अखिल भारतीय आयुर्विज्ञान संस्थान, रायपुर (छत्तीसगढ़)
All India Institute of Medical Sciences, Raipur (Chhattisgarh)
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Tender Enquiry No. ADMIN/Tender/MGPS/1/2013

Corrigendum

Subject: This office tender enquiry number: ADMIN/Tender/MGPS/2013/ Dated 10-09-2013

For supply, installation and commissioning of medical Gas Pipelines (MGPS) at All India Institute of Medical Sciences Raipur (CG)

Various queries raised by bidders during pre-meeting held at Committee room 1st floor medical college building, AIIMS Raipur, has been examined by technical and commercial committee and amendment is issued here under.

Due date and Bid submission date: 18.10.2013; 1400 hours

Time and date of opening of Technical tenders: 18.10.2013; 1430 hours

Time and date of opening of Financial tenders: will be notified to successful bidders

The prospective bidders should note the following points:

1. Wherever specifications are not mentioned, the following specification – USFDA / CE / HTM 2022 / HTM 02-01 / C11 / NFPA 99 will apply;
2. The successful bidder should attach manufacturer technical data sheet wherever applicable
3. The unit price of each item mentioned in the BOQ should be quoted separately also
4. The pipeline from MGPS manifold up to Ayush PMR will be suspended on the boundary wall at the backside of the building. The gas pipelines should be covered by protective covering made of rust proof and non-fragile metallic material and is to be provided by the bidder.
5. Wherever the MGPS is exposed inside the trauma building, it should be covered with a fire-proof material, which should have aesthetic colors and design. The purpose of this cover is to protect the pipeline and to enhance the aesthetic look of the surrounding.
6. The scope of pipeline supply will include any expenses to construct any framework or any suspension to be made as per the requirement.
7. The pipeline should be supported at intervals specified in HTM-02-01 using a suitable medical grade material

8. Installation of pipelines should be carried out with utmost cleanliness. Pipes, fittings and valves, which have been degreased and fittings brought in polythene-sealed bags at site shall be used.
9. All joints shall be made of copper-to-copper and brazed by silver brazing filler material without use of any flux. Inert gas welding techniques should be used by oxygen free nitrogen gas inside copper pipes while brazing to avoid carbon deposition.
10. After installation, the pipes should be flushed and pressure tested with dry air at a pressure equal to 1.5 times of working pressure or 150 psig whichever is higher for a period not less than 24 hours
11. The testing of the pipeline system shall be done in presence of the AIIMS representative
12. Exposed pipes should be painted with 2 coats of synthetic enamel paint and color coded as per IS: 2379 of 1963
13. Alarm system should be provided for medical gas pipeline system as per standards along with manufacturers technical datasheet

Page No/Clause no/ point no	Existing sentence	To be read as
Page 36 point vii	Inspection Certificate for the dispatched equipments issued by recognized/ reputed agency like SGS, Lloyd or equivalent (acceptable to the purchaser) prior to dispatch	**Inspection Certificate for the dispatched copper pipes should be issued by recognized/ reputed agency acceptable to the purchaser prior to dispatch**
Page no 55 Material Pipe Add sentence	The piped distribution system shall use copper pipes manufactured from phosphorous de-oxidised non-arsenical copper, seamless, half-hard, tempered. Pipes are to be degreased suitable for oxygen use.	The piped distribution system shall use copper pipes manufactured from phosphorous de-oxidized non-arsenical copper, seamless, half-hard, and tempered. Pipes are to be degreased suitable for oxygen use. **The Copper pipe should be medical grade and conform to BSEN 13348:2008**
Page no 57	Accessories For 500mm-wide rank Shelf (load capacity 80kg), 450mm / 550 (W) x 350mm (D) x nos Shelf with drawer (load capacity 80kg), 450mm/550 (W) x 350mm (D) x nos For 700mm-wide rank Shelf (load capacity 80kg), 650mm) x 350mm (D) x nos Shelf with drawer (load capacity 80kg), 650mm x 350mm (D) x nos	Accessories For 500 mm-wide rank Shelf (load capacity 80 kg), 450 mm / 550 (W) x 350 mm (D) x **2 nos** Shelf with drawer (load capacity 80 kg), 450 mm/550 (W) x 350 mm (D) x **2 nos** For 700 mm-wide rank Shelf (load capacity 80kg), 650 mm) x 350 mm (D) x 2 nos Shelf with drawer (load capacity 80 kg), 650 mm x 350 mm (D) x **2 nos**

Replace List of Requirements (BOQ) Part I given in Section VI by the BOQ given below:

1. BOQ for Ayush PMR building

SNo.	Description of work	Qty.	Unit
1	Terminal Units: Front loaded, color coded, gas specific, wall / panel mounting type		
	Oxygen	12	no.
	Nitrous Oxide	02	no.
	Compressed air 4 bar	12	no.
	Compressed air 7 bar	02	no.
	Vacuum	12	no.
2	Oxygen Flow Delivery Unit with humidification device	10	no.
3	Wall Mounted Patient Vacuum System 600 ml	10	no.
4	Wall Mounted Patient Vacuum System 2000 ml	00	no.
5	Trolley Mounted vacuum unit for OT along with 2 nos. suction jars 2000 ml	02	no.
6	Medical Gas and Vacuum warning system		
	2 services	0	no.
	3 services	2	no.
	4 service	0	no.
	5 services	1	no.
	6 services	0	no.
7	Medical Gas Zonal Valve with Indicator		
	2 services	0	no.
	3 services	2	no.
	4 service	0	no.
	5 services	1	no.
	6 services	0	no.

SNo.	Description of work	Qty.	Unit
8	Copper Tubes		
	12mm	0	mt.
	15mm	70	mt.
	22mm	50	mt.
	28mm	350	mt.
	42mm	1050	mt.
	54mm	350	mt.
9	Area Isolation Valves		
	15mm	0	nos.
	22mm	0	nos.
	28mm	0	nos.
	42mm	0	nos.
	54mm	0	nos.
10	Medical Supply Units for Critical care areas - Bed head Panel having 3Nos Switch socket Cutout, Nurse call cutout, data and telephone point, IV stand. 1500mm long for Semi and Private room	0	nos.
11	Medical Supply Units for Critical care areas - Bed Head trunking having cutout only for Gas Outlets, electrical socket etc.	0	Mtrs
12	High Pressure Flexible Tubes		
	Oxygen	10	Mt.
	Nitrous Oxide	10	Mt.
	Compressed air	10	Mt.
	Vacuum	10	Mt.
13	Intelligent Electrical Panel for Medical Suction and Medical air delivery System	1	no.

2. BOQ for Trauma building

S No.	Description of work	Qty.	Unit
1	Oxygen Control Station - (CE); minimum 1500 lpm at 60 psig	1	No.
2	Oxygen cylinder mounting system of 10 X 2 bank	1	Set
3	Oxygen Emergency Control Station - (CE)	1	No.
4	Oxygen Emergency cylinder mounting system of 5 cylinder	1	Set
5	Nitrous Oxide Control Station (CE); minimum 500 lpm at 60 psig	1	No.
6	Nitrous Oxide Cylinder mounting system of 2 X 2bank	1	Set
7	Nitrous Oxide Emergency Control Station	1	No.
8	Nitrous Oxide Emergency cylinder mounting system of 2 cylinder	1	Set
9	CO2 Cylinder Mounting system of 2X4 bank with control station	1	Set
10	Duplex Medical Air Delivery system rated capacity 57 CFM approx. 1000 liter reservoir and Air Dryer, Air Filters and Reducing stations along with all accessories	1	Set
11	Duplex Medical Suction system: of capacity 90 cfm approx. with 2000 liter reservoir, vacuum filter, silencers, automation and required accessories	1	Set
12	Terminal Units: Front loaded, color coded, gas specific, wall / panel mounting type (CE)		
	Oxygen	134	no.
	Compressed air 4 bar	57	no.
	Compressed air 7 bar	4	no.
	Vacuum	134	no.
	CO2	3	no.
	AGSS (Details are given at the end)	3	no.
13	Oxygen Flow Delivery Unit with humidification device	135	no.
14	Wall Mounted Patient Vacuum System 600 ml	80	no.

S No.	Description of work	Qty.	Unit
15	Wall Mounted Patient Vacuum System 2000 ml	55	no.
16	Trolley Mounted vacuum Unit for OT along with 2 nos. suction jars 2000 ml	10	no.
17	Medical Gas and Vacuum warning system		
	2 services	2	no.
	3 services	3	no.
	4 service	0	no.
	5 services	2	no.
	6 services	3	no.
18	Medical Gas Zonal Valve with Indicator		
	2 services	2	no.
	3 services	3	no.
	4 service	0	no.
	5 services	2	no.
	6 services	3	no.
19	Copper Tubes		
	12mm	400	Mt.
	15mm	749	Mt.
	22mm	663	Mt.
	28mm	250	Mt.
	42mm	75	Mt.
	54mm	355	Mt.
	76mm	495	Mt.
	108mm	165	Mt.
20	Area Isolation Valves		
	15mm	7	nos.

S No.	Description of work	Qty.	Unit
	22mm	**9**	**nos.**
	28mm	**5**	**nos.**
	42mm	**0**	**nos.**
	54mm	**0**	**nos.**
21	**Medical Supply Units for Critical care areas - Bed head Panel having 3Nos Switch socket Cutout, Nurse call cutout, data and telephone point, IV stand. 1500 mm long for Semi and Private room**	**70**	**nos.**
22	**Medical Supply Units for Critical care areas - Bed Head trunking having cutout only for Gas Outlets, electrical socket etc.**	**53**	**Mtrs**
23	**Modular ICU pendants for pre/postoperative room/ICU for gas supply system**	**10**	
24	**High Pressure Flexible Tubes**		
	Oxygen	**60**	**mt.**
	Nitrous Oxide	**60**	**mt.**
	Compressed air	**60**	**mt.**
	Vacuum	**60**	**mt.**
	CO2	**60**	**Mt.**
25	**Intelligent Electrical Panel for Medical Suction and Medical air delivery System**	**1**	**no.**

BPC Flow meter with Humidifier, Ward Vacuum Units, and Theatre Vacuum Units should be CE or ISO certified

High-pressure tube

- **It should be color coded for individual services i.e. white for Oxygen, Blue for N20, Black for Air & Yellow for Vacuum, antistatic rubber tube, as per ISO standards and CE marked.**

3. Specifications for AGSS system –

Anesthetic Gas Scavenging System (AGSS)

It should fully comply and meet with BS6834, HTM 2022, HTM02-01, C11, and must be duly CE marked. Duplex AGSS System should be supplied with twin standalone AGSS pumps of 3 phase 650 1/min capacity each with built in flow indication and pressure regulation valve. It should be mounted on a single frame with control panel and separate warning label. The pumps should work alternatively (while one pump work the other one remains standby). The package should consist of two rotary-vanes, a control panel, and a receiver all mounted on a common base frame.

AGSS pump: AGSS pump shall operate completely dry permanently lubricated and sealed. Each pump should be completely air-cooled and have absolutely no water requirements.

Control System: The duplex control system should conform to International Standards. The control system should provide automatic changeover from running to reserve with circuit breaker disconnects for each AGSS pump with external operators, full voltage motor starters with overload protection, control circuit transformers, visual and audible reserve unit alarm with isolated contacts for remote alarm. It should be in duplex format and must be chassis mounted ready for installation. Duplex system in-line non-return valves should allow individual pump servicing.

AGSS design should be dependent upon flow rate and pressure drop characteristics of the individual components of a system

The AGSS should be provided with terminal units, remote controls and pump units; such that it will be a complete functional system.

Each AGSS system must be provided with Remote Control indicator and AGSS hose kit with probe so that it can be made fully functional to use.

Internal wiring from AGSS plant to individual OT will be done by the firm.

Administrative Officer
AIIMS, Raipur