



Bihar Medical Services & Infrastructure Corporation Limited 4th floor State Building Construction Corporation Limited. Hospital Road, Shastri Nagar, Patna 800023, Phone/Fax: +91612 2283287,+ 91612 2283288

Corrigendum-I

Bihar Medical Services and Infrastructure Corporation Limited (BMSICL) had invited E-Bids from the interested parties for the procurement, rate contract and the supply of medical equipment for different Govt. Health Institutions of Bihar vide Notice Inviting Tender No.-BMSICL/2018-19/ME-116. During and after pre-bid meeting various suggestions from prospective bidders were received and accordingly some amendments have been made in the technical specification of certain equipment which are annexed as **annexure- I** of this corrigendum In order to facilitate the maximum participation of bidders, the tender schedule is being revised as following:-

Tender Reference No.	BMSICL/2018-19/ME-116
Date and time for downloading of bid document	Up to 15th February 2019 till 17:00 Hrs.
Last date and time of submission of online bids	16th February 2019 till 17:00 Hrs.
Last date and time of submission of original documents of EMD, Tender Fee and Document.	18th February 2019 till 14:00 Hrs.
Date, Time and Place of opening of Technical Bid	18thFebruary 2019 (at 15:00 Hrs.) on the website of www.eproc.bihar.gov.in in the office of BMSICL
Date and time of opening of financial Bids	To be announced later on www.eproc.bihar.gov.in

Sd/-

GM (Procurement)

BMSICL, Patna

Annexure-1

Name of Equipment - Digital Radiography (1000 mA)

SI no.	BMSICL Specification before amendments	Technical Specification After amendment
1	Should be a digital Radiography system with two flat panel detectors, capable to take digital images in horizontal, vertical and oblique positions of all skeletal body including spine and chest. Out of three major components (detector, X-ray tube and generator) at least 2 should be from same manufacturer of the main (complete) system.	Out of four major components (Detector, Acquisition software, X-ray tube and generator) at least 2 should be from same manufacturer of the main (complete) system.
	II. Generator	No Change
1	Generator should be of high frequency inverter technology for constant output	No Change
2	Should have at least 80KW power	No Change
3	The KV range from 40 to 150KV with 1KV step	No Change
4	KV/ mA output specification- 1000mA at 80 KV, 800mA at 100KV	No Change
5	Should have automatic exposure control device	No Change
6	Should have anatomical programming for radiography	No Change
7	Should have over load protection feature	No Change
8	Should have a digital display for KV and mAs	No Change
	III. X-Ray tube and collimator	No Change
1	Should be a high speed rotating anode high speed (8000 rpm or more), dual focus tube compatible with the generator	No Change

2	Should have focal spot sizes of 0.6mm (small) or less and 1.2mm (Large) or less. X ray tube loading should be atleast 30 KW for small focus & atleast 80 KW for large focus	No Change
3	Should have a multi leaf collimator having halogen/bright light source with auto shut provision for the light, auto collimation	No Change
4	Should have over load protection	No Change
5	Should have an anode heat capacity of 600 KHU or more	Should have an anode heat capacity of 300 KHU or more
	IV. Ceiling suspended tube	No Change
1	Should be ceiling suspended type with auto-tracking with detectors	No Change
2	It should have movements in all directions i.e.3D 140cm or more	No Change
3	All movements should have electromagnetic brakes with fully counter balanced mechanism	No Change
4	It should have facility to display FFD/SID	No Change
5	It should have provision for auto positioning, auto synchronization and auto centering with vertical bucky and table	No Change
6	Tube rotation at vertical axis and horizontal axis +/- 135 degree or more	No Change
	V. X-Ray Table with detector	No Change
1	Should be a carbon fibre/equivalent motorized up/down table, with four-way floating table top having a weight carrying capacity of minimum 200kgs.	No Change
2	The buky travel should be 400 mm or more	No Change
3	It should have automatic exposure control with at least 3 fields	No Change
4	Should have tracking with X-Ray tube.	No Change

	VI. Vertical detector stand	No Change
1	Should have an in-built detector capable to take digital images in horizontal, vertical and oblique positions with suitable motorized movements for all skeletal body including spine and chest	No Change
2	It should have provision to do chest radiography without grid	No Change
3	It should have automatic exposure control with at least 3 fields	No Change
4	Should be supplied with grids suitable for horizontal and vertical imaging	No Change
5	The Vertical Bucky should be capable of rotating on its axis across +90 to -15 degrees	No Change
	VII. Digital detector	No Change
1	The detector should be a flat panel detector of Amorphous silicon with Cesium Iodide Scintillator.	No Change
2	The size of the detector should be 41cm x 41cm or more for both detectors	No Change
3	Should have spatial resolution of 3 lines pair / millimeter or better	No Change
4	Detector Quantum Efficiency (DQE) should be 60% or more @ Zero lines pairs.	No Change
5	The active matrix size should be 2.8k x2.8k or more. Pixel size should be less than 150x 150 um	No Change
6	Should have a minimum image depth of 14 bit	No Change
		No Change
	VIII. Image acquisition, image processing	No Change
1	The digital workstation should be based on the latest high speed processors of at least 64 bit with 20 inch 2 megapixel medical grade monitor or more	No Change
2	It should have the possibility of acquiring the image from the detector system. Should have preview time 5 seconds or better	No Change

3	It should have image storage of 500 Gigabyte or more	It should have image storage of 1 TB or more.
4	The system should have DICOM 3 (or newer) ready & compliance (DICOM Worklist, DICOM Store, DICOM point, DICOM modality performed procedure step etc)	No Change
5	Complete Long Length Imaging (LLI) hardware & software be available on both v, vertical bucky & Table Bucky with automatic stitching software available on the acquisition console.	Complete Long Length Imaging (LLI) hardware & software be available on vertical bucky with automatic stitching software available on the acquisition console.
6	Post processing function must be available.	No Change
7	Dry imager camera with at least 3 online film trays, 500 dpi or more for printing the digital images	No Change
8	CD, DVD – R/W drive should be supplied.	No Change
	IX. Accessories	No Change
1	On line UPS with 30 minutes back up for both work station and Printer. Automatic servo voltage stabilizer for suitable k VA for the main equipment to be supplied by bidder .	No Change
2	Lead glass of size 80cms x 120cms	No Change
3	Light weight Radiation protection Apron of 0.5 mm lead equivalence, AERB approved – 5 nos, Thyroid Shield (AERB approved) -02, Lead Goggle (AERB approved)-01	No Change
4	One additional workstation should be provided with UPS, CPU, 1 MP 19” monitor, workstation software, computer Table & 02 nos revolving chair	No Change
5	Should be supplied with X-Ray view box (LED Type) Double – 2 No.	No Change
6	Lead lining of 02 nos LEAD door (patient entry + Console room) as per AERB norms must be provided by vendor.	No Change
	X. Quality Certificates	No Change

	a. The system should have US FDA and European CE (Issued by a notified body) and AERB approval/ NOC for the whole system on the date of closing of tender. Any other certification from any regulatory authority will be the responsibility of the supplier.	No Change
	b. Approval of site plan and registration of the installation from AERB shall be the responsibility of the successful bidder.	No Change
	C. The equipment must have typed approval of the model quoted on the date of opening of the tender.	No Change
	d. QA test should be done free of cost during warranty period (once in every year) and yearly QA test shall be done in the CMC period also and the rates shall be included in the CMC offered.	No Change
	e. QA test of the machine as per AERB guidelines will be responsibility of supplier during warranty & during CMC, cost is added in CMC cost of the machine.	No Change

Name of Equipment - Mobile X-ray Machine (100 mA)

SI no.	Technical Specification before amendments	Technical specification after Amendment
	General-purpose mobile diagnostic x-ray system used in a variety of routine x-ray imaging applications.	No Change
1	High Frequency generator of 40KHz or more for general radiography. Generator rating-4KW or more KV Range-40-100 KV mA-100 mA or more. The generator should have microprocessor/micro-controller based electric overload system.	No Change
2	Must have a digital display of mAs and kV, and an electronic timer.	No Change
3	Ergonomically designed unit with total soft touch switches for various operations.	No Change

4	Self Diagnostic Program with indicators for earthing fault error, KV error or filament error.	No Change
5	X-Ray Tube- Rotating dual focus anode. kV range 40 to 100 or more, mA range - 0.5to 200 mAs or more.	No Change
6	Exposure time range at least 1 ms to 5s.	No Change
7	Automatic exposure control facility required.	Deleted
8	Tube power rating at least 6 kW or more.	Tube power rating at least 4 kW or more.
9	Adjustable multileaf collimator, rotatable 90°with patient centringlight.	No Change
10	Must be supplied with protective dust cover at least for control panel.	No Change
11	Should be compatible with various basinet size in NICU & PICU.	No Change
12	QA test of the machine as per AERB guidelines will be responsibility of supplier during warranty & during CMC, cost is added in CMC cost of the machine.	No Change
	Settings	No Change
1	KV increase & decrease switches.	No Change
2	mAs increase & decrease switches.	No Change
3	Machine On/Off Switch.	No Change
4	Collimator lamp On/Off switch.	No Change
5	X-rays ON indicator should available.	No Change
6	Foot switch should available for trigger X-rays.	Deleted
	Dimensions (metric)	No Change
	A. Unit should have max. 7 foot in height, 2 foot in width and 5 foot in length.	No Change
	A. Weight -Maximum 500 Kg.	No Change
	Configuration	No Change
1	The unit must have an effective braking system for parking, transport and emergency braking.	No Change
2	The tube stand must be fully counterbalanced for rotation in all directions.	The tube stand must be fully counterbalanced or Spring balanced with tube head rotation in all directions.
3	It must have an articulated arm for imaging with any patient position.	No Change
4	All cables should be concealed in the arm system.	No Change

5	Unit base wheels must be easily accessible for cleaning.	No Change
	Safety / Certificate & Electrical configuration	No Change
1	Electrical safety conforms to standards for electrical safety IEC-60601, Class I.	No Change
2	Radiation safety to be certified to IAEA standards and AERB type approval (national standards).	No Change
3	Shall meet IEC 60601-1, IEC 60601-1-2, IEC 60601-1-3 and IEC 60601-2-28 (X-ray Tube) standard requirement.	No Change
4	Should work on 220VAC +/-10%, 50 Hz.	No Change
5	US FDA / European CE & AERB Approved model should be offered.	No Change

Name of Equipment - X-RAY 60 mA

SI no.	Technical Specification before amendments	Technical specification after Amendment
1	General-purpose mobile diagnostic x-ray system used in a variety of routine x-ray imaging applications.	No Change
2	Must have a digital display of mAs and kV.	No Change
3	The unit should Adjustable collimator,	No Change
4	The unit Should be compatible with various basinet size in NICU ,PICU , ICU & General bed.	No Change
5	Hand switch should be available for trigger X-rays.	No Change
6	Unit Should have wheel braking facility for easily accessible to required department.	No Change
7	The unit should operate on single phase power supply with plug in facility to any standard wall outlet with automatic adaptation to line voltage 200 to 240 Volts, 15 Amp plug	No Change
8	The unit should have Automatic tube over load protection.	No Change
9	X-Ray Generator: High Frequency .	No Change
	a. Power: 2.5 KW or more,	No Change
	b. Max KV : 100	No Change

	c. Max mA: 60	No Change
	d. Max Range: upto 200 mAS	No Change
	e. Exposure time: 20 msec to 5 sec or less	No Change
10	X-Ray Tube: Stationary or Rotating Anode with focus spot 2.00 mm or less.	No Change
11	Tube Stand: The tube stand should be fully spring/counter balanced with rotation.	No Change
12	The unit should have Integrated Cassette box.	No Change
13	The quoted model and tube should be AERB type approved for usage up to 60mA. Relevant copies of the certificate should be attached with the bid.	No Change
14	US FDA/ European CE (Issued by a notified body) approved Model should be offered.	US FDA/ European CE (Issued by a notified body)/ BIS(ISI) approved Model should be offered.
15	Should be AERB Approval. QA test of the machine as per AERB guidelines will be responsibility of supplier during warranty & during CMC, cost is added in CMC cost of the machine.	No Change