 2, THC (as CH ₄) – 0.5, CO+ CO ₂ – 0.5, N ₂ - 4	
42	Xenon (Type1) Gas Purity - 99.999% O ₂ – 2, H ₂ O – 2, THC (as CH ₄) – 0.5, CO+CO ₂ – 0.5, N ₂ – 2, H ₂ – Not Detectable	
43	Xenon (Grade 5.0 Purity 99.999%)(Type 2) Cylinder – 47 Ltrs C.S O ₂ +Ar≤0.5, H ₂ O≤1.0 , CO ₂ ≤0.1, CO≤0.1, CH ₄ ≤0.1, H ₂ ≤0.5, N ₂ ≤0.5, N ₂ O≤0.1, Kr≤1.0, C ₂ H ₆ ≤0.1	
44	Xenon (Type 3) Purity – 99.999% Grade – 5.0 O ₂ ≤1ppm, N ₂ ≤3ppm, H ₂ O≤3ppm, C _n H _m ≤1ppm, Kr≤5ppm, Ar≤2ppm	
45	Xenon (Type 4) Carbon Dioxide≤1ppm, Nitrogen≤3ppm, Oxygen≤0.5ppm, Krypton≤5ppm, Total Hydrocarbons≤0.5ppm, Moisture≤0.5ppm	
46	Nitrogen with Cylinder(Type 1) Gas Purity - 99.999% O ₂ – 2, H ₂ O – 2, THC (as CH ₄) – 0.5, CO+CO ₂ – 0.5, H ₂ -1	
47	Nitrogen (Grade 5.0 Purity 99.999%) with Cylinder (Type 2) Cylinder – 47 Ltrs C.S O ₂ ≤2.0, H ₂ O≤2.0, CO+CO ₂ ≤0.5, THC≤0.5	
48	Oxygen with Cylinder (Type1) Gas Purity - 99.999% H ₂ O – 2, THC(as CH ₄) – 0.5, CO+CO ₂ – 0.5, N ₂ – 7, H ₂ - 0.5	
49	Oxygen(Grade 5.0 Purity 99.999%) with Cylinder (Type 2) Cylinder – 47 Ltrs C.S H ₂ O≤1.0, CO+CO ₂ ≤0.5, THC≤0.5, N ₂ ≤8.0	
50	Helium(Grade 5.0 Purity 99.999%) with Cylinder (Type 1)	

	Cylinder – 47 Ltrs C.S O ₂ ≤2.0, H ₂ O≤2.0, CO+CO ₂ ≤ 0.5, THC≤0.5	
51	Helium with Cylinder(Type 2) Gas Purity - 99.999% O ₂ – 2, H ₂ O – 2, THC (as CH ₄) – 0.5, CO+CO ₂ – 0.5, N ₂ – 4, H ₂ - 0.5	
52	Argon (Grade 5.0 Purity 99.999%) with Cylinder (Type 1) Cylinder – 47 Ltrs C.S O ₂ ≤2.0, H ₂ O≤2.0, CO+CO ₂ ≤0.5, THC≤0.5	
53	Argon with Cylinder (Type 2) Gas Purity - 99.999% O ₂ – 2, H ₂ O – 2, THC (as CH ₄) – 0.5, CO+CO ₂ – 0.5, N ₂ – 4, H ₂ - 0.5	
54	Hydrogen (Grade 5.0 Purity 99.999%) with Cylinder (Type 1) Cylinder – 47 Ltrs C.S O ₂ ≤2.0, H ₂ O≤2.0, CO+CO ₂ ≤ 0.5, THC≤0.2, N ₂ ≤5.0	
55	Hydrogen with Cylinder (Type 2) Gas Purity - 99.999% O ₂ – 2, H ₂ O – 2, THC (as CH ₄) – 0.5, CO+CO ₂ – 0.5, N ₂ - 4	
56	5% Foaming Gas Mixture (5% Hydrogen and 95% Nitrogen) with Cylinder(Type 1) Gas Purity - 99.999% O ₂ – 2, H ₂ O – 2, THC (as CH ₄) – 0.5, CO+CO ₂ – 0.5, N ₂ - 4	
57	5% Foaming Gas Mixture (5% Hydrogen and 95% Nitrogen with cylinder(Type 2) PT= +/-5%, CA=+/- 2% Purity 99.999% Cylinder – 47 Ltrs C.S O ₂ ≤2.0, H ₂ O≤2.0, CO+CO ₂ ≤0.5, THC≤0.5	
58	8% Foaming Gas Mixture (8% Hydrogen and 92% Nitrogen) with Cylinder(Type 1) Gas Purity - 99.999% O ₂ – 2, H ₂ O – 2, THC (as CH ₄) – 0.5, CO+CO ₂ – 0.5, N ₂ - 4	
59	8% Foaming Gas Mixture (8% Hydrogen and 92% Nitrogen) with cylinder (Type 2) PT=+/-5% CA=+/- 2% Purity 99.999% Cylinder – 47 Ltrs C.S	

60	O ₂ ≤2.0, H ₂ O≤2.0, CO+CO ₂ ≤0.5, THC≤0.5 10% Foaming Gas Mixture (10% Hydrogen and 90% Nitrogen) with Cylinder (Type 1) PT= +/-5%, CA=+/- 2% Purity 99.999% Cylinder – 47 Ltrs C.S O ₂ ≤2.0, H ₂ O≤2.0, CO+CO ₂ ≤0.5, THC≤0.5	
61	10% Foaming Gas Mixture (10% Hydrogen and 90% Nitrogen) with Cylinder (Type2) Gas Purity – 99.999% O ₂ – 2, H ₂ O – 2, THC (as CH ₄) – 0.5, CO+CO ₂ – 0.5, N ₂ - 4	
62	Xenon with Cylinder(Type 1) Gas Purity - 99.999% O ₂ – 2, H ₂ O – 2, THC (as CH ₄) – 0.5, CO+CO ₂ – 0.5, N ₂ – 2, H ₂ – Not Detectable	
63	Xenon with Cylinder (Type 2) O ₂ +Ar≤0.5, H ₂ O≤1.0, CO ₂ ≤0.1, CO≤0.1, CH ₄ ≤ 0.1, H ₂ ≤0.5, N ₂ ≤0.5, N ₂ O≤0.1, Kr≤1.0, C ₂ H ₆ ≤0.1	
64	Argon (Grade 5.0 Purity 99.999%)(Type 1) Cylinder – 47 Ltrs C.S O ₂ ≤2.0, H ₂ O≤2.0, CO+CO ₂ ≤0.5, THC≤0.5	
65	Argon Gr. I – (Type 2) Gas Purity - 99.999% O ₂ – 2, H ₂ O – 2, THC (as CH ₄) – 0.5, CO+CO ₂ – 0.5, N ₂ – 4, H ₂ - 0.5	
66	Argon Gr. II – (Type 1) Gas Purity - 99.995% O ₂ – 10, H ₂ O – 10, THC (as CH ₄) – 5, CO+CO ₂ – 5, N ₂ – 10, H ₂ - 5	
67	Argon (Grade 4.5 Purity 99.995%)(Type 2) Cylinder – 47 Ltrs C.S O ₂ ≤5.0, H ₂ O≤5.0, THC≤2.0	
68	Hydrogen(Grade 5.0Purity 99.999%)(Type 1) Cylinder – 47 Ltrs C.S O ₂ ≤2.0, H ₂ O≤2.0, CO+CO ₂ ≤0.5, THC≤0.5, N ₂ ≤5.0	
69	Hydrogen Gr. I (Type 2) Gas Purity - 99.999% O ₂ – 2, H ₂ O – 2, THC (as CH ₄) – 0.5, CO+CO ₂ – 0.5, N ₂ - 4	
70	Hydrogen U.H.P (Grade 5.0 Purity 99.999%)(Type	

	1) Cylinder – 47 Ltrs C.S O ₂ ≤2.0, H ₂ O≤2.0, CO+CO ₂ ≤0.5, THC≤0.2, N ₂ ≤5.0	
71	Hydrogen U.H.P (Type 1) Gas Purity - 99.9995% O ₂ – 1, H ₂ O – 1, THC (as CH ₄) – 0.2, CO+CO ₂ – 0.5, N ₂ - 2	
72	Medical Oxygen(Type 1) Gas Purity - 99.5% H ₂ O – 500, THC(as CH ₄) – 500, CO+CO ₂ – 500, N ₂ – 1000, H ₂ - 250	
73	Medical Oxygen (Grade I.P Purity 99.00%)(Type 1) Purity not less than 99.00% Cylinder – 47 Ltrs C.S CO ₂ ≤300.00, CO≤5.0, Water vapor≤67	
74	NH ₃ (Ammonia) per kg(Type 1) Gas Purity - 99.8% H ₂ O - 1000	
75	NH ₃ Ammonia (Grade 5.5 Purity 99.9995%)(Type 1) Cylinder – 10 Ltrs C.S O ₂ ≤0.5, H ₂ O≤0.5, CO ₂ ≤0.5, CO≤0.5, CH ₄ ≤0.1, H ₂ ≤0.5, N ₂ ≤1.0, Fe - 0.01	
76	O.F.N (Type 1) Gas Purity - 99.5% O ₂ – 1000, H ₂ O – 500, THC (as CH ₄) – 500, CO+CO ₂ – 500, N ₂ – 500, H ₂ - 250	
77	OFN (Grade 5.0 Purity 99.999%)(Type 1) Cylinder – 47 Ltrs C.S H ₂ O≤1.0, CO+CO ₂ ≤0.5, THC≤0.5, N ₂ ≤8.0	
78	Zero Air (21% O ₂ + 79% N ₂)(Type 1) Cylinder – 47 Ltrs C.S H ₂ O≤2.0, CO+CO ₂ ≤1.0, THC≤3.0	
79	Zero Air (Type 1) Gas Purity - O ₂ – 99.5%+ N ₂ – 99.999% H ₂ O – 5, THC (as CH ₄) – 5, CO+CO ₂ – 2, H ₂ - 2	
80	Zero Air (Type 1) O ₂ – 20-21%, H ₂ O – 2.50, THC – 5.00, CO+Co ₂ - 0.50, N ₂ – Bal, Cylinder Size(Ltr) – 47, Pressure(Bar) – 140.00, Volume (M ³) – 6.5, Valve Specification - BS 03 Internal Thread (5/8 BSP)	
81	Synthetic Air (Type 1)	

	O2 – 20-21%, H2O – 2.00, THC – 1.00, CO+Co2- 0.50, N2 – Bal, Argon – NT, Cylinder Size(Ltr) – 47, Pressure(Bar) – 140.00, Volume (M3) – 6.5, Valve Specification - BS 03 Internal Thread (5/8 BSP)	
82	Hydrogen Sulphide (Type 1) (C.P. Grade 2.5 Purity 99.99%) Cylinder – 10 Ltrs C.S CO2<=0.05, THC<=0.3, N2<=0.01, Carbon Disulfide<=0.1%, Carbonyl Sulfide<=0.2	
83	Hydrogen Sulphide (Type 2) Gas Purity - 99.99% THC (as CH4) – 30, CO+CO2 – 25, N2 - 25	
84	Nitrogen Gr I (Type 1) Gas Purity - 99.999% O2 – 2, H2O – 2, THC (as CH4) – 0.5, CO+CO2 – 0.5, H2 - 1	
85	Nitrogen Gr. I (Type 2) (Grade 5.0 Purity 99.999%) Cylinder – 47 Ltrs C.S O2<=2.0, H2O<=2.0, CO+CO2<=0.5, THC<=0.5	
86	Nitrogen U.H.P (Grade 5 Purity 99.995%)(Type 1) Cylinder – 47 Ltrs C.S O2<=2.0, H2O<=2.0, CO+CO2<=0.5, THC<=0.5	
87	Nitrogen U.H.P (Type 2) Gas Purity% - 99.9995% O2 – 1, H2O – 1, THC (as CH4) – 0.2, CO+CO2 – 0.5, H2 – 0.5	
88	P10 Gas (Argon 90% + Methane 10%) (Type 1) Gas Purity - 99.995% O2 – 10, H2O – 10, CO+CO2 – 5, N2 – 10, H2 - 5	
89	P10 Gas (Argon 90% + Methane 10%) (Type 2) Pt = +/-5%, CA = +/-2% Cylinder – 10 Ltrs C.S O2<=2.0, H2O<=2.0, CO+CO2<=0.5, THC<=0.5	
90	Liquid Helium (Grade 4.5 purity 99.995%)(Type 1) Cylinder – 10 Ltrs C.S O2<=2.0, H2O<=2.0, CO+CO2<=0.5, THC<=0.5, N2<=5.0	
91	Liquid Helium (Type 1) Gas Purity – 99.999% O2 – 2, H2O – 2, THC (as CH4) – 0.5, CO+CO2 – 0.5, N2 – 4, H2 - 0.5	

92	CH4 (Methane) (Type 1) (Grade 5.0 Purity 99.999%) Cylinder – 47 Ltrs C.S O2<=2.0, H2O<=5.0, THC<=2.0, N2<=5.0	
93	CH4 (Methane) (Type 2) Gas Purity - 99.999% O2 – 2, H2O – 2, CO+CO2 – Not Detectable, N2 – 4, H2 – Not Detectable	
94	CH4 (Methane) with Cylinder Gas Purity - 99.999%(Type 1) O2 – 2, H2O – 2, CO+CO2 – Not Detectable, N2 – 4, H2 – Not Detectable	
95	CH4 Methane (Grade 5.0 Purity 99.999%) with Cylinder (Type 2) Cylinder – 47 Ltrs C.S O2<=2.0, H2O<=5.0, THC<=2.0, N2<=5.0	
96	Methane (Type 1) Purity – 99.999% Grade – 5.0 O2≤5ppm, N2≤20ppm, H2≤ 5ppm, Other CnHm≤20ppm, H2O≤ 5ppm	
97	Methane (Type 1) Purity -99.950% O2 – 10, H2O – 5.00, THC – 250(OHC), CO+CO2 – NT, N2 – 100.00, Argon – NT, Cylinder Size(Ltr) – 50, Pressure(Bar) – 200.00, Volume (M3) – 12.5, Valve Specification - BS 04 Internal Thread (5/8 BSP)	
98	Carbon Dioxide (Type 1) Purity -99.995% O2 – NT, H2O – 5.00, THC – 10.00, CO+CO2 – NT, N2 – 30.00, Cylinder Size(Ltr) – 47, Pressure(Bar) – 140.00, Volume (M3) – 30.0, Valve Specification - 1/2 BSP external Thread	
99	Carbon Dioxide (Type 2) Purity - 99.995% O2 – 15.00, H2O – 5.00, THC – 2.00, CO+CO2 – 1.00, N2 – 30.00, Cylinder Size(Ltr) – 47, Pressure(Bar) – 140.00, Volume (M3) – 30.0, Valve Specification - 1/2 BSP external Thread	
100	Carbon Monoxide (Type 1) Purity -99.970% O2 – 10, H2O – 10.00, THC – 10.00, H2 – 100.00, CO+CO2 – 10(CO2), N2 – 150, Argon – 10.00,	

	Cylinder Size(Ltr) – 50, Pressure(Bar) – 200.00, Volume (M3) – 10.0, Valve Specification - BS 04 Internal Thread (5/8 BSP)	
101	Krypton - (Type 1) Purity – 99.999% Grade – 5.0 Ar<2ppm , Co2<0.5 ppm, CF4<0.5ppm, H2<0.5ppm, N2<2ppm, O2<0.5ppm, H2O<0.5ppm, Xenon<5ppm, THC<0.5ppm, CO<1ppm	
102	Krypton (Type 2) Gas Purity - 99.999% O2<=2, H2O<=2, THC (as CH4)<=0.5, CO+CO2<=0.5, N2<=1, H2 Not Detectable	
103	Krypton (Grade 5.0 Purity 99.999%)(Type 3) O2<=1.0, CO2<=0.1, CH4<=0.3, THC<=0.1, H2<=0.5, N2<=1.0, Argon<=2.0, Xe<=0.2	
104	Krypton (Type 4) Purity – 99.999% Argon<=2ppm, Tetrafluoromethane<=0.5ppm, Methane<=0.5ppm, Carbon Dioxide<=0.5ppm, Hydrogen<=0.5ppm, Moisture<=0.5ppm, Nitrogen<=2ppm, Oxygen<=0.5ppm, Xenon<=5ppm, Carbon Monoxide<=1ppm	

Note:

- 1) Bidders should comply for all items of the applying category.**

PAN No:

GST Registration No:

Signature.....

Company Name & Address:.....

Date:

Place:

Affix Rubber Stamp:.....

CATEGORY "C"
Liquid Nitrogen

Sr. No.	Item Description (Impurity Details in PPM Level)	Compliance (Yes/No)
1	Liquid Nitrogen (Purity 99.90%)(Type 1) Cylinder – Per Ltr O ₂ ≤4.0, H ₂ O≤4.0, CO+CO ₂ ≤1.0, THC≤0.5	
2	Liquid Nitrogen (Purity 99.99%)(Type 1) Cylinder – Per Ltr O ₂ ≤4.0, H ₂ O≤4.0, CO+CO ₂ ≤1.0, THC≤0.5	
3	Liquid Nitrogen (Per Litre)(type 2) Gas Purity - 99.999% O ₂ – 2, H ₂ O – 2, THC (as CH ₄) – 0.5, CO+CO ₂ – 0.5, H ₂ - 1	
4	Liquid Nitrogen (Purity 95%) (Type 1) Cylinder – Per Ltr O ₂ ≤4.0, H ₂ O≤4.0, CO+CO ₂ ≤1.0, THC≤0.5	

Note:

- 1) Bidders should comply for all items of the applying category.**

PAN No:

GST Registration No:

Signature.....

Company Name & Address:.....

Date:

Place:

Affix Rubber Stamp:.....

Accessories:

Item Code No.	Item Description	Compliance (Yes/No)
1	Cylinder valve each (IS Standard)	
2	Valve Spindle each (ISI Mark)	
3	Gland Nut each	
4	Valve Guard each	
5	Preconditioning charges	
6	Hydrotesting charges for Argon	
7	Hydrotesting charges for Hydrogen	
8	Hydrotesting charges for oxygen	
9	Hydrotesting charges for Nitrogen	
10	Hydrotesting charges for Helium	
11	Hydrotesting charges for carbon dioxide	
12	Valve fitting charges (IS Standard)	
13	Purging charges	
14	Double Stage Regulators SS	
15	Double Stage Regulators Brass	
16	Single Stage Regulators SS	
17	Single Stage Regulators Brass	
18	Cylinder Painting	

PAN No:

GST Registration No:

Signature.....

Company Name & Address:.....

Date:

Place:

Affix Rubber Stamp:.....

SECTION 7- COMMERCIAL BID
CATEGORY "A"
HIGH PURITY GASES

Sr. No.	Item Description (Impurity Details in PPM Level)	HSN Code/ SAC Code	Unit	Unit Price Rs.	IGST %	CGST %	SGST %	Total Price Rs.
1	Argon (Grade 5.5 Purity 99.9995%) (Type 1) Cylinder – 47 Ltrs. C.S O2<=1.0, H2O<=1.0, CO+CO2<=0.5, THC<=0.2, H2<=0.2, N2<=2.0		Per CuM					
2	Argon (Type 2) Gas Purity - 99.9995% O2 <=1, H2O<=1, THC(as CH4)<=0.2, CO+CO2<=0.5, N2 <=2, H2 Not Detectable		Per CuM					
3	Argon (Type 3) Purity - 99.9995% Grade -5.5 O2<0.5ppm, N2<2ppm, THC<0.5ppm, H2O<1ppm		Per CuM					
4	FG (Grade 5.5 Purity 99.9995%) (Type 1) 8% H2 Purity 99.9995% + 92% N2 Purity 99.9995% PT = +/-5%, CA = +/-2% Cylinder – 47 Ltrs C.S. O2<=1.0, H2O<=1.0,		Per CuM					

	CO+CO2<=0.5, THC<=0.2							
5	Helium (Type 1) Purity – 99.9995% Grade – 5.5 O2≤1ppm, N2≤2ppm, H2O≤2ppm, CnHm≤0.1ppm		Per CuM					
6	Helium (Grade 5.5 Purity 99.9995%)(Type 2) Cylinder - 47 Ltrs C.S. O2<=0.1, H2O<=0.1, CO+CO2<=0.5, CH4<=2.0, N2<=5		Per CuM					
7	Helium (Type 3) Gas Purity – 99.9995% O2<=1, H2O<=1, THC(as CH4)<=0.2, CO+CO2<=0.5, N2<=2, H2 Non Detectable		Per CuM					
8	Hydrogen(Type 1) Purity – 99.9995% Grade – 5.5 H2O<3ppm, O2<2ppm , CnHm<0.2ppm, CO<1ppm, CO2<1ppm, N2<5ppm		Per CuM					
9	Hydrogen (Grade 5.5 Purity 99.9995%)(Type 2) Cylinder - 47 Ltrs C.S. O2<=1.0, H2O<=1.0, CO+CO2<=0.5, THC<=0.2, N2<=3.0		Per CuM					
10	Hydrogen (Type 3)		Per					

	Gas Purity - 99.9995% O ₂ ≤1, H ₂ O≤1, THC(as CH ₄)≤0.2, CO+CO ₂ ≤0.5, N ₂ ≤2		CuM				
11	Oxygen(Type 1) Purity - 99.9995% Grade - 5.5 H ₂ O<1.5ppm, CO<0.10ppm, CO ₂ <0.10ppm, THC<0.10ppm, H ₂ <0.20ppm, N ₂ <2.0ppm, Ar<1ppm		Per CuM				
12	Oxygen (Type 2) Gas Purity - 99.9995% H ₂ O≤1, THC(as CH ₄)≤0.2, CO+CO ₂ ≤0.5, N ₂ ≤3, H ₂ Non Detectable		Per CuM				
13	Oxygen (Grade 5.5 % Purity 99.9995%)(Type 3) Cylinder – 47Ltrs C.S H ₂ O≤0.5, CO+CO ₂ ≤0.6, THC≤0.1, N ₂ ≤3.0		Per CuM				
14	Oxygen (99.9000%)(Type 1) Cylinder – 47Ltrs C.S. H ₂ O≤5.0, CO+CO ₂ ≤1.0 , THC≤2.0, H ₂ ≤5.0, Argon≤ 5.0		Per CuM				
15	Nitrogen(Type 1) Purity – 99.9995% Grade – 5.5 O ₂ <1ppm, H ₂ O<2.50ppm,		Per CuM				

	CO<1ppm, CO2<1ppm, THC<1ppm, H2<1ppm							
16	Pure Nitrogen (Type 2) Gas Purity - 99.9995% O2<=1, H2O<=1, THC(as CH4)<=0.2, CO+CO2<=0.5, H2<=0.5		Per CuM					
17	Pure Nitrogen (Grade 5.5 Purity 99.9995% (Type 3) Cylinder – 47Ltrs C.S O2<=1.0, H2O<=1.0, CO+CO2<=0.5, THC<=0.2		Per CuM					
18	Nitrogen (Grade 6.0 Purity 99.9999% (Type 1) Cylinder – 47Ltrs C.S O2<=0.3, H2O<=0.5, CO+CO2<=0.5, THC<=0.2		Per CuM					
19	Nitrogen (Type 2) Purity – 99.9999% O2<=0.3, H2O<=0.5, THC (as CH4)<=0.1, CO+CO2<=0.05, H2<=0.05		Per CuM					
20	Nitrogen(Type 3) Purity - 99.9999% Grade - 6.0 H2O<0.5 ppm , O2<0.5ppm, CnHm<0.1ppm, CO<0.1ppm, CO2<0.1ppm, H2<0.5ppm		Per CuM					

21	Oxygen(Type 1) Purity - 99.9999% Grade -6.0 H2O<0.5ppm, CnHm<0.1ppm, CO<0.1ppm, CO2<0.1ppm, N2<0.5ppm, Ar<1ppm		Per CuM				
22	Oxygen(Grade 6.0 Purity 99.9999%)(Type 2) Cylinder – 47Ltrs C.S H2O<=0.5, CO+CO2<=0.6, THC<=0.1, N2<=3.0		Per CuM				
23	Oxygen (Type 3) Gas Purity% - 99.9999% H2O<=0.5, THC(as CH4)<=0.1, CO+CO2<=0.1, N2<=0.3, H2 Non Detectable		Per CuM				
24	Helium (Type 1) Purity – 99.9999% Grade – 6.0 O2<0.5ppm, N2<0.5ppm, H2O<0.5ppm, CnHm<0.1ppm, CO<0.1ppm, CO2<0.1ppm		Per CuM				
25	Helium(Grade 6.0 Purity 99.9999%)(Type 2) Cylinder – 47Ltrs C.S O2<=0.1, H2O<=0.5, CO+CO2<=0.1, THC<=0.1, N2<=0.1		Per CuM				
26	Helium (Type 3) Gas Purity - 99.9999%		Per CuM				

	O2<=0.1, H2O<=0.1, THC (as CH4)<=0.2, CO+CO2<=0.5, N2<=0.1, H2 Non Detectable							
27	Argon(Type 1) Purity – 99.9999% Grade – 6.0 O2<0.5ppm, N2<0.5ppm, H2O<0.5ppm, CnHm<0.1ppm, CO<0.1ppm, CO2<0.1ppm		Per CuM					
28	Argon (Grade 6.0 Purity 99.9999%)(Type 2) Cylinder – 47Ltrs C.S O2<=0.2, H2O<=0.2, CO2<=0.1, CO<=0.1, THC<=0.1, H2<=0.1, N2<=0.5		Per CuM					
29	Argon – (Type 3) Gas Purity - 99.9999% O2<=0.2, H2O<=0.2, THC (as CH4)<=0.1, CO+CO2<=0.1, N2 <=0.4, H2 Non Detectable		Per CuM					
30	Hydrogen(Type 1) Purity – 99.9999% Grade – 6.0 H2O<0.5ppm, O2<0.5ppm, CnHm<0.1ppm, CO<0.1ppm, CO2<0.1ppm, N2<0.5ppm		Per CuM					
31	Hydrogen(Grade 6.0 Purity		Per CuM					

	99.9999%)(Type 2) Cylinder – 47 Ltrs C.S O ₂ ≤0.2, H ₂ O≤0.2, CO ₂ ≤0.1, CO≤0.1, THC≤0.1, N ₂ ≤0.5						
32	Hydrogen – (Type 3) Gas Purity - 99.9999% O ₂ ≤0.5, H ₂ O≤0.5, THC (as CH ₄)≤0.1, CO+CO ₂ ≤0.1, N ₂ ≤0.5		Per CuM				
33	Nitrogen with Cylinder (Type 1) Gas Purity – 99.9999% O ₂ ≤0.3, H ₂ O≤0.5, THC (as CH ₄)≤0.1, CO+CO ₂ ≤0.05, H ₂ ≤0.05		Per Cylinder of 7 CuM				
34	Oxygen with Cylinder (Type 1) Gas Purity - 99.9999% H ₂ O≤0.5, THC (as CH ₄)≤0.1, CO+CO ₂ ≤0.1, N ₂ ≤0.3, H ₂ Non Detectable		Per Cylinder of 7 CuM				
35	Oxygen(Grade 6.0 Purity 99.9999%) with cylinder (Type 2) Cylinder – 47 Ltrs C.S H ₂ O≤0.5, CO+CO ₂ ≤0.6, THC≤0.1, N ₂ ≤ 3.0		Per Cylinder of 7 CuM				
36	Helium (Grade 6.0		Per				

	Purity 99.9999%)with Cylinder(Type 1) Cylinder – 47 Ltrs C.S O2<=0.1, H2O<=0.5, CO+CO2<=0.1, THC<=0.1, N2<=0.1		Cylinder of 7 CuM				
37	Helium Gas Purity – 99.9999% with Cylinder (Type 2) O2<=0.1, H2O<=0.1, THC (as CH4)<=0.2, CO+CO2<=0.5, N2<=0.1, H2 Non Detectable		Per Cylinder of 7 CuM				
38	Argon(Grade 6.0 Purity 99.9999%) with Cylinder((Type 1) Cylinder – 47 Ltrs C.S O2<=0.2, H2O<=0.2, CO2<=0.1, CO<=0.1, THC<=0.1, H2<=0.1, N2<=0.5		Per Cylinder of 7 CuM				
39	Argon with Cylinder (Type 2) Gas Purity - 99.9999% O2<=0.2, H2O<=0.2, THC (as CH4)<=0.1, CO+CO2<=0.1, N2<=0.4, H2 Non Detectable		Per Cylinder of 7 CuM				
40	Hydrogen (Grade 6.0 Purity 99.9999%)with Cylinder(Type 1) Cylinder – 47 Ltrs C.S		Per Cylinder of 7 CuM				

	O2<=0.2, H2O<=0.2, CO2<=0.1, CO<=0.1, THC<=0.1, N2<=0.5						
41	Hydrogen with Cylinder (Type 2) Gas Purity - (99.9999%) O2<=0.5, H2O<=0.5, THC (as CH4)<=0.1, CO+CO2<=0.1, N2<=0.5		Per Cylinder of 7 CuM				
42	Nitrogen (Grade 7.0 Purity 99.99999%) (Type 1) Cylinder – 47 Ltrs C.S O2<=0.3, H2O<=0.5, CO+CO2<=0.5, THC<=0.2		Per CuM				
43	Nitrogen - Along with purifier and its certificate indicating the outcome impurities(Type 2) Gas Purity - (99.99999%) O2<=0.04, H2O<=0.04, THC (as CH4) Non Detectable, CO+CO2<=0.01, H2<=0.01		Per CuM				
44	Oxygen - Along with purifier and its certificate indicating the outcome impurities (Type 1) Gas Purity - 99.99999%		Per CuM				

	H2O<=0.05, THC (as CH4) Not Detectable, CO+CO2<=0.05, N2 Not Detectable, H2 Not Detectable						
45	Oxygen (Grade 7.0 Purity 99.99999%) (Type 2) Cylinder – 47 Ltrs C.S H2O<=0.5, CO+CO2<=0.1, THC<=0.1, N2<=0.1		Per CuM				
46	Nitrogen(Grade 7.0 Purity 99.99999%)with Cylinder (Type 1) Cylinder – 47 Ltrs C.S O2<=0.3, H2O<=0.5, CO+CO2<=0.5, THC<=0.2		Per Cylinder of 7 CuM				
47	Nitrogen with cylinder – Along with purifier and its certificate indicating the outcome impurities Gas Purity - (99.99999%) (Type 2) O2<=0.04, H2O<=0.04, THC (as CH4) Not Detectable, CO+CO2<=0.01, H2<=0.01		Per Cylinder of 7 CuM				
48	Oxygen (Grade 7.0 Purity 99.99999%)with Cylinder(Type 1) Cylinder – 47 Ltrs C.S H2O<=0.5, CO+CO2		Per Cylinder of 7 CuM				

	<=0.1, THC<=0.1, N2<=0.1						
49	Oxygen – Along with purifier and its certificate indicating the outcome impurities (Type 2) Gas Purity - 99.99999% with Cylinder H2O<=0.05, THC (as CH4) Not Detectable, CO+CO2<=0.05, N2 Not Detectable, H2 Not Detectable		Per Cylinder of 7 CuM				

Note:

- 1) Quantity as per user's requirement.
- 2) Price Bid should be submitted in given format only.
- 3) Bidders should quote for all items of the applying category.

PAN No:

GST Registration No:

Signature.....

Company Name & Address:.....

Date:

Place:

Affix Rubber Stamp:.....

CATEGORY "B"
LOW PURITY GASES

Sr. No.	Item Description (Impurity Details in PPM Level)	HSN Code/ SAC Code	Unit	Unit Price Rs.	IGST %	CGST %	SGST %	Total Price Rs.
1	Argon Comm. (Grade 4.5 Purity 99.995%)with Cylinder(Type 1) Cylinder – 47 Ltrs C.S O2<=5.0, H2O<=5.0, THC<=2.0		Per Cylinder of 7 CuM					
2	Argon Commercial (Type 1) Gas Purity - 99.5% O2 - 1000, H2O - 500, THC (as CH4) - 500, CO+CO2 – 500, N2 – 500, H2 - 250		Per CuM					
3	FG (Propane) (Type 1) Gas Purity - 99.999% O2<=1, H2O<=2, THC(as CH4)<=3, CO+CO2<=1, N2<=2, H2 Non Detectable		Per CuM					
4	Carbon Dioxide (Grade 4.0 Purity 99.99%)with Cylinder(Type 1) Cylinder – 47 Ltrs C.S O2<=10.0, H2O<=10.0, THC<=1.0		Per Kg					
5	Carbon Dioxide per kg(Type 1) Gas Purity - 99.5% O2 – 1000, H2O – 500, THC (as CH4) – 500, CO+CO2 – 500, N2 – 500, H2 - 250		Per Kg					
6	Dissolved Acetylene(Type 1) Gas Purity - 96.0% O2 – 5000, H2O – 5000, THC (as CH4) – 5000, CO+CO2 – 500, N2 – 5000, H2 -Not Detectable		Per CuM					
7	Dissolve Acetylene(Type 1) Cylinder – 41 Ltrs C.S O2<=50.0, N2<=4000.0		Per CuM					
8	Dissolved Acetylene (Type 1) Purity – 98.000%		Per CuM					

	Cylinder Size(Ltr) – 41, Volume (M3) – 5.6, Valve Specification - BS 04 Internal Thread (5/8 BSP)						
9	Helium (Grade 4.5 Purity 99.995%)(Type 2) Cylinder – 47 Ltrs C.S O2<=6.0, H2O<=6.0, CO+CO2<=1.0, THC<=1.0		Per CuM				
10	Helium(Type 1) Gas Purity - 99.5% O2 - 1 000, H2O – 500, THC (as CH4) – 500, CO+CO2 – 500, N2 – 500, H2 - 250		Per CuM				
11	Hydrogen Commercial (Grade 4.5 Purity 99.995%)(Type 1) Cylinder – 47 Ltrs C.S O2<=4.0, H2O<=4.0, CO+CO2<=1.0, THC<=1.0		Per CuM				
12	Hydrogen Commercial (Type1) Gas Purity - 99.5% O2 – 1000, H2O – 500, THC (as CH4) – 500, CO+CO2 – 500, N2 - 500		Per CuM				
13	Nitrogen Commercial (Grade 4.5 Purity 99.995%)(Type 1) Cylinder – 47 Ltrs C.S O2<=4.0, H2O<=1.0, CO+CO2<=1.0, THC<=0.5		Per CuM				
14	Nitrogen Commercial(Type 1) Gas Purity – 99.5% O2 – 1000, H2O – 500, THC (as CH4) – 500, CO+CO2 – 500, N2 – 500, H2 - 250		Per CuM				
15	Nitrogen(Grade 6.0 Purity 99.999%)with Cylinder(Type 1) Cylinder – 47 Ltrs C.S O2<=0.3, H2O<=0.5, CO+CO2<=0.5, THC<=0.2		Per Cylinder of 7 CuM				
16	Oxygen (Grade 4.5 Purity 99.995%)(Type 1) Cylinder – 47 Ltrs C.S H2O<=5.0, CO2<=1.0, THC<=2.0, Argon<=5.0		Per CuM				

17	Oxygen (Type 1) Gas Purity - 99.5% H2O – 500, THC (as CH4) – 500, CO+CO2 – 500, N2 – 1000, H2 - 250		Per CuM					
18	Oxygen (Type 1) Gas Purity – 99.9% H2O <=100, THC(as CH4)<=100, CO+CO2<=100, N2<=200, H2<=50		Per CuM					
19	Oxygen (Type 1) Purity - 99.900% O2 - NA , H2O – 2.50, THC – 15.00, CO+CO2 - 0.50 , N2 – 100.00, Argon – 500.00, Cylinder size(ltr) – 47, Pressure (Bar) – 140.00, Volume(M3) – 7.0, Valve Specification- BS 03 Internal Thread (5/8 BSP)		Per CuM					
20	Nitrogen (Type 1) Purity - 99.999% O2 – 2.00, H2O – 2.00, THC – 0.50, CO+CO2 – 0.50, NA-NA, Argon – 5.00, Cylinder Size(Ltr) – 47, Pressure(Bar) – 140.00, Volume (M3) – 6.5, Valve Specification - Bs 03 Internal Thread (5/8 BSP)		Per CuM					
21	Nitrogen (Grade.5.0 Purity 99.999%) (Type 2) Cylinder – 47Ltrs C.S O2<=2.0, H2O<=2.0, CO+CO2<=0.5, THC<=0.5		Per CuM					
22	Nitrogen (Type 3) Gas Purity - 99.999% O2 – 2, H2O – 2, THC (as CH4) – 0.5, CO+CO2 – 0.5, H2 - 1		Per CuM					
23	Oxygen (Type 1) Purity - 99.999% O2 – NA, H2O -1.00, THC – 0.50, CO+CO2 – 0.50, N2 – 7.00, Argon – 1.00, Cylinder Size(Ltr) – 50, Pressure(Bar) – 200, Volume (M3) – 10.0, Valve Specification - BS 03		Per CuM					

	Internal Thread (5/8 BSP)						
24	Oxygen (Type 2) Gas Purity - 99.999% H2O – 2, THC (as CH4) – 0.5, CO+CO2 – 0.5, N2 – 7, H2 - 0.5		Per CuM				
25	Oxygen (Grade 5.0 Purity 99.999%)(Type 3) Cylinder – 47 Ltrs C.S H2O<=1.0, CO+CO2<=0.5, THC<=0.5, N2<=8.0		Per CuM				
26	Helium (Type 1) Purity -99.999% O2 – 2.00, H2O – 1.00, THC – 0.50, CO+CO2 – 0.50, N2 – 6.00, Argon – NT, Cylinder Size(Ltr) – 50, Pressure(Bar) – 200.00, Volume (M3) – 9.1, Valve Specification - IS3224 Srno 20, External thread		Per CuM				
27	Helium (Grade 5.0 Purity 99.999%)(Type 2) Cylinder – 47 Ltrs C.S O2<=2.0, H2O<=2.0, CO+CO2<=0.5, THC<=0.5		Per CuM				
28	Helium (Type 3) Gas Purity - 99.999% O2 – 2, H2O – 2, THC (as CH4) – 0.5, CO+CO2 – 0.5, N2 – 4, H2 - 0.5		Per CuM				
29	Argon (Type 1) Purity – 99.999% Grade – 1.0 O2<1ppm, N2< 5ppm, THC<0.5ppm, H2O<1ppm		Per CuM				
30	Argon (Grade 5.0 Purity 99.999%)(Type 2) Cylinder – 47 Ltrs C.S O2<=2.0, H2O<=2.0, CO+CO2<=0.5, THC<=0.5		Per CuM				
31	Argon (Type 3) Gas Purity% - 99.999% O2 – 2, H2O – 2, THC (as CH4) – 0.5, CO+CO2 – 0.5, N2 – 4, H2 - 0.5		Per CuM				

32	Argon (Type 4) Purity -99.999% O2 – 2.00, H2O – 2.00, THC – 0.50, CO+CO2 – 0.50, N2 – 5.00, Argon-NT, Cylinder Size(Ltr)- 47, Pressure(Bar)- 140.00, Volume (M3)-7.0, Valve Specification - IS3224 Srno 20, External thread		Per CuM					
33	Hydrogen (Type 1) Purity - 99.999% O2 – 2.00, H2O – 2.00, THC – 0.50, CO+CO2 – 0.50, N2 – NT, , Argon – NT, Cylinder Size(Ltr) – 47, Pressure(Bar) – 140.00, Volume (M3) – 6.0, Valve Specification - BS 04 Internal Thread (5/8 BSP)		Per CuM					
34	Hydrogen(Grade 5.0 Purity 99.999%)(Type 2) Cylinder – 47 Ltrs C.S O2<=2.0, H2O<=2.0, CO+CO2<=0.5, THC<=0.2		Per CuM					
35	Hydrogen (Type 3) Gas Purity - 99.999% O2 – 2, H2O – 2, THC (as CH4) – 0.5, CO+CO2 – 0.5, N2 - 4		Per CuM					
36	5% Foaming Gas Mixture (5% Hydrogen and 95% Nitrogen (Type1) Gas Purity - 99.999% O2 – 2, H2O – 2, THC (as CH4) – 0.5, CO+CO2 – 0.5, N2 - 4		Per CuM					
37	5% Foaming Gas Mixture (5% Hydrogen and 95% Nitrogen) (Type 2) PT= +/-5%, CA=+/- 2% Purity 99.999% Cylinder – 47 Ltrs C.S O2<=2.0, H2O<=2.0, CO+CO2<=0.5, THC<=0.5		Per CuM					
38	8% Foaming Gas Mixture (8% Hydrogen and 92% Nitrogen) (Type 1) Gas Purity - 99.999%		Per CuM					

39	O ₂ – 2, H ₂ O – 2, THC (as CH ₄) – 0.5, CO+CO ₂ – 0.5, N ₂ - 4 8% Foaming Gas Mixture (8% Hydrogen and 92% Nitrogen (Type 2) PT= +/-5%, CA=+/- 2% Purity 99.999% Cylinder – 47 Ltrs C.S O ₂ ≤2.0, H ₂ O≤2.0, CO+CO ₂ ≤0.5, THC≤0.5	Per CuM					
40	10% Foaming Gas Mixture (10% Hydrogen and 90% Nitrogen) (Type 1) PT= +/-5%, CA=+/- 2% Purity 99.999% Cylinder – 47 Ltrs C.S O ₂ ≤2.0, H ₂ O≤2.0, CO+CO ₂ ≤0.5, THC≤0.5	Per CuM					
41	10% Foaming Gas Mixture (10% Hydrogen and 90% Nitrogen) (Type 2) Gas Purity - 99.999% O ₂ – 2, H ₂ O – 2, THC (as CH ₄) – 0.5, CO+ CO ₂ – 0.5, N ₂ - 4	Per CuM					
42	Xenon (Type1) Gas Purity - 99.999% O ₂ – 2, H ₂ O – 2, THC (as CH ₄) – 0.5, CO+CO ₂ – 0.5, N ₂ – 2, H ₂ – Not Detectable	Per Ltr					
43	Xenon (Grade 5.0 Purity 99.999%)(Type 2) Cylinder – 47 Ltrs C.S O ₂ +Ar≤0.5, H ₂ O≤1.0 , CO ₂ ≤0.1, CO≤0.1, CH ₄ ≤0.1, H ₂ ≤0.5, N ₂ ≤0.5, N ₂ O≤0.1, Kr≤1.0, C ₂ H ₆ ≤0.1	Per Ltr					
44	Xenon (Type 3) Purity – 99.999% Grade – 5.0 O ₂ ≤1ppm, N ₂ ≤3ppm, H ₂ O≤3ppm, CnHm≤1ppm, Kr≤5ppm, Ar≤2ppm	Per Ltr					
45	Xenon (Type 4) Carbon Dioxide≤1ppm, Nitrogen≤3ppm,	Per Ltr					

	Oxygen<=0.5ppm, Krypton<=5ppm, Total Hydrocarbons<=0.5ppm, Moisture<=0.5ppm						
46	Nitrogen with Cylinder(Type 1) Gas Purity - 99.999% O2 – 2, H2O – 2, THC (as CH4) – 0.5, CO+CO2 – 0.5, H2 -1		Per Cylinder of 7 CuM				
47	Nitrogen (Grade 5.0 Purity 99.999%) with Cylinder (Type 2) Cylinder – 47 Ltrs C.S O2<=2.0, H2O<=2.0, CO+CO2<=0.5, THC<=0.5		Per Cylinder of 7 CuM Per Cylinder of 7 CuM				
48	Oxygen with Cylinder (Type1) Gas Purity - 99.999% H2O – 2, THC(as CH4) – 0.5, CO+CO2 – 0.5, N2 – 7, H2 - 0.5		Per Cylinder of 7 CuM				
49	Oxygen(Grade 5.0 Purity 99.999%) with Cylinder (Type 2) Cylinder – 47 Ltrs C.S H2O<=1.0, CO+CO2<=0.5, THC<=0.5, N2<=8.0		Per Cylinder of 7 CuM				
50	Helium(Grade 5.0 Purity 99.999%) with Cylinder (Type 1) Cylinder – 47 Ltrs C.S O2<=2.0, H2O<=2.0, CO+CO2<= 0.5, THC<=0.5		Per Cylinder of 7 CuM				
51	Helium with Cylinder(Type 2) Gas Purity - 99.999% O2 – 2, H2O – 2, THC (as CH4) – 0.5, CO+CO2 – 0.5, N2 – 4, H2 - 0.5		Per Cylinder of 7 CuM				
52	Argon (Grade 5.0 Purity 99.999%) with Cylinder (Type 1) Cylinder – 47 Ltrs C.S O2<=2.0, H2O<=2.0, CO+CO2<=0.5, THC<=0.5		Per Cylinder of 7 CuM				
53	Argon with Cylinder (Type 2) Gas Purity - 99.999%		Per Cylinder				

	O2 – 2, H2O – 2, THC (as CH4) – 0.5, CO+CO2 – 0.5, N2 – 4, H2 - 0.5		of 7 CuM					
54	Hydrogen (Grade 5.0 Purity 99.999%) with Cylinder (Type 1) Cylinder – 47 Ltrs C.S O2<=2.0, H2O<=2.0, CO+CO2<= 0.5, THC<=0.2, N2 <=5.0		Per Cylinder of 7 CuM					
55	Hydrogen with Cylinder (Type 2) Gas Purity - 99.999% O2 – 2, H2O – 2, THC (as CH4) – 0.5, CO+CO2 – 0.5, N2 - 4		Per Cylinder of 7 CuM					
56	5% Foaming Gas Mixture (5% Hydrogen and 95% Nitrogen) with Cylinder(Type 1) Gas Purity - 99.999% O2 – 2, H2O – 2, THC (as CH4) – 0.5, CO+CO2 – 0.5, N2 - 4		Per Cylinder of 7 CuM					
57	5% Foaming Gas Mixture (5% Hydrogen and 95% Nitrogen with cylinder(Type 2) PT= +/-5%, CA=+/- 2% Purity 99.999% Cylinder – 47 Ltrs C.S O2<=2.0, H2O<=2.0, CO+CO2<=0.5, THC<=0.5		Per Cylinder of 7 CuM					
58	8% Foaming Gas Mixture (8% Hydrogen and 92% Nitrogen) with Cylinder(Type 1) Gas Purity - 99.999% O2 – 2, H2O – 2, THC (as CH4) – 0.5, CO+CO2 – 0.5, N2 - 4		Per Cylinder of 7 CuM					
59	8% Foaming Gas Mixture (8% Hydrogen and 92% Nitrogen) with cylinder (Type 2) PT=+/-5% CA=+/- 2% Purity 99.999% Cylinder – 47 Ltrs C.S O2<=2.0, H2O<=2.0, CO+CO2<=0.5, THC<=0.5		Per Cylinder of 7 CuM					
60	10% Foaming Gas Mixture (10% Hydrogen and 90%		Per Cylinder					

	Nitrogen) with Cylinder (Type 1) PT= +/-5%, CA=+/- 2% Purity 99.999% Cylinder – 47 Ltrs C.S O2<=2.0, H2O<=2.0, CO+CO2<=0.5, THC<=0.5		of 7 CuM					
61	10% Foaming Gas Mixture (10% Hydrogen and 90% Nitrogen) with Cylinder (Type2) Gas Purity – 99.999% O2 – 2, H2O – 2, THC (as CH4) – 0.5, CO+CO2 – 0.5, N2 - 4		Per Cylinder of 7 CuM					
62	Xenon with Cylinde(Type 1) Gas Purity - 99.999% O2 – 2, H2O – 2, THC (as CH4) – 0.5, CO+CO2 – 0.5, N2 – 2, H2 – Not Detectable		Per Cylinder of 1000 Ltrs					
63	Xenon with Cylinder (Type 2) O2+Ar<=0.5, H2O<=1.0, CO2 <=0.1, CO<=0.1, CH4<= 0.1, H2<=0.5, N2<=0.5, N2O<=0.1, Kr<=1.0, C2H6<=0.1		Per Cylinder of 1000 Ltrs					
64	Argon (Grade 5.0 Purity 99.999%)(Type 1) Cylinder – 47 Ltrs C.S O2<=2.0, H2O<=2.0, CO+CO2<=0.5, THC<=0.5		Per Cylinder of 7 CuM					
65	Argon Gr. I – (Type 2) Gas Purity - 99.999% O2 – 2, H2O – 2, THC (as CH4) – 0.5, CO+CO2 – 0.5, N2 – 4, H2 - 0.5		Per CuM					
66	Argon Gr. II – (Type 1) Gas Purity - 99.995% O2 – 10, H2O – 10, THC (as CH4) – 5, CO+CO2 – 5, N2 – 10, H2 - 5		Per CuM					
67	Argon (Grade 4.5 Purity 99.995%)(Type 2) Cylinder – 47 Ltrs C.S O2<=5.0, H2O<=5.0, THC<=2.0		Per CuM					
68	Hydrogen(Grade 5.0Purity		Per					

	99.999%)(Type 1) Cylinder – 47 Ltrs C.S O ₂ ≤2.0, H ₂ O≤2.0, CO+CO ₂ ≤0.5, THC≤0.5, N ₂ ≤5.0		CuM					
69	Hydrogen Gr. I (Type 2) Gas Purity - 99.999% O ₂ – 2, H ₂ O – 2, THC (as CH ₄) – 0.5, CO+CO ₂ – 0.5, N ₂ - 4		Per CuM					
70	Hydrogen U.H.P (Grade 5.0 Purity 99.999%)(Type 1) Cylinder – 47 Ltrs C.S O ₂ ≤2.0, H ₂ O≤2.0, CO+CO ₂ ≤0.5, THC≤0.2, N ₂ ≤5.0		Per CuM					
71	Hydrogen U.H.P (Type 1) Gas Purity - 99.9995% O ₂ – 1, H ₂ O – 1, THC (as CH ₄) – 0.2, CO+CO ₂ – 0.5, N ₂ - 2		Per CuM					
72	Medical Oxygen(Type 1) Gas Purity - 99.5% H ₂ O – 500, THC(as CH ₄) – 500, CO+CO ₂ – 500, N ₂ – 1000, H ₂ - 250		Per CuM					
73	Medical Oxygen (Grade I.P Purity 99.00%)(Type 1) Purity not less than 99.00% Cylinder – 47 Ltrs C.S CO ₂ ≤300.00, CO≤5.0, Water vapor≤67		Per CuM					
74	NH ₃ (Ammonia) per kg(Type 1) Gas Purity - 99.8% H ₂ O - 1000		Per Kg					
75	NH ₃ Ammonia (Grade 5.5 Purity 99.9995%)(Type 1) Cylinder – 10 Ltrs C.S O ₂ ≤0.5, H ₂ O≤0.5, CO ₂ ≤0.5, CO≤0.5, CH ₄ ≤0.1, H ₂ ≤0.5, N ₂ ≤1.0, Fe - 0.01		Per Kg					
76	O.F.N (Type 1) Gas Purity - 99.5% O ₂ – 1000, H ₂ O – 500, THC (as CH ₄) – 500, CO+CO ₂ – 500, N ₂ – 500, H ₂ - 250		Per CuM					

77	OFN (Grade 5.0 Purity 99.999%)(Type 1) Cylinder – 47 Ltrs C.S H2O<=1.0, CO+CO2<=0.5, THC<=0.5, N2<=8.0		Per CuM					
78	Zero Air (21% O2 + 79% N2)(Type 1) Cylinder – 47 Ltrs C.S H2O<=2.0, CO+CO2<=1.0, THC<=3.0		Per CuM					
79	Zero Air (Type 1) Gas Purity - O2 – 99.5%+ N2 – 99.999% H2O – 5, THC (as CH4) – 5, CO+CO2 – 2, H2 - 2		Per CuM					
80	Zero Air (Type 1) O2 – 20-21%, H2O – 2.50, THC – 5.00, CO+Co2-0.50, N2 – Bal, Cylinder Size(Ltr) – 47, Pressure(Bar) – 140.00, Volume (M3) – 6.5, Valve Specification - BS 03 Internal Thread (5/8 BSP)		Per CuM					
81	Synthetic Air (Type 1) O2 – 20-21%, H2O – 2.00, THC – 1.00, CO+Co2-0.50, N2 – Bal, Argon – NT, Cylinder Size(Ltr) – 47, Pressure(Bar) – 140.00, Volume (M3) – 6.5, Valve Specification - BS 03 Internal Thread (5/8 BSP)		Per CuM					
82	Hydrogen Sulphide (Type 1) (C.P. Grade 2.5 Purity 99.99%) Cylinder – 10 Ltrs C.S CO2<=0.05, THC<=0.3, N2<=0.01, Corbon Disulfide<=0.1%, Carbony Sulfide<=0.2		Per Kg					
83	Hydrogen Sulphide (Type 2) Gas Purity - 99.99% THC (as CH4) – 30, CO+CO2 – 25, N2 - 25		Per Kg					
84	Nitrogen Gr I (Type 1) Gas Purity - 99.999% O2 – 2, H2O – 2, THC (as CH4)		Per CuM					

85	– 0.5, CO+CO2 – 0.5, H2 - 1 Nitrogen Gr. I (Type 2) (Grade 5.0 Purity 99.999%) Cylinder – 47 Ltrs C.S O2<=2.0, H2O<=2.0, CO+CO2<=0.5, THC<=0.5		Per CuM					
86	Nitrogen U.H.P (Grade 5 Purity 99.995%)(Type 1) Cylinder – 47 Ltrs C.S O2<=2.0, H2O<=2.0, CO+CO2<=0.5, THC<=0.5		Per CuM					
87	Nitrogen U.H.P (Type 2) Gas Purity% - 99.9995% O2 – 1, H2O – 1, THC (as CH4) – 0.2, CO+CO2 – 0.5, H2 – 0.5		Per CuM					
88	P10 Gas (Argon 90% + Methane 10%) (Type 1) Gas Purity - 99.995% O2 – 10, H2O – 10, CO+CO2 – 5, N2 – 10, H2 - 5		Per CuM					
89	P10 Gas (Argon 90% + Methane 10%) (Type 2) Pt = +/-5%, CA = +/-2% Cylinder – 10 Ltrs C.S O2<=2.0, H2O<=2.0, CO+CO2<=0.5, THC<=0.5		Per CuM					
90	Liquid Helium (Grade 4.5 purity 99.995%)(Type 1) Cylinder – 10 Ltrs C.S O2<=2.0, H2O<=2.0, CO+CO2<=0.5, THC<=0.5, N2<=5.0		Per Ltr					
91	Liquid Helium (Type 1) Gas Purity – 99.999% O2 – 2, H2O – 2, THC (as CH4) – 0.5, CO+CO2 – 0.5, N2 – 4, H2 - 0.5		Per Ltr					
92	CH4 (Methane) (Type 1) (Grade 5.0 Purity 99.999%) Cylinder – 47 Ltrs C.S O2<=2.0, H2O<=5.0, THC<=2.0, N2<=5.0		Per CuM					
93	CH4 (Methane) (Type 2)		Per					

	Gas Purity - 99.999% O2 – 2, H2O – 2, CO+CO2 – Not Detectable, N2 – 4, H2 – Not Detectable		CuM					
94	CH4 (Methane) with Cylinder Gas Purity - 99.999%(Type 1) O2 – 2, H2O – 2, CO+CO2 – Not Detectable, N2 – 4, H2 – Not Detectable		Per Cylinder of 7 CuM					
95	CH4 Methane (Grade 5.0 Purity 99.999%) with Cylinder (Type 2) Cylinder – 47 Ltrs C.S O2<=2.0, H2O<=5.0, THC<=2.0, N2<=5.0		Per Cylinder of 7 CuM					
96	Methane (Type 1) Purity – 99.999% Grade – 5.0 O2≤5ppm, N2≤20ppm, H2≤ 5ppm, Other CnHm≤20ppm, H2O≤ 5ppm		Per CuM					
97	Methane (Type 1) Purity -99.950% O2 – 10, H2O – 5.00, THC – 250(OHC), CO+CO2 – NT, N2 – 100.00, Argon – NT, Cylinder Size(Ltr) – 50, Pressure(Bar) – 200.00, Volume (M3) – 12.5, Valve Specification - BS 04 Internal Thread (5/8 BSP)		Per CuM					
98	Carbon Dioxide (Type 1) Purity -99.995% O2 – NT, H2O – 5.00, THC – 10.00, CO+CO2 – NT, N2 – 30.00, Cylinder Size(Ltr) – 47, Pressure(Bar) – 140.00, Volume (M3) – 30.0, Valve Specification - 1/2 BSP external Thread		Per Kg					
99	Carbon Dioxide (Type 2) Purity - 99.995% O2 – 15.00, H2O – 5.00, THC – 2.00, CO+CO2 – 1.00, N2 – 30.00, Cylinder Size(Ltr) – 47, Pressure(Bar) – 140.00,		Per Kg					

	Volume (M3) – 30.0, Valve Specification - 1/2 BSP external Thread							
100	Carbon Monoxide (Type 1) Purity -99.970% O2 – 10, H2O – 10.00, THC – 10.00, H2 – 100.00, CO+CO2 – 10(CO2), N2 – 150, Argon – 10.00, Cylinder Size(Ltr) – 50, Pressure(Bar) – 200.00, Volume (M3) – 10.0, Valve Specification - BS 04 Internal Thread (5/8 BSP)		Per CuM					
101	Krypton - (Type 1) Purity – 99.999% Grade – 5.0 Ar<2ppm , Co2<0.5 ppm, CF4<0.5ppm, H2<0.5ppm, N2<2ppm, O2<0.5ppm, H2O<0.5ppm, Xenon<5ppm, THC<0.5ppm, CO<1ppm		Per Ltr					
102	Krypton (Type 2) Gas Purity - 99.999% O2<=2, H2O<=2, THC (as CH4)<=0.5, CO+CO2<=0.5, N2<=1, H2 Not Detectable		Per Ltr					
103	Krypton (Grade 5.0 Purity 99.999%)(Type 3) O2<=1.0, CO2<=0.1, CH4<=0.3, THC<=0.1, H2<=0.5, N2<=1.0, Argon<=2.0, Xe<=0.2		Per Ltr					
104	Krypton (Type 4) Purity – 99.999% Argon<=2ppm, Tetrafluoromethane<=0.5ppm, Methane<=0.5ppm, Carbon Dioxide<=0.5ppm, Hydrogen<=0.5ppm, Moisture<=0.5ppm, Nitrogen<=2ppm, Oxygen<=0.5ppm, Xenon<=5ppm, Carbon Monoxide<=1ppm		Per Ltr					

Note:

- 1) Quantity as per user's requirement.**
- 2) Price Bid should be submitted in given format only.**
- 3) Bidders should quote for all items of the applying category.**

PAN No:

GST Registration No:

Signature.....

Company Name & Address:.....

Date:

Place:

Affix Rubber Stamp:.....

CATEGORY "C"
Liquid Nitrogen

Sr. No.	Item Description (Impurity Details in PPM Level)	HSN Code/ SAC Code	Unit	Total Price Rs.
1	Liquid Nitrogen (Purity 99.90%)(Type 1) Cylinder – Per Ltr O2 <=4.0, H2O<=4.0, CO+CO2<=1.0, THC<=0.5		Per Ltr	
2	Liquid Nitrogen (Purity 99.99%)(Type 1) Cylinder – Per Ltr O2<=4.0, H2O<=4.0, CO+CO2<=1.0, THC<=0.5		Per Ltr	
3	Liquid Nitrogen (Per Litre)(type 2) Gas Purity - 99.999% O2 – 2, H2O – 2, THC (as CH4) – 0.5, CO+CO2 – 0.5, H2 - 1		Per Ltr	
4	Liquid Nitrogen (Purity 95%) (Type 1) Cylinder – Per Ltr O2<=4.0, H2O<=4.0, CO+CO2<=1.0, THC<=0.5		Per Ltr	

Note:

- 1) Quantity as per user's requirement.
- 2) Price Bid should be submitted in given format only.
- 3) Bidders should quote for all items of the applying category.

PAN No:

GST Registration No:

Signature.....

Company Name & Address:.....

Date:

Place:

Affix Rubber Stamp:.....

Accessories:

Item Code No.	Item Description	Unit	Rates (in Rs.)
1	Cylinder valve each (IS Standard)		
2	Valve Spindle each (ISI Mark)		
3	Gland Nut each		
4	Valve Guard each		
5	Preconditioning charges		
6	Hydro testing charges for Argon		
7	Hydro testing charges for Hydrogen		
8	Hydro testing charges for oxygen		
9	Hydro testing charges for Nitrogen		
10	Hydro testing charges for Helium		
11	Hydro testing charges for carbon dioxide		
12	Valve fitting charges (IS Standard)		
13	Purging charges		
14	Double Stage Regulators SS		
15	Double Stage Regulators Brass		
16	Single Stage Regulators SS		
17	Single Stage Regulators Brass		
18	Cylinder Painting		

Note:

- 1) Quantity as per user's requirement.
- 2) Price Bid should be submitted in given format only.

PAN No:

GST Registration No:

Signature.....

Company Name & Address:.....

Date:

Place:

Affix Rubber Stamp:.....

SECTION 8 – ANNEXURES
ANNEXURE A-1 – DECLARATION REGARDING CLEAN TRACK BY BIDDER
(On Company / firm's Letterhead)

To,

Date:

The Joint Registrar
Materials Management Division,
Main Building, I.I.T. Bombay,
Powai, Mumbai – 400 076.

Sir,

Re: Tender No.MMD/GAS/RC/2020-21 for “Annual Rate contract for supplying & refilling various Gases & Gas Cylinder”

I/we carefully gone through the Terms & Conditions contained in the above referred tender. I/we hereby declare that my company / firm is not currently debarred / black listed or no legal case pending by any Government / Semi Government Organizations / Institutions in India or abroad. I/we further certify that I'm competent officer in my company /firm to make this declaration.

Or

I/we declare the following

No.	Country in which the company is debarred / blacklisted / case is pending	Black listed / debarred by Government / Semi Government Organizations / Institutions	Reason	Since when and for how long

(NOTE: In case the company / firm was blacklisted previously, please provide the details regarding Period for which the company / firm was blacklisted and the reason/s for the same)

Yours faithfully,

(Signature of the Bidder)

Printed Name

Designation

Seal

Date:

Business Address:

ANNEXURE A-2: DECLARATION FOR ACCEPTANCE OF tender TERMS AND CONDITIONS
(On Company / firm's Letterhead)

To,

Date:

The Joint Registrar
Materials Management Division
Main Building, I.I.T. Bombay,
Powai, Mumbai – 400 076.

Sir,

Re: Tender No.MMD/GAS/RC/2020-21 for “Annual Rate contract for supplying & refilling various Gases & Gas Cylinder”

I/we carefully gone through the all Terms & Conditions are mentioned in the above referred tender document. I/we declare that all the provisions of this tender are acceptable to my company. I /we further certify that I'm an authorized signatory of my company and I am, therefore, competent to make this declaration.

Yours faithfully,

(Signature of the Bidder)

Printed Name

Designation

Seal

Date:

Business Address:

ANNEXURE A-3: CLIENT DETAILS
(On Company / firm's Letterhead)

To,

Date:

The Joint Registrar
Materials Management Division
Main Building, I.I.T. Bombay,
Powai, Mumbai – 400 076.

Sir,

Re: Tender No.MMD/GAS/RC/2020-21 for “Annual Rate contract for supplying & refilling various Gases & Gas Cylinder”

I/we hereby mention following list of our clients where our firm had provided our materials/services timely and in good condition. (Supported by copy of Purchase orders/work orders): **Total amount of supported purchase orders has been Rs. 1 lakh approximately.**

Sr. No.	Name of Client	Purchase Order No. & Date	Amount of P. O.	Short Description of items supplied	Contact Person & Telephone No.

Yours faithfully,

(Signature of the Bidder)

Printed Name

Designation

Seal

Date:

Business Address:

Encl: As above

ANNEXURE A-4: DECLARATION OF ANNUAL TURNOVER AND INCOME TAX RETURN
(On Company / firm's Letterhead)

To,

Date:

The Joint Registrar
Materials Management Division
Main Building, I.I.T. Bombay,
Powai, Mumbai – 400 076.

Sir,

Re: Tender No.MMD/GAS/RC/2020-21 for “Annual Rate contract for supplying & refilling various Gases & Gas Cylinder”

1) I/we hereby declare that, our firm's Annual Turnover is more than Rs. 2 crores, and I/we have also supported an Audited Accounts for your references (In case of High Purity Gases):

OR

1) I/we hereby declare that, our firm's Annual Turnover is more than Rs. 1 crore, and I/we have also supported an Audited Accounts for your references (In case of Low Purity Gases):

F. Y. 2017 – 18	F. Y. 2018 – 19

And,

2) I/we hereby declare that, our firm had filed Income Tax Returns for last two years i.e. A. Y. 2018-19 (F. Y. 2017 – 18) & A.Y.2019-20 (F. Y. 2018 – 19). Supported by copy of acknowledgements of filed ITR for two years.

Yours faithfully,

(Signature of the Bidder)

Printed Name

Designation

Seal

Date:

Business Address:

Encl: As above

ANNEXURE A-5: DECLARATION OF UNDERTAKING FOR SUBMISSION OF OFFER
(On Company / firm's Letterhead)

To,

Date:

The Joint Registrar
Materials Management Division
Main Building, I.I.T. Bombay,
Powai, Mumbai – 400 076.

Sir,

Re: Tender No.MMD/GAS/RC/2020-21 for “Annual Rate contract for supplying & refilling various Gases & Gas Cylinder”

I/we hereby declare that, I/we am/are interested in following category/categories of the tender and have submitted the documents for the same. I/We have quote for all items of the applying category.

Sr. No.	Type of Gases and Category	Quotation submitted (Yes/No)
1.	High Purity Gases (Category 'A')	
2.	Low Purity Gases (Category 'B')	
3.	Liquid Nitrogen (Category 'C')	

I/we hereby declare that, information submitted by us in this tender is best of our knowledge and it's true. If you found any discrepancies in the submitted tender responses by us you can disqualify my tender without notice.

Yours faithfully,

(Signature of the Bidder)

Printed Name

Designation

Seal

Date:

Business Address:

SECTION 9 - CHECKLIST

The following items must be checked before the Bid is submitted:

1. Envelop "A" (Technical Bid)

- a) Demand Draft for Rs. 10,000/- (Rs. Ten Thousand only) towards Earnest Money Deposit.
- b) Eligibility Criteria Responses (each pages duly sealed and signed by the authorized signatory)
- c) Copy of this tender document duly sealed and signed by the authorized signatory on every page.
- d) Technical bid Compliances
- e) Annexure A-1 – Declaration Regarding Clean Track by Bidder
Annexure A-2: Declaration for Acceptance of Tender Terms and Conditions
Annexure A-3: Client's Experience
Annexure A-4: Declaration of Annual Turnover and Income Tax Return
Annexure A-5: Declaration of Undertaking for Submission of Offer

2. Envelope "B" (Commercial Bid)

Your quotation must be submitted in two envelopes Technical Bid (Envelope A) and Commercial Bid (Envelope B) superscripting on both the envelopes the Tender no. and the due date and both these sealed covers are to be put in a bigger cover which should also be sealed and duly superscripted with our Tender No. & Due date.