Tender No: BMSICL/2013-14/MC-010

Minutes of meeting of pre-bid meeting for tender no. BMSICL/2013-14/ MC-010 held on 7th February, 2014 at conference hall of BMSICL.

Background:

Tender for medical Equipments is invited vide tender no. BMSICL/2013-14/MC-010. Notice Inviting Tenders (NIT) was published [Advertisement ID. 13218 (Letter No. 1767)] in Dainik Jagaran (all editions of Bihar), Hindustan Times (all India editions) and Times of India (all India editions) on 24th January, 2014.

The said tender notice was also uploaded on the website of BMSICL i.e. www.bmsicl.gov.in for information of all concerned.

Pre-Bid Meeting:-

Pre- bid meeting of the prospective bidders of the above mentioned tender was held on 7th February, 2014 at conference hall of BMSICL in the presence of following members:

1. Tripurari Kumar (GM (F&A), BMSICL, Patna)
2. Gautam Agrawal (DGM (Drugs), BMSICL, Patna)
3. Biomedical Engineers (Shivam Anand, Siddhartha Singh, Lava Mishra, Naqui Zaidi)

In all sixteen prospective bidders or their authorised representatives participated in the pre-bid meeting. Attendance of participants was taken prior to the commencement of the meeting and record is maintained in the attendance register.

As an outcome of discussion held in the meeting, some amendments in specifications and other terms and conditions of 8 Equipments were considered to be incorporated in the bid document. **Detail of amendments is attached as Annexure I, II, III, IV and V** further contains details related with these amendments. Further, **the last date for sale** of tender documents has been extended to **28th February 2014 till 3:00** pm and **last date for submission** has been extended to **3rd March 2014 till 2:00 pm**. The bid will **be opened** in the presence of prospective bidders on **3rd March 2014 at 4:00** pm in BMSICL office.

T. Kumar 27/02/2014

(Tripurari Kumar)
GM(F&A)

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ANNEXURE-I

3 Part Haematology Analyzer		
Sl. No.	**Specification Before Amendment**	**Specification After Amendment**
1.	Point No. 1-Should be fully Automated three Part Haematology Analyser providing 20 Parameters including a 3-part differential.	Point No. 1.-Should be fully Automated three Part Haematology Analyser providing at least 18 Parameters including a 3-part differential.
2.	Point No.3-System should be capable of processing samples at 70 samples/hour & storage memory result capacity 10000.	Point No.3-System should be capable of processing samples at 60 samples/hour & storage memory result capacity 10000.
3.	Point No.4- The System Should be based on "closed, Maintenance free sample Rotary Valve(SRV)" for precise sample all quoting for dilution.	Point No.4- The System Should be based on "closed, Maintenance free liquid Valve/ sample Rotary Valve(SRV)" for precise sample all quoting for dilution.
4.	-	Point No. 16- online UPS with 60min back up should be supplied with the instrument.
5.	-	Point No.17- one set of complete reagent kit should be supplied along with the instrument.
6.	-	Point No.18-Price evaluation will be done as per annexure III
7	-	Point No. 19-Reagent Consumption chart for 10 test per day (including two times ON/OFF) should be provided .

5 Part Haematology Analyzer		
Sl. No.	**Specification Before Amendment**	**Specification After Amendment**
1.	Point No.1-It should be fully automated flow cytometry based 5-part differential Haematology Cell Counter with semi automated fluorescent reticulocyte count and can run single samples with NMB coated tubes.	Point No.1-It should be fully automated flow cytometry /VCS technology based 5-part differential Haematology Cell Counter with semi automated fluorescent reticulocyte count and can run single samples with NMB coated tubes.
2.	Point No.6(b) RBC measurement by 3 angles optical method.	Point No.6(b) RBC measurement by minimum 2 angles optical method.
3.	Point No.6(c) PLT measurement by 2 angles optical method.	Point No.6(c) PLT measurement by minimum 2 angles optical method.
4.	Point No. 6(e) & (f)	Deleted
5.	Point No.15- There should be long life He-Neon Laser.	Point No.15- There should be long life He-Neon Laser/semi conductor laser.
6.	-	Point No. 17- online UPS with 60min back up should be supplied with the instrument.
7.	-	Point No.18- one set of complete reagent kit should be supplied along with the instrument.

Shivam Anand
Biomedical Engg.
BMSICL
21/02/14

21/02/14
LAVA MISHRA
Biomedical Engineer.

21/02/14
Siddhartha Singh
Biomed. Engg.
BMSICL

Noqui Zaidi
21/02/14
Biomedical Engineer

8.	-	Point No.19- Price evaluation will be done as per annexure IV
9.	-	Point No. 20-Reagent Consumption chart for 50 test per day (including two times ON/OFF) should be provided .

Hospital General Bed with Mattress

Sl. No.	Specification Before Amendment	Specification After Amendment
1.	Point No.15-Bed production facility to be US FDA registered. Bed to be CE & facility to be ISO 9001 and 13485 approved	US FDA approved or production facility to US FDA Registered.

High End ICU Bed

Sl. No.	Specification Before Amendment	Specification After Amendment
1.	Point No.3- Under Bed clearance to be 130mm or more.	Point No.3- Under Bed clearance to be 125mm or more.
2.	Point No.25-Bed production facility to be US FDA registered. Bed to be CE & facility to be ISO 9001 and 13485 approved	US FDA approved or production facility to US FDA Registered.

LED O.T. LIGHT

Sl. No.	Specification Before Amendment	Specification After Amendment
1.	Point No.6- Colour temperature for both the dome should be adjustable from 3800k to 4300K	Point No.6- Colour temperature for both the dome should be in the range of 3800k to 5000K
2.	Point No.7- Lamp Life of 40000hrs	Point No.7- Lamp Life of 30000hrs or more.
3.	Point No.9- Has touch based control panel.	Point No.9- Has touch/button based control panel.
4.	Point No.13- The light should have the unique function that enables light field adjustment to the surgical field, giving you the choice between Circular and oval illumination.	Point No.13- The light should have the unique function that enables light field adjustment to the surgical field.
5.	Point No.14-The facility of adjusting the light field geometry in accordance with anatomical requirements or the operating techniques used.	Point No.14-The facility of adjusting the light field geometry in accordance with anatomical requirements .
6.	Technical Data: CRI for Main dome (95) and CRI for Satellite dome (95) LED service Life for Main Dome(40000hr) and for Satellite dome(40000hr)	Technical Data: CRI for Main dome (85±10) and CRI for Satellite dome (85±10) LED service Life for Main Dome(30000hr or more) and for Satellite dome(30000hr or more)

CTG Machine

Sl. No.	Specification Before Amendment	Specification After Amendment
1	-	US FDA approved

OT Table

Sl. No.	Specification Before Amendment	Specification After Amendment
1.	Point No.1-Hydraulic OT Table are simple tables for performing surgical procedures and it works without electrical power.	Point No.1- Electro-Hydraulic OT Tables are operated with ease and smoothness with press of buttons of remote or control panel.

2.	Point No.5- The casings on the frame and centres supporting columns should be made of hygienic stainless steel.	Point No.5- The casings on the frame and centres supporting columns should be made of hygienic stainless steel and should have built in elevator for kidney and chest bridge.
3.	Point No.7(a)- Height 730mm-1040mm.	Point No.7(a)- Height 400mm-950mm.
4.	Point No.7(b)-Side tilt +15Deg.	Point No.7(b)-Side tilt +20Deg.
5.		Power Supply- Should operate on 240V Power supply with battery back – up for 50-80 operations for at least two weeks.

Kiran Anand

21/02/14

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Naqui Zaidi

ANNEXURE – II

Final Specification for DIGITAL RADIOGRAPHY

Should be a Digital Radiography system with single flat panel detector, capable to take digital images in horizontal, vertical and oblique positions of all skeletal body including spine and chest.

The detector should be fixed type and move between horizontal and vertical positions.

GENERATOR

1. Generator should be of latest high frequency inverter technology for constant output and lowest radiation doses.
2. Should have at least 80 KW power.
3. The range should be from 40 to 150 KV.
4. Should have 800mA or more at 100KV.
5. Should have automatic exposure control device.
6. Should have anatomical programming radiography.
7. Should have over loading protection feature.
8. Should have a digital display for KV and mAs.

X-RAY TUBE AND COLLIMATOR

1. Should be a high speed rotating anode dual focus tube compatible with the generator
2. Should have focal spot sizes of 0.6mm and 1.2mm or less.
3. Should have an anode heat capacity of 300KHU or more
4. Should have a multi leaf collimator having halogen/bright light source with auto shut provision for the light
5. Should have over load protection.

CEILING SUSPENDED TUBE

1. Should be ceiling suspended type.
2. It should have movements in all directions i.e. 3D transverse 140 cm or more, longitudinal 290 cm or more and vertical 125 cm or more.
3. All movements should have electromagnetic brakes with fully counter balanced mechanism.
4. It should have facility to display FFD/SID.
5. It should have provision of auto centering with the detector.
6. Tube rotation at vertical axis and horizontal axis +/ - 180 degree.

X-RAY TABLE

1. Should be a horizontal table with carbon fiber table top of minimum 2000mmx720mm.59 with adjustable height.
2. It should have a weight bearing capacity of 200kg or more.
3. The X Ray table should have carbon fiber top and fixed type.

VERTICAL DETECTOR STAND

1. Should have an in-built detector capable to take digital images in horizontal, vertical and oblique positions with suitable movements for all skeletal body including spine and chest.
2. It should have provision to do chest radiography without grid.
3. It should have automatic exposure control with at least 3 fields.
4. Should be supplied with grids suitable for horizontal and vertical imaging.
5. The detector should be capable of rotating on its axis across +90 to -15 degrees synchronized with X ray tube.

Naqvi Zaidi

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DIGITAL DETECTOR

1. There should be two detectors one in the table and other in the vertical stand of latest technology with Cesium Iodide scintillator.
2. The size of the detector should be 35 cm x 41 cm or more.
3. Should have a minimum spatial resolution of 3 lines pair/millimeter or more.
4. Detector Quantum Efficiency (D.Q.E) should be more 55% @ Zero Line Pairs.
5. The active matrix size should be 2 k x 2k or more.
6. Should have a minimum image depth of 14 bit.

IMAGE ACQUISITION, IMAGE PROCESSING

1. The digital workstation should be based on the latest high speed processors of at least 32 to 64 bit.
2. It should have the possibility of acquiring the image from the detector system. Should have preview time 5 seconds or better.

3. It should have image storage disk of 70 Gigabyte or more.

4. The system should have ready DICOM interface and networking capability with RIS/HIS/PACS.

5. Post processing function must be available.

6. System should be upgradable to stitching option.

7. (1+4) Workstation one state of the art latest Pentium system minimum 2 GB RAM, minimum 1 Tera Byte Hard disk, 19" or more Medical grade monitor supported by all necessary software for all the various DR functions and four additional fully networked workstation with high resolution monitors. DICOM images should be viewed on all the four additional workstations. The configuration of the main and additional work stations should be specified in the bid and should be supplied with suitable table and UPS.

8. Dry Laser camera with at least 3 online film tray, 500 dpi or more for printing the digital images should be supplied.

9. A CD, DVD – R/W drive should be supplied.

10. Free comprehensive software upgrade with existing platform on site till CMC.

ACCESSORIES

1. On line UPS with 30 minutes back up for work station and laser camera (3 hrs backup).
2. Lead Glass of size 80cms x 120cms.
3. Lead apron: 6 nos
4. Thyroid and Gonad protection.
5. Four 3 ton split AC for X-ray and work station room.
6. Diesel Generator 100 KVA
7. Chemical earthing
8. Film badge for radiation measurement – 20p/c per college.
9. Syringe needle destroyer.

CERTIFICATION:

1. The equipment must have AERB approved.
2. System should have FDA/CE approval.

TRAINING:
Training of doctors and technicians 7 days continuous at the site where equipment is installed.

TURNKEY
The bidder will carry out installation on turnkey basis. To assess the turnkey costs the bidder may visit the sites before quoting for the equipment.

Nagui Zaidi

ANNEXURE III

3 PART CELL COUNTER

Cost Calculation will be done considering following points:-

1. Cost of instrument with three years warranty.
2. The price of reagents like Diluent, Lyse, Cleaning, extra cleaning should also be taken into consideration for price evaluation. Hence price of all the reagents with pack-size which will be used during 10 years should be quoted with the consumption chart.
3. CMC, quoted to use within 10 years (i.e.So that there should not be any hidden cost within warranty & CMC period) and will be considered for price evaluation.
4. Institution shall not pay any amount within 10 years against any consumables which are not provided along with warranty and CMC.

Price Comparison Chart

	0th Year	1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	8th Year	9th Year	10th Year
Cost of Equipment with three years warranty											
CMC inclusive of all spare and consumable parts	NIL	NIL	NIL	NIL							
Cost of 3650 test per year(Considering min two times ON-OFF daily)	NIL										

* **No. of test is expected each year per machine. It may increase or decrease.**
* **Price Evaluation will be done on the net present value with discount factor of 8%.**

Nagvi Zaidi.

Breakups for cost and consumption of Reagents.

Particulars	Consumption in ml for 3650 Test	Consumption in ml for Two Times ON for 365 days	Consumption in ml for Two Times OFF for 365 days	Total Consumption in ml for 3650 test	Rate per ml	Total
Diluent						
Lysner						
Clinic Solution						
					Gross Total	

* In case of Reagents price is different for different years, table for all such cases should be provided.

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ANNEXURE IV

5 PART CELL COUNTER

Cost Calculation will be done considering following points:-

1. Cost of instrument with three years warranty.
2. The price of reagents like Diluent, Lyse, Cleaning, extra cleaning should also be taken into consideration for price evaluation. Hence price of all the reagents with pack-size which will be used during 10 years should be quoted with the consumption chart.
3. CMC, quoted to use within 10 years (i.e. So that there should not be any hidden cost within warranty & CMC period) and will be considered for price evaluation.
4. Institution shall not pay any amount within 10 years against any consumables which are not provided along with warranty and CMC.

Price Comparison Chart

	0 Year	1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year	7th Year	8th Year	9th Year	10th Year
Cost of Equipment with three years warranty											
CMC inclusive of all spare and consumable parts	NIL	NIL	NIL	NIL							
Cost of 18250 test per year(considering min. two times ON-OFF daily)	NIL										

* **No. of test is expected each year per machine. It may increase or decrease.**
* **Price Evaluation will be done on the net present value with discount factor of 8%.**

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Breakups for cost and consumption of Reagents.

Particulars	Consumption in ml for 18250 Test	Consumption in ml for Two Times ON for 365 days	Consumption in ml for Two Times OFF for 365 days	Total Consumption in ml for 18250 test	Rate per ml	Total
Diluent						
Lysner						
Clinic Solution						
					Gross Total	

* If rate is different for different year, then years wise table should be provided.

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ANNEXURE – V

Revised Specification of Anaesthesia Workstation

Description of function:

Anaethesia machine is used for delivering anesthesia agents to the patients during surgery and monitors the vital signs and ventilates the patient.

1. Technical Specification

Frame:Anesthesia system be high end three gas system with three gas Oxygen, Nitrous Oxide and Medical Air double scale flowmeter with high and low flow and minimal flow provisions. System should be designed such that all components are integrated to minimise dead space.Should have an independent Oxygen flow meter for Oxygen delivery and an integrated variable flow suction unit.

a) Anaesthesia machine should have high grade reinforced fibre frame free from oxidation. It should have three drawers, one retractable writing table, and rigid top tray.
b) System should have at least two drawers and an additional writing surface that can be easily accessed.
c) Drawers shall be easily removed for the purposes of cleaning and sterilisation.
d) Pipeline, cylinder and Airway pressures should all be displayed on colour coded gauges and be visible at all times during operation.
e) Should have provision to attach 2 cylinders 1 each for O2 and N2O.
f) System should have a second user accessible port for extraction of Anesthetic gas when using a non re-breathing patient circuit. System should also provide the option of returning sample gas to the scavenging system with a dedicated port.
g) A single pneumatic/electric on/off switch should activate the gas flow and vaporization.
h) The unit should have a battery back up facility for the ventilator in the event of power loss and should operate for a minimum of one hour.
i) In the event of complete power loss and battery failure it shall still be possible to manually ventilate and deliver anaesthetic agent.
j) System should have easily accessible common gas outlet in the event of an emergency and for use of alternate breathing circuits.
k) Should have unlockable Oxygen flush to deliver oxygen flow of approximately 35/40 l/min.
l) Should have built in safety features like O2 failure alarm, N2O cutoff, Low O2 pressure etc.,
m) The frame should have integrated power outlets to supply a minimum of four external devices.
n) Should have locking of the castors by brake mechanism.

2. Gas Flow

a) Machine should have electronic gas flow mixing and electronic flow meters.

3. Vaporizers

a) The unit should accommodate two vaporizers for anesthetic agent delivery to allow easy selection of agent to be used.
b) Vaporiser should be selected/quick mount type, tool free installation and vaporiser of our choice can be mounted at will with interlocking facility to allow operation of only one vaporiser at one time.
c) Vaporizers supplied with the unit shall be routine maintenance free for the life of the product.
d) Should provide temperature, pressure and flow compensated Halothane, Isoflurane and Sevoflurane key filled or bottle filled vaporisers .

4. Breathing System

a) All parts of the breathing system that are in contact with patient gas should be latex free and autoclavable.Should not require tools when dismantled for cleaning and sterilization.

b) One canister of suitable size shall be provided.
c) The ventilator bellows shall be clearly visible and should ascend on expiration to provide a quick visual indicator for system leaks.
d) Breathing system should have the option of CO2 Absorber bypass control that will allow the absorber canisters to be removed without introducing system leaks. CO2 absorber should have APL valve, and it should be suitable for low flow anesthesia.
e) Should have bag / vent selecting valve integrated onto the absorber and should automatically turn on the ventilator when positioned to vent mode.
f) Should have flow sensing capabilities at inhalation and exhalation ports. It should have adjustable pressure pressure limiting valve and should be flow and pressure compensated.

5. Ventilatior

a) Ventilator should be pneumatically/electrically driven, electronically controlled and should be ascending bellows/bag in bottle/piston type.
b) Ventilator shall have a large color display with touch screen user interface.
c) Ventilator should have the following ventilation abilities, volume control, decelerating flow pressure control, SIMV with pressure support and pressure support.
d) Ventilator should be capable of ventilating diverse range of patient groups from neonates to patients with restrictive airways with tidal volume range between 20 ml to 1500 ml with single bellows system.
e) Assisted modes of breathing should be flow triggered.
f) Ventilator shall have an active proportional exhalation valve to prevent the potential of over delivery during pressure modes of ventilation.
g) Ventilator should have a leak and compliance test that can be done independently of the full system check.
h) On switching on, the ventilator system should be able to and shall give the user a choice of doing a unit test or bypassing in the case of an emergency.
i) Ventilator shall compensate for fresh gas flow and compliance of the entire circuit dynamically.
j) Measurement at the patient end of the circuit (sensor at the patient end) should be provided to compensate for small leakages and compressible volume variability that occur during ventilation.
k) User should also have the option of setting a pre set compliance correction where similar circuits are used constantly.
l) Should provide constant fresh gas flow into the breathing circuit during the inspiratory phase as mandatory.
m) Ventilator should have the ability to set and store a hospital default as well as individual user preferences for easy selection of ventilation parameters and include screen layout, alarm preferences and ventilation settings.
n) Apnea alarms must be user adjustable to allow for all operating conditions and phases during Anesthesia.
o) Ventilator should have the ability to display and store Patient Spirometery loops including Flow-Volume and Pressure-Volume curves.The loops may be displayed on ventilator/monitor screen.
p) Ventilator should also display waveforms for flow and airway pressure.
q) Ventilator shall display measured fresh gas independent of the flow meters.
r) Ventilator shall display a dynamic compliance measurement.

6. Integrated Monitoring system:

a) Anesthesia Monitoring system should be of modular type and capable of monitoring adult, pediatric and neonatal patients. Should have invasive blood pressure measurement facility, spirometry, respiratory gas monitoring, and anesthetic agent monitoring facility.
b) Should be from the same manufacturer as of the anesthesia system.
c) Monitor should have minimum 15" independent flat panel display with multi color touch screen user interface to ensure all parameters are visible simultaneously.
d) Module rack / housing should be independent and shall be able to be placed near to the patient (preferable).
e) Should be capable of 8 traces display. Should have facility to monitor: ECG, NIBP, SpO2,
f) Respiration, Invasive pressures (3), temperatures (2), Capnography and Bispectral index. Should

have Cardiac output port enabled.

g) Should have automatic identification and measurement of anesthetic agents, EtCo2, O2 and N2O and MAC value in monitor/ventilator screen.
h) Should have depth of anesthesia monitoring using Bispectral index.
i) Cardiac output monitoring facility using thermo dilution technology with all accessories.
j) ECG should have capability for 3, 5 and / or 10 lead monitoring and should have built in arrhythmia monitoring on all 12 leads Inbuilt ST segment analysis and arrhythmia detection for all the leads should be available.
k) Should have haemodynamic, oxygenation and drug dose calculations.
l) EtCO2 should have both mainstream and side stream in one module in monior/ventilator display. Respiration should be available with Cardio Vascular Artifact filter.
m) OCRG(oxy cardio respiro gram) should be available for monitoring neonates.
n) Alarm parameter should flash red in the presence of high priority alarms (e.g. ventricular fibrillation and asystole) and flash yellow in the presence of medium or low priority alarms (e.g. noisy signal, etc.)
o) 24 hours trend data should be displayed.
p) All monitors including central station should have similar user interface for easy usage among all clinicians.
q) Modules should be compatible with transport monitors if required.
r) Monitor shall provide capability to remote view of real time waveforms via the internet. Should be able to upgrade to softwares for electronic flow sheet and full dislcosure of all waveforms.
s) On-screen keyboard for entering this data is preferable.
t) Should have USB ports to connect mouse, key board, bar code scanner.
u) Alarm limit status (ON/OFF) must be indicated on-screen for each parameter and actual parameter alarm settings must be displayed on-screen when alarms are on.
v) Position of the displayed waveforms and color of the waveform must be user configurable.
w) Monitor shall permit the optional ability to receive and display information from other patient devices such as ventilators, infusion pumps and other standalone devices.
x) All modules should be compatible with all monitors quoted.
y) Should be supplied with necessary accessories for adult , pediatric and neonatal accessories.

Should be US FDA Approved
Should be compatible with HIS and Should be HL7 compliant

7. Accessories and spares

a) ECG / respiration: 5 lead ECG cable and lead wire set and 10 lead ECG cable and lead wire set per monitor
b) NIBP: Adult: 2 sizes and Pediatric 2 sizes and neonatal, 1 size per monitor
c) SPo2 Sensor: Adult sensor with cable, pediatric sensor with cable and neonatal sensor with cable per monitor
d) IBP: Include 10 nos of disposable pressure transducer with bracket and interface cable per monitor
e) Temperature: Skin and nasopharyngeal probes per monitor
f) BIS: 25 nos of disposable sensors per monitor

8. Environmental factors:

a) Safe disposal system : AGSS – Anesthetic Gas Scavenging System, should be in place
b) The unit shall be capable of operating continuously in ambient temperature of 10C to 40C and relative humidity of 15-90%.
c) Shall meet IEC 60601-1-2:2001 (Or equivalent) general requirements of safety for electromagnetic compatibility.