



भारत सरकार

परमाणु ऊर्जा विभाग

GOVERNMENT OF INDIA

DEPARTMENT OF ATOMIC ENERGY

Bhabha Atomic Research Centre
Isotope & Radiation Application Division

Head, IRAD,
EBPS, ILU- Electron Beam Accelerator Facility,
REPF Hall, BARC-BRIT Complex,
Sector-20, Vashi,
Navi Mumbai; Pin: 400703, Maharashtra, India
Ph. 91-22-27887340-3
Fax: 91-22-27840022

Limited Tender

Ref. : IRAD/EBPS/31/2022/06/06

Date: 07/06/2022

To,

08

Sub:- Supply, Installation and Commissioning of CCTV Camera System with recording and repairing of PLC based power roller conveyor etc. at Electron Beam Accelerator (ILU-EBA) Facility, BARC-BRIT Vashi Complex, Navi Mumbai

Dear Sir,

1. Quotations are invited for the fabrication / repair job, as per the above specifications.
Supply, Installation and Commissioning of CCTV Camera System with recording and repairing of PLC based power roller conveyor etc. at Electron Beam Accelerator (ILU-EBA) Facility, BARC-BRIT Vashi Complex, Navi Mumbai
2. Bidder shall quote for fabrication of these components with his own material
3. The quotations must reach, **E B P Section, 27th Jun, 2022** and must be sent in a sealed envelope super scribed with the above reference number and due date & by **Indian Postal Service Only**.
4. The address on the envelope should read: **Head, EBPS, I R A Division, REPF Hall, ILU- EBA Facility, BARC-BRIT Vashi Complex, Sector 20, Vashi, Navi Mumbai 400 705**
Attn: Shri S A Khader, OIC (ILU-EBA)
5. The bidder shall have to take an insurance against any material issued to him by the purchaser.
6. Copies of PVC for their employees should be submitted for verifications.
6. The fabrication work shall be subject to inspection by our officers. The finished components shall not be dispatched prior to approval by our officers at bidder's work's Necessary inspection facilities should be provided to our officers during the fabrication at bidder's premises.
7. The bidder shall deliver the finished items / components after approval by our officers, within **Six(6) Weeks**. The finished items/components and the scrap from the issue materials if any shall be delivered by the bidder at REPF Hall, ILU EBA Facility, BARC-BRIT Vashi Complex, Sector 20, Vashi, Navi Mumbai 400 705

8. The party must offer warranty on the fabricated components for satisfactory performance for a period not less than six months.

9. No advance payment in full or in part will be admissible and payments will be made after satisfactory installation.

10. The goods proposed to be fabricated based on this NIT (Notice Inviting Tender) is meant for research purposes of Research Institution under the Dept. of Atomic Energy and therefore the prices to be quoted for the product should be exclusive of the excise duty. The purchaser will make available to the successful bidder with whom a work order is placed the excise duty exemption certificate duly signed by the authorized officer in the Dept. of Atomic Energy well before the dispatch of the goods by the supplier. While submitting the offer, the bidders should specify in his offer that the price quoted by him does not include any element of excise duty, subject to production of exemption certificate. Where however, the prices quoted are inclusive of excise duty, the percentage/quantum of Excise included in the quoted price should be specifically indicated in the tender.

11. The acceptance of quotation will rest with *Head IRAD, BARC* who does not bind himself to accept the lowest or any quotation and reserves to himself the right to reject any or all quotations received without assigning any reason whatsoever.

12. Bidder shall provide PAN Number, GST Number, TIN Details should be mentioned in their quotation.

**Last date for receipt of quotation 27th Jun, 2022 up to 14.00 Hrs.
The quotations will be opened on the next working day at 15.00 hrs**

Yours faithfully,

(Dr. H J Pant)
(Head, IRAD)

Copy to:

1. APO, PMD, BARC-Vashi complex. Navi Mumbai-for kind display in Notice Board.
2. APO, BRIT, BARC-Vashi complex. Navi Mumbai-for kind display in Notice Board.
3. Head, SIRD, BARC, Trombay, Mumbai- for kind display in BARC web site.

Technical Specifications

Sub:- Supply, Installation and Commissioning of CCTV Camera System with recording and repairing of PLC based power roller conveyor etc. at Electron Beam Accelerator (ILU-EBA) Facility, BARC-BRIT Vashi Complex, Navi Mumbai.

A) Specifications of CCTV Camera System

Sr.No	Description	Quantity
1	16 channel NVR for 4 SATA HDD(8 TB)	01 No.
2	8 TB Surveillance Hard Disk	04 Nos.
3	Wall/Table Top Mountable 43" Full HD LED Monitor	01 No.
4	IP Dome Camera (4 MP)	07 Nos.
5	IP Bullet Camera (4 MP)	01 Nos.
6	4 Channel PPOE Switch	02 Nos.
7	D Link Cat 6 Cable (305 Mtr)	02 Bundles
8	Pass-through RJ45 connector	1 No
9	3U Wall Rack.	3 Nos.
10	1U Rack	02 Nos.
11	PVC Box (5 x 5)	8 Nos.
12	PVC Pipe	400 Mtr.
13	Miscellaneous item like screw, glands, climbs, grip, pvc fittings, tap, cable tie, lag, ferrule etc.	01 set
14	Testing and commissioning/ Installation charges	01 System.

B) Repairing of PLC based power roller conveyor

Scope of work :

D) System Modification and Servicing

1. Replacement of existing ICP CON i8437 PLC/SCADA interfaced with HMI panel (Model No: Monochrome 550), power roller conveyor PLC based control system with suitable for control system as per specifications
2. Programming of six VFD's with variable speed by adjusting frequency from 0 to 50 Hz.
3. The conveyor is having four sector, One Mesh conveyor & One diverter, Thirteen Geared Motors (A.C 3 Phase, 0.1 & 0.2 kW) to be programmed and synchronized as per customer requirement.
4. The 3 Phase isolation transformers for EMI/EMC of geared motors to be connected as it is in the System.
5. Nissei Motor Specification: **Mount** : - Foot mounted
 - i. **Power** : - 0.2kW (output)
 - ii. **Gear Ratio** : - 1: 100
 - iii. **Model No** : - G3LM-22-100-1020WA
6. VFD Specification :
 - 1) **Cat. No** : 22A-D6P0W104
 - i. **2) Motor Rating** : 2.2 kW / 3 HP
 - ii. **3) Input Phase** : 3 phase, 380-428 V, 48-63 Hz
 - iii. **4) A/C Voltage Range** : 342-578, Amps: -7.5

- iv. **5) Output Phase** : 3 Phases, 0-240 Hz
- v. **6) A/C Voltage Range** : 0 - 460
- vi. **7) Continuous Amps** : 6.0
- vii. **8) 60 Sec Overload Amps** : 9.0
- viii. **9) Feature** : Momentarily Reverse/Forward

- 7. Total conveyor Length (Including S S mesh conveyor) =32mts.
- 8. Conveyor variable speed range = 2 to 5m/min.

II) Hardware Description

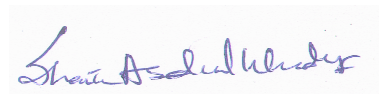
- 1. PAC with back plane and I/O slots and PSU are considered.
- 2. Energy Meter on Modbus Communication is considered
- 3. KV 512- Software for 512 parameters/tags is considered in the quote. This is upgradeable to 2000 tags
- 4. Accessories as required for Panel: Light/ Fans/ Push Button/ Emergency Switch as required. There will be an add on panel to support this panel. Same as we have an extra VFD panel.
- 5. M Series Module(M7051) is on RS485 connection and communicates with the PLZ on RS485 Modbus

IV) Description of Items

Sr. No.	Part No.	Make	Description	Qty.
1	WP8447	ICPDAS	PAC with Accessories	1
2	I8054	ICPDAS	8DI/8DO Digital Input/Output Module	2 Nos.
3	I-87017	ICPDAS	8 Ch-Analog Input Module	1 Nos.
4	I-87028	ICPDAS	8 Ch-Analog Output Module	1 Nos.
5	M-7051	ICPDAS	16 Channel Digital Input	2 Nos.
6	KV-512	King View	SCADA for 512 Tags	1 Nos.
7	Panel PC	Axiomtek /LEX	12.1 Inch/panel mount	1 Nos.
8	Energy Meter	ICPDAS/CAHO/ADTEK	3 Ph. Energy Meter Panel Mount	1 Nos.
9	DPM2.8	DPM/ADTEK/CAHO	Panel Mount Voltage/Current Meters	2 Nos.

VI) Services and Installations:

- 1. PLC designed and built for professional applications, all hardware shall have high MTBF, Necessary safety interlocks, Interlocks, Indicators, Alarm system, Stop and Stop buttons to be provided.
 - 2. Panel Re-Wiring as per New PLC
 - 3. Programming, Development, Installation And Commissioning.
 - 4. Wiring of 0.5 Sq. inch is considered. Rewiring of the panel is considered for the panel.
 - 5. PAC with accessories: The unit has CPU PAC with Back Plane and i/o connectors. All the Individual modules will be plugged in the i/o connectors.
 - 6. Dressing the wires, termination, ferruling will be in our scope.
 - 7. Adjusting the HMI in existing panel and machining the panel for the same will be in scope of BARC
 - 8. All the field sensors are expected to be working, if they are not then the same are expected to be Rectified.
 - 9. The conveyor is driven with the Nissei Motor, it should communicate on Modbus communication. ie. It can be configure to work on Modbus. VFD also should communicate on modbus/Profibus protocol and should have I/Os .
- Note :
- 1) Warranty of 1 year on all devices
 - 2) Software CD for all Equipment should be provided.
 - 3) All connecting Cables / Interfacing cables cables should be provided .
 - 4) On-site Training to be provided .
 - 5) contractor should provide documents in form of operation and maintenance manuals in English without any extra cost.



1. *The brief scope of work (covered under the tender enquiry) is mentioned above. It provides, in concise, the brief specifications of Camera / associated accessories / gadgets to be supplied and works to be carried out — for overall understanding ONLY.*
2. *Sealed quotation should reach above address through 'Registered post / Speed post' only through Indian Postal Service.*
3. *Last date for receipt of sealed quotation to be in time.*

Terms and Conditions

I) Free issue of material: No Free Issue material shall be provided by the department.

II) Material to be supplied by the contractor: All the materials for the execution of the job as mentioned in the scope of work, helmets, safety Belts, safety shoes, marking & measuring instruments, and all the tools & equipment /instruments required during fabrication shall be supplied by the contractor only.

III) Inspection & Testing: an authorized inspector from the division will inspect the fabrication work on the site, regularly. He will have full access to the site and shall have an authority to check the dimensions, straightness of the members, types of material used and nature and type of weld joint. After the entire fabrication, installation and erection work is over the inspector only will inspect the structures and issue the 'Work Completion Certificate' if the job is found satisfactory in all respect.

IV) Note:

1. Details of the job & technical specification is attached herewith.
2. Since work should be executed immediately, the bidders who have existing work force with police verification certificate (PVC) issued by Police department are preferred to participate in this tender. The PVC is a mandatory requirement for entry & work in BARC premises.
3. The firm should have preferably vetted for security clearance by security department of BARC.
4. Copy of the PVC for the employees of the bidder shall be enclosed along with the offer.
Since this job involves site
Work at BARC premises; any offer without copies of the valid PVC will not be accepted
5. All materials required to execute this work should be procured and supplied by the contractor and fabrication
Should be carried out at site
6. Time period to complete this work will be 6 weeks from the date of issue of work order.
Time is the essence of
This tender and hence no extension will be permitted.
7. No advance payment will be made for execution of this work. 100% payment will be released after completion
And satisfactory commissioning of the work and certification by our Engineer.
8. The contractor and their workmen shall take all safety precautions as per standard procedure while executing
the job.
9. All tools 86 safety gears required for executing this work should be provided by the contractor
10. This department will not be responsible for any accident happens while doing any job and no compensation will
be payable by this department for any such incidents.
11. The successful bidder shall give guarantee in writing for materials used and workmanship for a period of one

- year from the date of completion and commissioning of the work
12. If any part of the work is to be sub contracted, the details of such sub contractor should be clearly mentioned in the quotation.
13. **Liquidated damages:** Any delay in execution of the work, which is attributable to the contractor, is liable for Penalty @ $1/2$ % per week (max. 5%) will be imposed on successful contractor.

14. Termination clause: If the work is not executed to our satisfaction or delayed beyond reasonable time, the purchaser shall have the option to terminate the work order as is where is condition at any time during the currency of contract and the work shall be got executed through other agencies at your cost.

15. Evaluation and acceptance criteria.

- a) Since work should be executed immediately, the bidders who have existing work force with police Verification certificate (PVC) issued by Police department are preferred to participate in this tender.
The PVC is a mandatory requirement for entry & work in BARC premises.
- b) The firm should have preferably vetted for security clearance by security department of BARC.
- c) Bidder should have previous experience in similar type of work executed in BARC or any other reputed Organizations.
- d) Bidder should have licensed and qualified technicians with field experience in similar type of job.
- e) Lowest technically suitable offer will be considered for placing the work order.
- f) Total cumulative lowest price and technical suitability of vendor will be considered for this job.
- g) If any work is to be sub contracted, the details should be explicitly mentioned in the quotation. Such Sub-contractor also will be evaluated before acceptance of the offer.
- h) Bidder should be ready to provide all safety gears to their technicians.

16. Confidential close:

- a) No party shall disclose any information to any third party concerning the matters under this contract generally. In particular, any information identified as "proprietary" in nature by disclosing party shall be kept strictly confidential by the receiving party without the prior written consent of the original disclosing party.
- b) This clause shall apply to the sub-contractors, contractors, advisors, or the employees engaged by the party with equal force.
- c) **"Restricted Information" categories under section 18 of the Atomic Energy Act, 1962 and "official secrets" under section 5 of the Official Secret Act 1923.**
- d) Any contravention of the above mentioned provisions by any contractor, sub-contractor, consultants, advisors or the employees of the contractor will invite penal consequences under the aforesaid legislation. **Prohibition against the use of BARC's name without permission for publicity purposes.**

The contractor, sub-contractor, consultants, advisors or the employees engaged by the contractor shall not use BARC's name for any publicity through any public media like Press, Radio, T.V., or Internet without prior written approval of BARC.

