

All Bidders

Amendment –IV

Project: Supply, Installation, Testing & Commissioning of Medical Gas Manifold System for Hospital Block at All India Institute of Medical Sciences (AIIMS), Nagpur

IFB No. HSCC/SES/MGMS/AIIMS/Nagpur/2019 Date :13.06.2019

This has reference to above IFB.

The following Amendment may be noted which shall be treated as part of the tender document and to be submitted duly signed & stamp along with tender.

Sr. No.	Bidders' Queries	Reply
1	Medical Gas Area Alarm for 2 Services - In Amendment No.2 at Sr.74, you had confirmed and amended the gases from Oxygen and Air to Oxygen and Vacuum, however the same is not corrected in the revised BOQ of tender. You are requested to kindly amend the same.	Amended in the revised BOQ attached
2.	Please refer to the revised BOQ - Medical Gas Hose assemblies are mentioned twice with different quantities at item Sr. No.18 & Item Sr. No.20 respectively. You are requested to kindly delete the incorrect item from the same.	Deleted the incorrect one in the revised BOQ attached
3	Please refer to the Item Sr. No.21 - Turnkey works including site modification - Under this sub head, you have various turnkey works to be done by bidder along with required quantities leaving the site Modification works to be done by bidder as mentioned in the technical specifications of tender. You are requested to kindly add all the below mentioned Site Modification works in the BOQ of tender and mention quantities as well to enable us to submit our quote accordingly. Please also note that if the below site modifications works will not be considered in the BOQ of tender, hence the same shall be provided by consignee at their cost.	
i	Bidder should be responsible for Antistatic Rubber/Ironite flooring with minimum thickness 5mm flooring in the manifold room and thickness of flooring not less than 1inch.	Flooring will be provided by HSCC/client at site

ii	Bidder should provide a raised Loading/Unloading Platform of suitable sized adjacent to manifold room, so that cylinder can be loaded & unloaded easily from the lorry/vehicle.	Loading/Unloading Platform of suitable sized adjacent to manifold room will be provided by HSCC/client at site
iii	Bidder should be responsible for foundation of Plant Room (If required) for Medical Air Plant, Vacuum Pant & AGSS Plant.	Manifold and Plant Room will be provided by HSCC/client at site
iv	Bidder should co-ordinate with respective Institute/Authorities for the availability of Office Room for & Toilet for MGPS Operator into Manifold/Plant Room.	Office Room for & Toilet for MGPS Operator into Manifold/Plant Room will be provided by HSCC/client at site
v	Bidder should be responsible for all civil modifications and repair for successful completion of MGPS Plant, Manifold, and Pipeline installation and commissioning throughout the proposed blocks/buildings.	Tender terms & conditions prevail
4	We request you to kindly issue necessary amendments in the tender along with time extension for minimum 8-10 working days from the date of uploading of suitable corrigendum.	Tender terms & conditions prevail
5	<p>Volume-I, Page no. 3, Period of Completion</p> <p>Our Request: As per Amendment-II, the completion is changed to 7 months. However, this period is not sufficient for any bidder to accomplish the quantum of work as per tender. If any bidder gets all the 3 big Tenders namely AIIMS Nagpur, AIIMS Kalyani &amp; AIIMS Nagpur, Sir it is not possible to complete all the 3 projects within 7 months time and not only these 3 big tenders, bidders always has other projects also which need to be completed in the stipulated time frame. Even if a bidder deploy more manpower, practically it is not possible. Taking into consideration the above factors, we sincerely request you to kindly extend the Period of Completion to 11 months.</p>	Tender terms & conditions prevail
6	<p><b>Volume IV, Responsibility of bidder; Item 15</b></p> <p>Page 25, the following system/items must be from the same principal company/manufacturer:</p> <p>a. Control Panels &amp; Manifold for O<sub>2</sub>, N<sub>2</sub>O &amp;</p>	

	<p>CO2  b. Medical air plant  c. Medical Vacuum Plant  d. AGSS Plant  e. Area &amp; Master Alarm  f. All types Outlets  g. AVSU  h. Line Isolation valves  i. High Pressure tubes</p> <p>Our Request: It is requested that these items should be as per same standard. The standard should supersede from specifications. This is totally resulting in restricting the competition so it should be deleted.</p> <p>The tenders from AIIMS Delhi [Copy enclosed of recently evaluated AIIMS MGMS Jai Prakash Narayan, Delhi at Page 1 to 3]. We are referring M/s NBCC, UPRNN, PWD Haryana,</p> <p>Municipal Corporation of Greater Mumbai etc. such a Clause of same principal is never there in any Tender. You can mention that Air Compressor, Vacuum System Components such as Plant , Control Panel, Tank, Filter from Single Source, otherwise it will lead to restrictions for bidders, so please, it is requested that it should be deleted.</p> <p>Secondly, please appreciate worldwide, NO Single Manufacturer, Manufactures Complete Medical Gas Items. One Manufacturer Specialize in Certain Medical Gas Items and Second</p> <p>Manufacturer Specialize in other Medical Gas Items; by Combining together, a bidder supply the Complete Medical Gas Items as per Standard. The same applies in other Medical</p> <p>Equipment. In case of submitting UL/European CE/ETL/USFDA certification from other bidder, you will immediately reject the tender.</p> <p>Therefore we strongly suggest that the “Medical Gas Pipeline System must follow standard” instead of items must be from the same principal company/ manufacturer:</p>	<p>Tender terms &amp; conditions prevail:</p>
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7	<p><b>Vol. 4, Technical Specifications, Page 14, Para 8 and Amendment-II dated 12.07.2019 : AGSS (Anesthetic Gas Scavenging System) Plant</b></p> <p><b>AGSS: Rotary Vane/claw type vacuum pumps or blower:</b></p> <p>Our Request: Earlier the Technical Specifications for AGSS System are very clear and precise that the AGSS Plant required should be Rotary Vane/Claw type Technology.</p> <p>In amendment, Blower technology is also added. Blower word expresses itself “A typical backward-curved centrifugal fan, in which the blades curve away from the direction in which they rotate, like fan.</p> <p>You would be surprised to learn that AGSS System with Blower Technology is never installed in any of the reputed Hospital in India and there is huge costing difference between AGSS System with Blower Technology. In comparison to Rotary Vane/Claw Technology; Blower Technology costs 6 times lower in cost comparison and is inferior quality &amp; not at par to the Rotary Vane/Claw Technology. <b>There should not be any compromise on quality of material.</b></p> <p>In other words, you are asking to submit the price of Manual Gear Car in comparison to Automatic Gear Car.</p> <p>By depriving quality, you are giving birth to products which are quality wise not long lasting. You are compromising on quality. It is strongly suggested, do not compromise with low specifications, as this is life saving system. Do not allow anybody to play with precious human life. <b><u>Rotary Vane / Claw Type Vacuum Pumps only should be adopted and Amended in the Tender.</u></b> It is therefore requested “Blower Technology” should be deleted.</p>	<p>AGSS system shall be as per standards mentioned in the technical specification of tender.</p>
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8	<p><b>Tender Submission Date</b></p> <p>Sir, as you are aware that we are keen bidder and follow M/s HSCC (India) Ltd. Tenders. We had requested you earlier M/s HSCC has floated big &amp; tenders of National Importance for prestigious institute AIIMS.</p> <p>The bidders who work in the field of MGMS would wish to participate in all the upcoming tenders and in order to do so will have to arrange and complete all the required documents of the tender such as Earnest Money Deposit, Eligibility Documents, Authorisation Letters, Compliance from Foreign Supplier, Pricing &amp; other documentation required as per tender.</p> <p>Taking into the consideration of above factors, we sincerely request you to kindly allow a minimum 14 days time i.e. upto 1<sup>st</sup> August 2019 to arrange and submit most suitable competitive price for all the tenders.</p>	Tender terms & conditions prevail.
9	<p>6 months from the date of order of commencement</p> <p>Going by the outlets disposition chart of MGPS tender, the OT's are in three different floors- ground floor (2 nos.), first floor (23 nos.) and third floor (2 nos.).</p> <p>Since AIIMS projects are done in phases, we request more clarity on readiness of the site to carry out the works within the stipulated time period and accordingly accept PBG to commence work.</p>	Tender terms & conditions prevail
10	<p>The contractor must fill up price in India Rupees against each item of BOQ (Volume-V online both in words and figures in the blank spaces provided in the respective columns.</p> <p>Request that imported items be allowed to be quoted in Euro/US Dollar and payment through Letter of Credit be allowed. This will greatly reduce our financial stress.</p>	Tender terms & conditions prevail
11	<p>The bid submission date is extended from 12.07.2019 to 19.07.2019</p> <p>Request you to extend by another week to 26<sup>th</sup> July 2019</p>	Tender terms & conditions prevail
12	<p>The Applicant should meet the following minimum criteria for Pre- Qualification :</p> <p>Experience of having successfully completed</p>	Tender terms & conditions prevail

	<p>similar work during last 7 years ending last day of month previous to the one in which tenders are invited should be either of the following :</p> <p>Three similar* completed works costing not less than the amount equal to 40% of the estimated cost.</p> <p>or Two similar* completed works costing not less than the amount equal to 50% of the estimated cost. or</p> <p>One similar* completed work costing not less than the amount equal to 80% of the estimated cost.</p> <p>We wish to inform you that, we fulfill all your eligibility criteria to great extend. However, we have observed that the Pre- Qualification Criteria is restricted &amp; biased to favour some proven cartel companies to participate. In view of this, we request you to kindly amend the Pre- Qualification Criteria in line with 2 Options requested below. This will ensure wider participation from various bidders including us and there will be a price advantage to HSCC in view of huge participation, price comparison, and no encouragement to cartelization.</p> <p>OPTION 1: Please go through attached HITES Tender Eligibility criteria for this size of MGPS work and same may be amended accordingly. We are surprised to note that HSCC and HITES both are under Ministry of Health &amp; Family Welfare but asking different Eligibility Criteria.</p> <p>PQ Criteria - Request for Amendment: "Minimum work of similar Nature: Eligible bidders should have successfully executed globally in last Seven years from the date of tender opening, similar turnkey project of value, equivalent to or exceeding 50% of the estimated schedule / tender value. Out of total 50% value, at least one single order for similar work of minimum 10% of the estimated schedule / tender value should have been executed globally". Please refer to <u>Annexure - II</u></p> <p>for similar condition in one of the tenders of</p>	
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	<p>HITES issued on 14.02.2019.</p> <p>OPTION 2:</p> <p>(i) As can be seen we are very eager to participate in this tender and in this regard, we request you to kindly allow the bidders to submit the "Experience of having successfully completed similar work during last 10 years ending last day of month previous to the one in which tenders are invited instead of 7 years:</p>	
13	<p>The following systems/items must be from the same principal company/Manufacturer:</p> <ul style="list-style-type: none"> <li>a. Control Panels &amp; Manifold for O2, N2O &amp; CO2</li> <li>b. Medical air plant</li> <li>c. Medical Vacuum Plant</li> <li>d. AGSS Plant</li> <li>e. Area &amp; Master Alarm</li> <li>f. All types Outlets</li> <li>g. AVSU</li> <li>h. Line Isolation valves</li> <li>i. High Pressure tubes</li> </ul> <p>This is purely a favourable clause to favour companies who have done exclusive tie-ups for Indian market with three to four American companies, who are also not manufacturing these Air Plants, Vacuum Plants and AGSS/WAGD plants themselves but most of them buy from Powerex USA only and they simply print their catalogues with powerex plants specifications and certifications, which has unfortunately never asked or checked by HSCC ever. Ideally there should be an enquiry on this subject. This is an another example of restricted conditions to buy only NFPA standard / recommendations products and other international standards mentioned in the tender are just eye wash. Under the circumstances this highly objectionable clause may please be removed from this tender and we expect justice at this stage from your end only. We are surprised you being Engineering organization and consultants is not having this information and you did not bother to check online as well before publishing such tenders. Worldwide plants manufacturers are different as they manufacture not only for Medical Industry but for many other industrial requirements too and MGPS manufacturers worldwide do not manufacturer these plants except one who are also dealing with Medical and Industrial. You should also not ask single</p>	Tender terms & conditions prevail

	<p>standard for all the items because it has no relevance, we expect you to explain to us for our knowledge what advantage you get with this and what disadvantage you have without this when the aim of all the standards manufacture products for medical applications and full fill your flow rate, pressure and quality requirements. These are nothing but to favour companies of your choice probably or due to lack of knowledge which both the cases are not expected from government consultants like you.</p>	
14	<p><b>Emergency Oxygen Manifold (without Cylinders):</b></p> <p>There is no reference about the Pressure Reducer arrangement, its Type (Control Panel, Single Stage Regulator or Double Stage Regulator) nor flow requirement Capacity etc in the Tender Specifications. That is the reason this query was raised by us, and it is still not clarified properly.</p> <p>It is to be noted that during unfortunate incident of failure of Main Control Panel, the Emergency Manifold Pressure regulating system has to support the oxygen demand of the entire hospital. Hence, fair amount of diligence is required to be shown for this particular line item specifications.</p> <p>We again request you to kindly provide the technical details of the Pressure reducing arrangement required.</p>	<p>Pressure Reducer arrangement shall be as per Standards mentioned in the technical specification of tender.</p>
15	<p><b>Oxygen Flow meter with Humidifier Bottle:</b></p> <p>should be BIS/CE certified/ UL Listed</p> <p>Nowhere else you have asked for BIS standards in the Tender.</p> <p>Out of all the items sought in tender, only for this item BIS Standard is accepted. Why? It should be ideally sought for all items or for none.</p> <p>We request you to delete BIS criteria, as this will result in substandard local product being offered.</p> <p>Kindly clarify this point, else it is possible that certain bidders might offer local / inferior products by arranging BIS Standard certificate.</p>	<p>Tender terms &amp; conditions prevail (Amendment-II)</p>
16	<p><b>MEDICAL AND SURGICAL AIR SYSTEM :</b></p> <p>The medical air plant shall fully comply with the requirements of the HTM 02-01/ NFPA 99C/EN/DIN/ISO 7396-1. It should be US FDA/European CE certified with 4 digit notified body number or American ETL/ UL listed.</p> <p>Since NFPA does not permit combined Medical &amp; Surgical Air Plant, we suggest that for the benefit of NFPA bidders, the individual capacity of both Medical Air &amp; Surgical Air</p>	<p>Tender terms &amp; conditions</p>



	plant be clearly defined, so as to avoid any ambiguities during evaluation of the bids.	prevail (Amendment-II)
17	<p><b>Vertical Air Receiver:</b> Total air receiver capacity shall be at least 50% (<math>\pm</math> 5%) of the primary plant capacity mentioned in the BOQ) in 1 minute in terms of free air delivered at normal working pressure or as per guideline of standard to be followed.</p> <p>By this clause incorporated, it will not be possible for any HTM / ISO based supplier to compete with NFPA Products. This clause is totally favouring the NFPA bidders. Our submission is that, for fair evaluation and comparison of bidders of various standards and for parity purposes (apple to apple comparison), the minimum capacity of the Air Receiver should be specified by the tendering authority, which should be complied by bidders for all standards. It may be noted that for HTM / ISO the Air Receiver capacity required to be supplied is 6000 Ltrs, and whereas for NFPA there is no clarity in the guideline / standard. Hence, eventually the NFPA suppliers end up by supplying Receiver capacity in the range of around 1000 Ltrs only. Thus we feel that this is not a fair comparison of bids (14000 Ltrs vs 1000 Ktrs). Please, imagine all the extra efforts and cost required by HTM / ISO suppliers in fabricating, despatching, Transporting by sea from foreign country, erecting etc.. It may be noted that, NFPA does not dictate or have any say on the capacity required, except it says in para 5.1.3.5.6 Medical Air Receivers be of a capacity sufficient to prevent the compressors from short-cycling. But, definitely there is no harm in providing a larger capacity Receiver.</p> <p>We once again therefore request you to mention the minimum capacity required, which should be followed by all bidders, for the fair comparison and evaluation of the technical bids.</p>	Tender terms & conditions prevail (Amendment-II)
18	<p>AGSS (Anesthetic Gas Scavenging System) Plant: Connecting hose suitable to fit with anaesthesia workstation should be provided.</p> <p>The attached revised BOQ mentioned by you is still not available in the portal. We request you to provide this information at the earliest, to enable bidders to arrange for the necessary quotes.</p> <p>We however still are of the opinion that these connecting hoses are actually required to be supplied by the Anaesthesia machine suppliers, as this is their speciality.</p>	Tender terms & conditions prevail (Amendment-II) BOQ is attached
19	<p><b>Master Alarm :</b></p> <p>The master alarms should be capable to monitor minimum 30-40 Point. Bidder shall be responsible for all cabling from local alarm panels to master alarm panel.</p>	The master alarms should be capable to monitor minimum 30-40 Point.

	<p>This point has not been clarified properly enough. It may be noted that the Size of Master Alarm Panel is not sufficient, as it has provision to connect only 30-40 points. Whereas, the total number of AVSU is 93 Nos. Hence, please specify which of 30-40 Area alarms are required to be connected with Master Alarm. This information is required to enable bidder to make best estimation of the works involved and costing.</p>	
20	<p><b>Responsibility of bidder:</b> <b>5. Rota meters for measurement of consumption of Oxygen and Compressed air</b></p> <p>There is no mention about capacity or technical specification about Rotameter in the tender. We request you to kindly provide this vital information so that the appropriate rotameter can be supplied by the bidders.</p>	Tender terms & conditions prevail
21	<p><b>MANUFACTURER'S AUTHORIZATION FORM:</b> <b>Dear Sir,</b> <b>Tender No. -----</b></p> <p>We who are established and reputed manufacturer of (name &amp; description of goods offered) having factories at ( address of factory) do hereby authorize M/s ( Name &amp; address of agent ) which has been our dealer/distributor since , to submit a bid, and sign the contract with you for the goods manufactured by us against the above tender. No company or firm or individual other than M/s are authorized to bid and conclude the contract for goods manufactured by us against this Specific tender. We hereby extend our full guarantee and defect liability period as per the clause of Condition of Contract and Additional Specific Conditions of Contract of above tender for goods and services offered for supply by our authorized firm .</p> <p>The format provided is not suitable for Principal Supplier as they are not actually the manufacturers for certain items. We request you to kindly clarify this as was discussed in the prebid meeting.</p>	Tender terms & conditions prevail
22	<p><b>Item No.1.5</b> <b>LIQUID MEDICAL OXYGEN</b> <b>Safety Fitting Vessel Low Liquid level alarm</b></p> <p>It may kindly noted that purpose of Liquid Low Level Alarm &amp; Liquid Low Pressure Alarm are total different. It would be possible in a LMO system that the Liquid pressure is normal but the Liquid level has already become LOW. This would be very serious and critical condition for the Hospital. The Liquid Low Level Alarm is a very very critical requirement for hospital and hence should not be deleted in any circumstances. By having this Alarm removed the hospital will never know when the liquid level in LMO falls to critical level.</p>	

	<p>It appears that some of the other bidder who does not understand clearly about the LMO system as ill-advised for the removal of this very critical safety alarm requirement. It may be noted that almost all of the existing LMO Systems installed throughout the country will have this Alarm inbuilt in the system.</p> <p>Hence, in the interest of the safety of patients in hospital, we suggest that the LOW LIQUID LEVEL ALARM should be reinstated in the specifications.</p>	<p>Liquid level alarm/Low pressure alarm shall be provided.</p>
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Revised BOQ is attached.

All others terms & conditions remain unchanged.

Sr. CGM –I, HSCC

For & on behalf of Director , AIIMS, Nagpur

**ALL INDIA INSTITUTE OF MEDICAL SCIENCES  
(AIIMS), NAGPUR**

**e- Tender**

**for**

**Supply Installation Testing & Commissioning of Medical  
Gas Manifold System for Hospital Block at All India  
Institute of Medical Sciences (AIIMS), Nagpur**

**VOLUME – V**

**BOQ**

**JUNE 2019**



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**Tender No. HSCC/SES/MGMS/ AIIMS/Nagpur/2019**

BOQ OF MEDICAL GAS PIPELINE SYSTEM						
Name Of Bidder M/s:-						
<b>Part-I -Plan. Design, Supply, installation, testing and commissioning of MGPS on turnkey basis including Warranty of 5 years</b>						
Sl.No.	Description of items	QTY	Unit	Rate in Rs.	Rate in Rupees in Words	Amount in Rs.
1.1	Fully Automatic Oxygen Control System : Supply, Installation testing and commissioning of Fully Automatic Oxygen Control System complete with all accessories as per technical specification	2	Nos			0.00
1.2	Oxygen Manifold (2x20) : Supply, Installation, testing and commissioning of (2x20 size) class D cylinder Oxygen Supply System complete with all accessories as per technical specification.	2	Nos			0.00
1.3	Emergency Oxygen Supply System : Supply, Installation, testing and commissioning of (2x5 or 1x10 size) class D cylinder Emergency Oxygen Supply System complete with all accessories as per technical specification.	2	Nos			0.00
1.4	Oxygen Flow meter with Humidifier Bottle: Supply, installation, testing and commissioning of oxygen flow meter with humidifier bottle 0-15Litres complete with all accessories as per technical specification	1602	Nos			0.00
1.5	LMO Tank 20KL & 10 KLwith Vaporiser and Pressure Reducing Stn:Supply, installation,testing and commissioning complete with all accessories complete with all accessories as per technical specification	1	Nos			0.00
2.1	Fully Automatic Manifold Control Panel for Nitrous Oxide: Supply, installation testing and commission of fully automatic control panel for Nitrous Oxide complete with all accessories as per technical specification	1	Nos			0.00
2.2	Nitrous Oxide Manifold System, (2x10 size): Supply, installation, testing and commissioning of Nitrous Oxide Manifold system complete with all accessories as per technical specification	1	Nos			0.00
2.3	Emergency Nitrous Oxide Manifold System, 2x4 or 1x8 size: Supply,installation, testing and commissioning of cylinderEmergency Nitrous Oxide supply System complete with all accessories as per technical specification	1	Nos			0.00

3.0	Medical Air Plant (Package Unit ) including electrical control panel: Supply, Installation, testing and commissioning medical air plant having minimum capacity of 12000 LPM as primary and 3000 LPM as standby or total plant capacity of 15000 LPM and complete with all accessories as per technical specification. Vendor may offer 2 plant and do zoiing also to meet the flow capacity.	1	Nos			0.00
4.0	Medical Vacuum Plant (Package unit): Supply, Installation, testing and commissioning of Rotary Vane type medical vacuum plant having a minimum system capacity of 14000 LPM as primary and 14000 LPM as standby and complete with all accessories complete with all accessories as per technical specification. Vendor may offer 2 plant and do zoiing also to meet the flow capacity.	1	Nos			0.00
5.0	Ward Vacuum Unit: Supply, installation, testing and commissiiong of Ward Vacuum Unit complete with all accessories as per technical specification.	1486	Nos			0.00
6.0	Low flow ward vacuum unit SITC complete with all accessories as per technical specification	60	Nos			0.00
7.0	Theater Vaccum Unit for Operation Theaters: Supply, installation, testing and commissiiong of Theater Vacuum Unit complete with all accessories as per technical specification	58	Nos			0.00
8.0	AGSS System: Supply installation and commissioning of AGSS system of minimum capacity 2500 LPM as primary and 2500 LPM as standby and complete with all accessories as per technical specification	2	Nos			0.00
9.0	Copper Pipes					
	Complete with all accessories as per technical specification					
i	108mm OD x 1.5mm thick	77	mtr			0.00
ii	76mm OD X 1.5mm thick	820	mtr			0.00
iii	54mm OD X 1.2mm thick	1270	mtr			0.00
iv	42mm OD X 1.2mm thick	1925	mtr			0.00
v	35mm OD X 1.2mm thick	2794	mtr			0.00
vi	28mm OD X 1 mm thick	6723	mtr			0.00

vii	22mm OD X 1 mm thick	12778	mtr			0.00
viii	15mm OD X 1 mm thick	10980	mtr			0.00
ix	12mm OD X 1 mm thick	5500	mtr			0.00
10.0	Gas Outlet Points/ Terminal Units with probe: Supply,Installation, testing and commissioning of Gas outlet points for Oxygen, Nitrous Oxide, Medical Air 4 Bar , Surgical Air 7 Bar, Vacuum, CO2 and AGSS complete with all accessories as per technical specification .					
i	Oxygen outlet with probe (MOT outlets are in the MOT Package)	1490	Nos			0.00
ii	Nitrous Oxide outlet with probe (MOT outlets are in the MOT Package)	12	Nos			0.00
iii	Medical Air 4 outlet with probe (MOT outlets are in the MOT Package)	394	Nos			0.00
iv	Vacuum outlet with probe (MOT outlets are in the MOT Package)	1490	Nos			0.00
v	Surgical Air 7 outlet with probe (MOT outlets are in the MOT Package)	0	Nos			0.00
vi	AGSS outlet with probe (MOT outlets are in the MOT Package)	15	Nos			0.00
vii	Carbon di Oxide outlet with probe (MOT outlets are in the MOT Package)	4	Nos			0.00
11.0	AREA VALVE BOX : Supply,Installation, testing and commissioning of Area Valve Boxes complete with all accessories as per technical specification .					
	Valve Box - 2 Gas Service	20	Nos			0.00
	Valve Box - 3 Gas Service	32	Nos			0.00
	Valve Box - 4 Gas Service	1	Nos			0.00
	Valve Box - 5 Gas Service	8	Nos			0.00
	Valve Box - 6 Gas Service	32	Nos			0.00
12.0	MEDICAL GAS ALARM PANEL : Supply, Installation, testing and commissioning of Medical Gas Alarm Panel complete with all accessories as per technical specification .					
	Medical Gas Area Alarm for 2 services (Oxygen and Vacuum )	20	Nos			0.00

	Medical Gas Area Alarm for 3 services (Oxygen, MA4 bar and Vacuum)	32	Nos			0.00
	Medical Gas Area Alarm for 4 services	1	Nos			0.00
	Medical Gas Area Alarm 5 services	8	Nos			0.00
	Medical Gas Area Alarm 6 services	32	Nos			0.00
	Master Alarm Panel	1	Nos			0.00
13.0	LINE ISOLATION VALVES Supply, Installation, testing and commissioning of Medical Gas Alarm Panel complete with all accessories as per technical specification .					
	15 mm ball valve	955	Nos			0.00
	22 mm ball valve	570	Nos			0.00
	28 mm ball valve	10	Nos			0.00
	35 mm ball valve	9	Nos			0.00
	42 mm ball valve	18	Nos			0.00
	54 mm ball valve	12	Nos			0.00
	76 mm ball valve	10	Nos			0.00
	108 mm ball valve	2				0.00
14.0	Supply of O2 cylinders-Class D cylinders	200	Nos			0.00
15.0	Supply of N2O cylinders-Class D cylinders	60	Nos			0.00
16.0	Supply of CO2 cylinders-Class D cylinders	15	Nos			0.00
17.0	Bed Head Horizontal/ vertical Wall Panel (Without outlets) as per specification	373	Nos			0.00
18.0	Supply installation testing and commissioning of Medical gas hose assemblies as per standard followed	1500	mtr			0.00



19.0	CO2 Manifold 4 + 4 Primary & 2+2 Standby Cylinders with Automatic control panelas per specs	1	Nos			0.00
21.0	Turnkey works including Site modification as per Specification and also as following					
20a	Providing and fixing of Exhaust fan with IS marked Motor and louvre for ventilation of MGPS Plant room and Manifold room	15	Nos			0.00
20b	Providing and fixing of Airconditioners (Ductable with Exhausts) for MGPS Plant room	25	TR			0.00
20c	Providing and fixing of cable from local alram panels (OTs & ICUs)	2000	m			0.00
20d	Construction of Overhead/Under Ground trench size approx 1.5mx1m as standard for interconnection between buildings/plant/manifold/etc block	150	m			0.00
20e	SITC of 3.5 core 185 sq.mm XLPE Cable as per IS: 7098 inside the gas manifold and plant room including Electrical Distribution Panel for plant & Manifold rooms	100	m			0.00
20f	SITC of Electrical Distribution Panel for Plant & Manifold rooms	1	No			0.00
20g	Providing of dedicated chemical earthing for MGPS Plant room as per IS: 3043	1	No			0.00
20h	SITC of LED Industrial Tube Light-4 ft long surface mounted for lighting in MGPS Plant and Manifold room	16	Nos			0.00
20i	SITC of Ceiling Fan, for MGPS Plant and Manifold room	2	Nos			0.00
20j	Wiring for light point/fan point/exhaust fan point/call bell point with 1.5 sqmm FRLS PVC insulated copper conductor single core cable in surface/recessed medium plate, suitable GI box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc as required- Group-A - Point = 30, Group-B- Point = 2 and Group-C- Point = 15	1	Lot			0.00
20k	SITC of portable fire extinguishers (9Kg DCP Fire Extinguisher each) to fitted on the walls in certain interval in the Manifold room and Plant room	15	Nos			0.00
						<b>SUB TOTAL Rs. 0.00</b>

Part-II						
	Item No.	Unit	Qty	Rate in Rs.	Rate in Rupees in Words	Amount
	2	3	4			7
						Rs
1	Operation of MGPS plant 24x7 throughout the day 365 days a year for five years					
	1st Year	Job	1			0.00
	2nd Year	Job	1			0.00
	3rd Year	Job	1			0.00
	4th Year	Job	1			0.00
	5th year	Job	1			0.00
					SUB TOTAL Rs.	0.00
<b>Part-III</b>						
	<b>Comprehensive Maintenance Charges</b> for the complete Medical Gas Manifold System including spares, repair or replacement of defective equipments/parts, tools, tackles, accessories, consumables, labour charges etc. complete in all respect after completion of DLP/Warranty as per the contract.					
	6th Year	Job	1			0.00
	7th Year	Job	1			0.00
	8th Year	Job	1			0.00
	9th Year	Job	1			0.00
	10th year	Job	1			0.00
					SUB TOTAL Rs.	0.00
<b>SUMMARY OF RATES QUOTED</b>						

	TOTAL (PART-I)					0.00
	TOTAL (PART-II)					0.00
	TOTAL (PART-III)					0.00
	<b>Grand Total Amount (PART - I + PART - II + PART - III) (in Figures) :-</b>					<b>0.00</b>
<b>Note:</b>	<b>Rates of Operation and CMC will be considered for ranking purpose</b>					