03-05-2018

Amendment No. 2

Sub: Amendment to the referred tender enquiry

Ref.: Tender Enquiry HITES/PCD/ NHM/MGPS/17-18 dated 31-03-2018

The following changes are being incorporated in the above referred Tender Enquiry Document.

Section VII Technical Specification

SI.No.	Tender Specification	Amendment
1	 1.2 Fully Automatic Oxygen Control Panel The Control Panel should be made to provide Heavy Duty and have a flow capacity of 1500 LPM at 50 to 60 psi. It should be European CE Certified or UL listed. The fully automatic Oxygen control panel should comply with HTM 02-01/ NFPA 99 C/EN/DIN/ISO 7396-1 STANDARD. It should be European CE Certified or UL listed. 	Amended as: The Control Panel should be made to provide Heavy Duty and have a flow capacity of 1500 LPM or more at 50 to 60 psi. It should be US FDA / European CE Certified with 4 digit notified body number or American ETL/ American UL listed The fully automatic Oxygen control panel should comply with HTM 02-01/ NFPA 99 C/EN/DIN/ISO 7396-1 STANDARD. It should be US FDA / European CE Certified with 4 digit notified body number or American ETL/ American UL listed
2	1.2 Fully Automatic Oxygen Control Panel All high pressure manifold regulators should contain no halogenated polymers and have adiabatic certification/undertaking from manufacture	Amended as: All high pressure manifold regulators should contain no halogenated polymers

3	Fully Automatic Oxygen Control Panel	Amended as:
	The manifold assembly should provide two	Fully Automatic Oxygen Control Panel
	stages of pressure regulation. A single stage	The manifold assembly should provide two
	primary regulator, one for each cylinder bank	stages of pressure regulation. A single stage
	should be used to initially reduce cylinder	primary regulator, one for each cylinder bank
	pressure and two single stage pressure	should be used to initially reduce cylinder
	regulators should be provided in the control	pressure and two single stage pressure
	cabinet for final delivery pressure regulation.	regulators should be provided in the control
	One delivery pressure regulator in service and	cabinet for final delivery pressure regulation.
	one should be ready for service in a Standby	One delivery pressure regulator in service and
	mode. The Manifold control panel should be	one should be ready for service in a Standby
	digital/analogue, fully automatic type and	mode. The Manifold control panel should be
	switches from "Bank in Use" to "Reserve bank "	digital, fully automatic type and switches from
	without fluctuation in delivery supply line	"Bank in Use" to "Reserve bank " without
	pressure. Changeover should be performed by	fluctuation in delivery supply line pressure.
	electrically/pneumatically operated valves	Changeover should be performed by
	contained in the control cabinet. In the event	electrically/pneumatically operated valves
	of an electrical power failure the valves should	contained in the control cabinet. In the event
	automatically open to provide an	of an electrical power failure the valves should
	uninterrupted gas flow. The manifold should	automatically open to provide an
	not require any manual resetting or	uninterrupted gas flow. The manifold should
	adjustments after the replacements of the	not require any manual resetting or
	depleted cylinders	adjustments after the replacements of the
		depleted cylinders
4	Fully Automatic Oxygen control panelThe	Para Deleted
	automatic gas manifold control should include:	
	 supply pressure gauges x 2Nos - delivery 	
	pressure gauge x 1No - Line pressure regulators	
	with bypass valve x 2 Nos - line pressure relief	
	valve x 1No - green in service LED indicators,	
	one for each supply bank x 2Nos - amber /	
	yellow ready for service LED indicators, one for	
	each supply bank x 2Nos - red LEDs to indicate	
	depleted cylinders, one for each supply bank x	
	2Nos Instruction for changing the cylinders	
	should be clearly shown on a metal plate	
	attached on the front of the removable cover	
	of the control panel All functional	
	•	
	components should be enclosed on fire	
	resistant, robust synthetic polymer/SS.	

5	Oxygen Manifold -2 X 16 Class-D type bulk cylinders.	Added Para: It should be US FDA / European CE Certified with 4 digit notified body number or American ETL/ American UL listed
6	Emergency Oxygen Manifold – 2 x 5 Class-D type bulk Cylinders. Manifold shall consist of two high-pressure header bar assemblies to facilitate connection of primary and secondary cylinder supplies. Each header bar shall be provided with 5 numbers of cylinder pigtail connections to suit cylinder valves as per IS 3224 incorporating a check valve at the header connection. The high-pressure header bar shall be designed in such a manner that it can be extended to facilitate additional cylinder connections. Each header bar assembly shall be provided with a high pressure shut off valve. Emergency Oxygen manifold should consist of 2 rows of 5 cylinders.	Amended as: Manifold shall consist of two high-pressure header bar assemblies to facilitate connection of primary and secondary cylinder supplies. Each header bar shall be provided with 5 numbers of cylinder pigtail connections to suit cylinder valves as per IS 3224 incorporating a check valve at the header connection. The high-pressure header bar shall be designed in such a manner that it can be extended to facilitate additional cylinder connections. Each header bar assembly shall be provided with a high pressure shut off valve/NRV . Emergency Oxygen manifold should consist of 2 rows of 5 cylinders.
7	Emergency Oxygen Manifold – 2 x 5 Class-D type bulk Cylinders.	Added Para: It should be US FDA / European CE Certified with 4 digit notified body number or American ETL/ American UL listed
8	Fully Automatic Nitrous Oxide Control PanelControl panel should have Alarm reset switch to control and monitor the alarm indications by the operator. All high pressure manifold regulators should contain no halogenated polymers and have adiabatic certification/undertaking from manufacture	Amended as:Control panel should have Alarm reset switch to control and monitor the alarm indications by the operator. All high pressure manifold regulators should contain no halogenated polymers

9	Fully Automatic Nitrous Oxide Control Panel	Amended as:
	The manifold assembly should provide two	The manifold assembly should provide two
	stages of pressure regulation. A single stage	stages of pressure regulation. A single stage
	primary regulator, one for each cylinder bank	primary regulator, one for each cylinder bank
	should be used to initially reduce cylinder	should be used to initially reduce cylinder
	pressure and two single stage pressure	pressure and two single stage pressure
	regulators should be provided in the control	regulators should be provided in the control
	cabinet for final delivery pressure regulation.	cabinet for final delivery pressure regulation.
	One delivery pressure regulator in service and	One delivery pressure regulator in service and
	one should be ready for service in a Standby	one should be ready for service in a Standby
	mode. The Manifold control panel should be	mode. The Manifold control panel should be
	digital/analogue, fully automatic type and	digital , fully automatic type and switches from
	switches from "Bank in Use" to "Reserve bank"	"Bank in Use" to "Reserve bank " without
	without fluctuation in delivery supply line	fluctuation in delivery supply line pressure.
	pressure. Changeover should be performed by	Changeover should be performed by
	electrically/pneumatically operated valves	electrically/pneumatically operated valves
	contained in the control cabinet. In the event	contained in the control cabinet. In the event
	of an electrical power failure the valves should	of an electrical power failure the valves should
	automatically open to provide an	automatically open to provide an
	uninterrupted gas flow. The manifold should	uninterrupted gas flow. The manifold should
	not require any manual resetting or	not require any manual resetting or
	adjustments after the replacements of the	adjustments after the replacements of the
		أربع المعامية المتعامية
	depleted cylinders	depleted cylinders
10	Fully Automatic Nitrous Oxide Control Panel	Para Deleted
10		
10	Fully Automatic Nitrous Oxide Control Panel	
10	Fully Automatic Nitrous Oxide Control Panel Para: -	
10	Fully Automatic Nitrous Oxide Control Panel Para: - The automatic gas manifold control should	
10	Fully Automatic Nitrous Oxide Control Panel Para: - The automatic gas manifold control should include:	
10	Fully Automatic Nitrous Oxide Control Panel Para: - The automatic gas manifold control should include: - supply pressure gauges x 2Nos	
10	Fully Automatic Nitrous Oxide Control Panel Para: - The automatic gas manifold control should include: - supply pressure gauges x 2Nos - delivery pressure gauge x 1No	
10	Fully Automatic Nitrous Oxide Control Panel Para: - The automatic gas manifold control should include: - supply pressure gauges x 2Nos - delivery pressure gauge x 1No - Line pressure regulators with bypass valve x 2	
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10	Fully Automatic Nitrous Oxide Control Panel Para: - The automatic gas manifold control should include: - supply pressure gauges x 2Nos - delivery pressure gauge x 1No - Line pressure regulators with bypass valve x 2 Nos - line pressure relief valve x 1No - green in service LED indicators, one for each supply bank x 2Nos - amber / yellow ready for service LED	
10	Fully Automatic Nitrous Oxide Control Panel Para: - The automatic gas manifold control should include: - supply pressure gauges x 2Nos - delivery pressure gauge x 1No - Line pressure regulators with bypass valve x 2 Nos - line pressure relief valve x 1No - green in service LED indicators, one for each supply bank x 2Nos	
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10	Fully Automatic Nitrous Oxide Control Panel Para: - The automatic gas manifold control should include: - supply pressure gauges x 2Nos - delivery pressure gauge x 1No - Line pressure regulators with bypass valve x 2 Nos - line pressure relief valve x 1No - green in service LED indicators, one for each supply bank x 2Nos - amber / yellow ready for service LED indicators, one for each supply bank x 2Nos - red LEDs to indicate depleted cylinders, one for each supply bank x 2Nos Instruction for changing the cylinders should be clearly shown on a metal plate attached on the front of the removable cover of the control	

11	Nitrous Oxide Manifold -2 X 5 Class-D type bulk cylinders.	Added Para: It should be US FDA / European CE Certified with 4 digit notified body number or American ETL/ American UL listed
12	Emergency N2O Manifold Manifold shall consist of two high-pressure header bar assemblies to facilitate connection of primary and secondary cylinder supplies. Each header bar shall be provided with 2 numbers of cylinder pigtail connections to suit cylinder valves as per IS 3224 incorporating a check valve at the header connection. The high- pressure header bar shall be designed in such a manner that it can be extended to facilitate additional cylinder connections. Each header bar assembly shall be provided with a high pressure shut off valve. Emergency Nitrous oxide manifold should consist of 2 rows of 2 cylinders.	Amended as:Manifold shall consist of two high-pressure header bar assemblies to facilitate connection of primary and secondary cylinder supplies. Each header bar shall be provided with 2 numbers of cylinder pigtail connections to suit cylinder valves as per IS 3224 incorporating a check valve at the header connection. The high-pressure header bar shall be designed in such a manner that it can be extended to facilitate additional cylinder connections. Each header bar assembly shall be provided with a high pressure shut off valve/NRV . Emergency Nitrous oxide manifold should consist of 2 rows of 2 cylinders.
13	Emergency N2O Manifold	Added Para: It should be US FDA / European CE Certified with 4 digit notified body number or American ETL/ American UL listed
14	 3.1 Fully Automatic Control panel for CO2 System It should be European CE Certified or UL listed. Regulators shall comply with BS EN ISO 10524-2/as per NFPA standard. The Manifold Control System should supply any type of medical gas from both left and right hand manifold banks. Operation and performance criteria should fully satisfy the requirements of HTM 02-01/ NFPA 99 C/EN/DIN/ISO 7396-1 standard. The fully automatic CO2 control panel should comply with the standard. It should be European CE Certified or UL listed. 	May amend the para as: Fully Automatic Control panel for CO2 System (IMPORTED) • It should be US FDA / European CE Certified with 4 digit notified body number or American ETL/ American UL listed Regulators shall comply with BS EN ISO 10524-2/as per NFPA standard. The Manifold Control System should supply any type of medical gas from both left and right hand manifold banks. Operation and performance criteria should fully satisfy the requirements of HTM 02-01/ NFPA 99 C/EN/DIN/ISO 7396-1 standard. The fully automatic CO2 control panel should comply with the standard. It should be US FDA / European CE Certified with 4 digit notified body number or American ETL/ American UL listed

15	Fully Automatic Control panel for CO2 System Control panel should have Alarm reset switch to control and monitor the alarm indications by the operator. All high pressure manifold regulators should contain no halogenated polymers and have adiabatic certification/undertaking from manufacture.	Amended as: Control panel should have Alarm reset switch to control and monitor the alarm indications by the operator. All high pressure manifold regulators should contain no halogenated polymers
16	Fully Automatic Control panel for CO2 System	Added Para: The Manifold control panel should be digital
17	Medical CO2 Manifold 2 x 4 Nos of Class-D type Cylinders	Added Para: It should be US FDA / European CE Certified with 4 digit notified body number or American ETL/ American UL listed
18	3.1.1 Vacuum Pump Module It should be European CE marked/UL listed. The medical vacuum plant should be air- cooled, oil lubricated rotary vane vacuum pumps to provide a primary flow rate of at least 3000 LPM as primary and 3000 LPM as standly flow rate as per the relevant standardto provide the desired flow of the hospital to maintain a vaccum level of 450 mmHg at the plant connection point.	Amended as: Vacuum Pump Module It should be US FDA / European CE Certified with 4 digit notified body number or American ETL/ American UL listed (Incase of NFPA 99c the control panel of plant must be UL/ETL Listed and Undertaking from manufacturer for this tender reference must be submitted for using the same control panel in the system offered). The medical vacuum plant should be air-cooled, oil lubricated rotary vane vacuum pumps to provide a primary flow rate of at least 4000 LPM as primary and 4000 LPM as standly flow rate (inclusive of secondary & reserve source.) as per the relevant standardto provide the desired flow of the hospital to maintain a vaccum level of 450 mmHg at the plant connection point. In case primary system fails completely, the standby system should automatically augment for 100% primary capacity

19	3.1.2 Vacuum Receiver The vacuum receiver shall be made of rust free corrosion resistant steel and fabricated as per ASTM/BS/ISO/DIN standard for a vacuum pressure of 760mmHg. It should include bypass valves, manual drain valves, vacuum gauge. Vacuum reservoir shall have total volume of at least 100 % of plant output in one minute in terms of free air aspired at normal working pressure.	Amended as: Vacuum Receiver The vacuum receiver shall be made of rust free corrosion resistant steel and fabricated as per ASTM/BS/ISO/DIN standard for a vacuum pressure of 760mmHg. It should include bypass valves, manual drain valves, vacuum gauge. Vacuum reservoir shall have total volume of at least 100 % of plant output in one minute (or minium 4000 ltr.) in terms of free air aspired at normal working pressure
20	3.2 Ward Vacuum Units: Suction Regulator: Suction regulator should be supplied with a safety jar, including and antibacterial filter and an anti-overflow safety device. Should have wide membrane continuous suction controllerMust have central adjustment knob with a color coded for 0 to 760 mm of Hg. Should have Polysulfone/polycarbonate 1000cc safety jar , autoclavable at 121° C at 5mins, unbreakable, fitted with an anti-overflow safety device and equipped with a plastic antibacterial filter. It should be totally transparent, to ensure perfect sucked liquid visibility.	Amended as:Digital Suction Regulator: Suction regulator should be supplied with a safety jar, including and antibacterial filter and an anti- overflow safety device. Should have wide membrane continuous suction controllerMust have central adjustment knob with a color coded for 0 to 760 mm of Hg. Should have Polysulfone/polycarbonate 100cc safety jar , autoclavable at 121° C at 5mins, unbreakable, fitted with an anti-overflow safety device and equipped with a plastic antibacterial filter. It should be totally transparent, to ensure perfect sucked liquid visibility.
21	3.3 Theatre Vacuum unit It must consist of the following: - 1no. Suction Regulator and 2 x 2000ml or more polysulfone/polycarbonate collection jar and both to be mounted on a trolley.	Amended as: Digital Suction Regulator and 2nos. 1500ml or more polysulfone/ polycarbonate collection jar and both to be mounted on a trolley.
22	4.1.1 Medical and Surgical Air System - The medical air plant shall fully comply with the requirements of the HTM 02-01/ NFPA 99 C/EN/DIN/ISO 7396-1 standard. It should be European CE/ UL listed.	Amended as: The medical air plant shall fully comply with the requirements of the HTM 02-01/ NFPA 99 C/EN/DIN/ISO 7396-1. It should be US FDA / European CE Certified with 4 digit notified body number or American ETL/ American UL listed (Incase of NFPA 99c the control panel of plant must be UL/ETL Listed and Undertaking from manufacturer for this tender reference must be submitted for using the same control panel in the system offered)

23	4.1.1 Medical and Surgical Air System - Medical quality air shall be delivered at a nominal pressure of 400 kPa (4 bar) or 700 kPa(7 bar) gauge for supply of the hospital medical air system. The medical air plant shall deliver both medical and surgical air, with a total minimum primary flow rate of 4000 LPM and total minimum standby flow rate of 2000 LPM.	Amended as: Medical quality air shall be delivered at a nominal pressure of 400 kPa (4 bar) or 700 kPa(7 bar) gauge for supply of the hospital medical air system. The medical air plant shall deliver both medical and surgical air, with a total minimum primary flow rate of 4000 LPM and total minimum standby flow rate of 2000 LPM.(inclusive of secondary & reserve source.) In case primary system fails completely, the standby system should automatically augment for 50% primary capacity
24	Medical and Surgical Air System - 4.2 Verticial Air Receiver The corrosion resistant coated receiver is to be equipped with tested safety pressure relief valve, sight glass pressure gauge, automatic drain, three- valve by-pass and source isolation valve. Total air receiver capacity shall be at least 50% of the plant capacity in 1 minute in terms of free air delivered at normal working pressure.	Amended as:Verticial Air ReceiverThe corrosion resistant coated receiver is to be equipped with tested safety pressure relief valve, sight glass pressure gauge, automatic drain, three-valve by-pass and source isolation valve. Total air receiver capacity shall be at least 50% of the in 1 minute (or minimum2000 Itr.) in terms of free air delivered at normal working pressure.
25	4.1.1 Medical and Surgical Air System - Each rotary screw/scroll compressors should be suitable for both continuous and frequent start/stop operation at a nominal outlet pressure of 11 bar shall be provided.	Amended as: Medical and Surgical Air System - Each rotary screw/scroll compressors should be suitable for both continuous and frequent start/stop operation at a nominal outlet pressure of 10 bar or more shall be provided

26	Medical and Surgical Air System - 4.4 System Controls The electrical control should comply with HTM 02-01/NFPA 99C/EN/DIN standardsThe "Continuous on Demand" feature will stop the operation of the motors during periods of low or no demand. The control include individual self-protected combination motor controls with short circuit protection, single phase and thermal overload protection, individual control circuit transformers with fuseless primary and secondary protection, pressure sensors, temperature switches with reset buttons, and an electronic controller to automatically change the operating sequence of the compressors. The cabinet shall have status display to include system pressure, dew point pump operation, accumulated time, maintenance interval, fault conditions, and silence button, lighted Hand-Off-Automatic selector switches and safety disconnect operating handles. All required local alarm functions shall be integrated in to the packaged system.	Amended as: System Controls The electrical control should comply with HTM 02-01/NFPA 99C/EN/DIN/ISO7396 standards. .The "Continuous on Demand" feature will stop the operation of the motors during periods of low or no demand. The control include individual self-protected combination motor controls with short circuit protection, single phase and thermal overload protection, individual control circuit transformers with fuseless primary and secondary protection, pressure sensors, temperature switches with reset buttons, and an electronic controller to automatically change the operating sequence of the compressors. The cabinet shall have status display to include system pressure, dew point pump operation, accumulated time, maintenance interval, fault conditions, and silence button, lighted Hand-Off-Automatic selector switches and safety disconnect operating handles. All required local alarm functions shall be integrated in to the packaged system.
27	6.1 Master Alarm Should be European CE Certified or UL listed under Medical Devices Directive. Complies with HTM 02-01 / NFPA 99C/EN/DIN/ ISO 7396-1 Standards.	Amended as: It should be US FDA / European CE Certified with 4 digit notified body number or American ETL/ American UL listed Complies with HTM 02-01 / NFPA 99C/EN/DIN/ ISO 7396-1 Standards.
28	Para 6.2 Each Master Alarm should be modular in design and be fitted with required number of master alarm modules. The master alarms should be capable to monitor 10 to 30 Point in a standard box or 10 to 50 points in a large box.	Amended as: Master Alarm Should be Digital. Each Master Alarm should be modular in design and be fitted with required number of master alarm modules. The master alarms should be capable to monitor minimum 50 Point.

29	Master AlarmAdded Para:	The master alarm must be able to monitor the following source alarm conditions. • Oxygen Source Empty/Fault• Oxygen Cylinder Bank Empty/Fault• Oxygen Emergency Bank Empty/Fault• Air Compressor Faulty/Operation• Vacuum Pump Faulty/Operational• Vacuum Deficiency Vacuum Reservoir • And Other MGPS Signals & Alarms
30	6.2Medical Gas Alarm (Main & Area) The medical gas central alarms should be capable of monitoring 6 medical gas services by means of pressure sensors which detect deviations from the normal operating limits of either pressure or medical vacuum. The area alarm should have a digital/analogue display of pressures. The medical gas area alarm should fully satisfy the HTM 02-01/ NFPA 99 C/EN/DIN requirements and should be European CE Certified or UL listed	Amended as: The medical gas central alarms should be capable of monitoring 6 medical gas services by means of pressure sensors which detect deviations from the normal operating limits of either pressure or medical vacuum. The area alarm should have a digital display of pressures. The medical gas area alarm should fully satisfy the HTM 02-01/ NFPA 99 C/EN/DIN/ISO 7396 requirements and should be It should be US FDA / European CE Certified with 4 digit notified body number or American ETL/ American UL listed
31	7. AREA VALVE SERVICE UNIT The Area Valve Service Unit should incorporate a ball valve with NIST connectors either side mounted in a lockable box with emergency access. It should be reliable and easy to operate and must have NIST connectors facilitate easy purge, sample & pressure testing and emergency supply system. The unit should be pre-piped, wired and tested ready for installation into a finished building. Medical gas/vacuum services should be fixed copper, piped to and from their respective area valve service units. The box shall be made from extruded aluminium to prevent corrosion. All wetted parts (except seals and gaskets) should be factory tested for gas tightness. Rubber pipe grommets should be provided to ensure any leaking gas does not escape from the unit into	Amended as: AREA VALVE SERVICE UNIT without Valves The Area Valve Service Unit should incorporate a ball valve (mentioned in BOQ at Sl.no.12) in a lockable box with emergency access. It should be reliable and easy to operate, facilitate easy purge, sample & pressure testing and emergency supply system. Medical gas/vacuum services should be fixed copper, piped to and from their respective area valve service units. The box shall be made from extruded aluminium to prevent corrosion. All wetted parts (except seals and gaskets) should be brass or copper. Each unit assembly should be factory tested for gas tightness.
	a wall cavity. All visible aluminum surfaces should be powder coated.	It should be CE certified

32	8.BED HEAD PANELSFacility per unit as under:Lamp with flexible LED lighting – 1It shall confirm to HTM 02-01 / NFPA99C/EN/DIN/ ISO 7396-1 Standards. It should have following featuresFacility per unit as under:Oxygen – 2Vacuum – 2Medical Air-1Holder for vacuum collection jar –1Nurse call switch – 1Lamp with flexible LED lighting – 1Infusion pump mount pole with adapter for mounting at least two infusion pumps5 /15 A combined Electrical outlets – 6.RJ-45 socket -01Two spare spacesMonitor BracketLamp with flexible LED lighting – 1The size of vertical & Horizontal bed head panel should be sufficient to accommodate all the services specified(Approx 1800mm [Approx. 1800]All down drops should be installed at one end preferably & Vertical drop installed at one end should be covered with Aluminium boxing with matching color.	Amended as:Facility per unit as under:Lamp with flexible LED lighting – 1It shall confirm to HTM 02-01 / NFPA99C/EN/DIN/ ISO 7396-1 Standards. It should have following featuresFacility per unit as under:Oxygen – 2Vacuum – 2Medical Air-1Lamp with flexible LED lighting – 1 with 1500 lux intensity measured at 1 mtr. distanceInfusion pump mount pole with adapter for mounting at least two infusion pumps6/16 A combined Electrical swiss sockets – 6.RJ-45 socket -01The size of vertical & Horizontal bed head panel should be sufficient to accommodate all the services specified(Approx 1500 to 1800mm)All down drops should be installed at one end preferably
33	Bead head panels	Added Para:Segregation of services i.e. Low voltage supplies, High Voltage supply and Medical gases should be maintained with 2 tier/2 channel arrangements.It should be pre piped & fitted with outlets
34	9. Gas Outlets Outlet should be European CE certified or American UL listed	Amended as: Outlets should be It should be US FDA / European CE Certified with 4 digit notified body number or American ETL/ American UL listed

35	10. AGSS System The package should consist of two rotary vane vacuum pumps, a control panel, and mounted on a common base frame.	Amended as: The package should consist of two rotary vane/claw type vacuum pumps, a control panel, and mounted on a common base frame.
36	AGSS System	Added Para: AGSS System: All necesary cabling for AGSS remote control indicator, AGSS alarm etc. to be done by the bidder Any adaptor required for connecting with Anesthesia machine with active AGSS should be provided per each OT along with AGSS system
37	11.PENDANTS FOR ANESTHETIST AND SURGEON(OPTIONAL)	Item Deleted
38	8. Copper Pipespg.no.61 of BOQSolid drawn, seamless, deoxidised, non- arsenical, half hard, tempered and degreased copper pipes as per tender technical specifications76mm OD X 1.2mm thick	Amended as: 76mm OD X 1.5mm thick
39	All functional components should be enclosed on fire resistant, robust synthetic polymer/SS.(pg.46)	Amended as: All functional components should be enclosed in corrosion resistant robust material
40	MGPS System	Added Para: Line Isolation Valves: The Lockable line valves must degreesed and complete valve with stuffed pipe & fittings, factory tested and complies with HTM 02-01/ NFPA 99 C/EN/DIN/ISO 7396-1 standard.
41	MGPS System	Added Para: The Medical Gas Pipe Line System must follow Single Standard any one only from: NFPA 99c/HTM 02-01/ ISO 7396-1/DIN/EN except Copper Pipe, For AGSS Ventury type is not acceptable.

42	MGPS System	Added Para:1.Bidder may collect AutoCAD drawings of hospitals on the same day of receiving NOA from HITES office.2. Bidder should prepare drawings & final list of outlets etc. in consulation with HITES within 10 days from date of NOA.3. The working power required for erection of equipment/pipeline etc. has to be arranged by bidder themselves.4. Bidder has to draw power cables and switch sockets required for area alarms from nearest power source in consulation with HITES site engineer.
43	MGPS System	Added Para: Wherever "European CE or UL listed" is mentioned in the technical specifications, the same may be read as US FDA or European CE Certified with 4 digit notified body number or American ETL or
44	MGPS System	American UL listed Added Para: Bidder should be responsible for antistatic rubber flooring in the manifold room and thickness of flooring not less than 1/2 inch. Bidder should provide a raised Loading/Unloading Platform of suitable sized adjacent to manifold room, so that cylinder can be loaded & unloaded easily form the lorry/vehicle. Bidder should be responsible for foundation of Plant Room (If required) for Medical Air Plant, Vacuum Pant & AGSS Plant.
45	MGPS System	Added Para: The Medical Gas Pipe Line System must follow Single Standard any one only from: NFPA 99c/HTM 02-01/ ISO 7396-1/DIN/EN except Copper Pipe, For AGSS Ventury type is not acceptable.

All other contents of the tender enquiry including terms & conditions remain unaltered.

Note:

i. Prospective Bidders are also advised to check the website regularly prior to the closing date and time of online submission of bids