

CURRENCY NOTE PRESS : NASHIK ROAD

(A Unit of Security Printing and Minting Corporation of India Limited)

Wholly owned by Government of India

Nashik Road - 422 101 (Maharashtra)

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EOI NO:2/2022-23

Date:15.06.2022

1. Name of the organization: Currency Note Press (A Unit of Security Printing and Minting Corporation of India Limited)
2. Type of the organization: Wholly owned by Government of India
3. Reference No:EOI NO 2/2022-23
4. EOI Title:Supply, Installation, Testing and Commissioning of Automatic Guided Vehicles used for Transportation of Material along with Automatic Vertical Storage/Retrieval System.
5. Category:Automation
6. Document Fee: Nil
7. Mode of Publication:National Competitive Bidding
8. Date of Announcement:15.06.2022
9. Last Date of Submission:15.07.2022

Brief Intent of Requirement:

Currency Note Press (CNP)-Nashik Road, a unit of Security Printing & Minting Corporation of India Limited (SPMCIL) is engaged in printing of currency/bank notes as per requirement of Reserve Bank of India for Government of India. The printing/manufacturing of currency/banknotes involves different stages. The raw material required to print currency/banknotes is Paper and it is handled at every process of printing/manufacturing manually. The Paper is received from Stores and issued to different sections (offset/intaglio/numbering) for further processing and after every stage of printing process; it is stored in the Vault(s) located at different locations. This process requires manpower and manual handling equipment for material movement.

CNP intends to move the material (Paper lots) from one section to another section through Automated Guided Vehicle for strengthening security aspects, ease of work and minimal involvement of manpower for currency/banknotes handling. The proposed system shall be capable to move the material (Paper lots), track the material and facility for loading and unloading the material at various stations. Also at each section, an automatic storage and retrieval system needs shall be installed. This system shall save the manpower, increase efficiency, avoid human intervention and enhance security.

Description of the complete system:

The material (Paper lots) movement from one section to another section shall be done through Automated Guided Vehicle (AGV) for strengthening security aspects, ease of work and minimal involvement of manpower for currency/banknotes handling thus resulting into reducing (complete elimination) of transportation damages of sheets. The proposed system shall be capable to move the material (paper lots), track the material and facility for loading and unloading the material at various stations along with storage facilities of Auto Storage and Retrieval System (ASRS).

The tentative process flow is described as follows:-

Raw material i.e. Paper lots, shall be withdrawn from Stores and delivered to the Seasoning Section. The Paper lots from Stores shall be moved to Seasoning Section through Rail Guided Vehicle (covered with canopy). Movement of RGV will not be open to sky and firm needs to ensure safe operation during rainy season in this approx. passage of 700 mt. The size of one pallet is 830 x 720 x 970 mm and the pallet contains 15 reams (approx. weight of pallet along with paper may go upto 700 Kgs). It is also mentioned that for movement of RGV(s), two tracks system is required.

At Seasoning Section, an automatic storage and retrieval system (ASRS) to store Minimum 450 pallets.

After that the material shall be issued for production and the same shall be transported through AGV(s) to Simultan Section (here after referred as Block I). Further at Block I, the material is issued to different 4/5 machines.

At Block I, an automatic storage and retrieval system to be built to store Minimum 180 pallets and Maximum 270 Pallets.

From Block I, material shall be transferred to Intaglio Section (here after referred as Block II) through AGV(s).

At Block II, an automatic storage and retrieval system (ASRS) to be built to store Minimum 180 pallets and Maximum 270 Pallets.

From Block II, material shall be transferred to Numbering Section (here after referred to as Block III) through AGV(s).

From Block III, material shall be transferred to Number Sheet Storage Section (here after referred as Block IV) through AGV(s).

At Block IV, an automatic storage and retrieval system (ASRS) to be built to store Minimum 600 pallets.

ASRS of Block I, Block II and Block IV will be caged and other ASRS will have already closed walls.

Technical Brief about the Project:

The major systems present in this arrangement of AGVs/RGV for Transportation of Paper Lots and its storage in ASRS are as follows:

a. RAIL GUIDED VEHICLE (RGV)

Raw material i.e. Paper lots, shall be withdrawn from Stores and delivered to the Seasoning Section. The Paper lots from Stores shall be moved to Seasoning Section through Rail Guided Vehicle (covered with canopy). The size of one pallet is 830 x 720 x 970 mm and the pallet contains 15 reams (approx. weight of pallet along with paper may go up to 700 Kgs). It is also mentioned that for movement of RGV(s), two tracks system is required.

The RGV system is deployed in order to transfer the material from the stores to the seasoning section. The operators at the stores will load the material on the pallet manually and place it on the RGV.

Note: Height of 15 reams along with pallet is approx. 2mts.

b. Automatic Guided Vehicle (AGV)/ Autonomous Mobile Robot (AMR)

An AMR (Autonomous Mobile Robot) will pick up the pallet from the RGV conveyor and deliver it to the seasoning section.

c. SEASONING SECTION

The size of one pallet is 830 x 720 x 970 mm and the pallet contains 15 reams (approx. weight of pallet along with paper may go up to 700 Kgs. Afterwards each ream shall be opened, counted and placed on pallet of 20 reams. These pallets are then transferred to automated storage and retrieval system (ASRS).

d. AUTOMATED STORAGE AND RETRIEVAL SYSTEM

These pallets are then placed on AGV/AMR inside the seasoning section; the AGV/AMR will deliver the pallet on the conveyor connecting the ASRS in the seasoning section. The ASRS is a mother child type of ASRS system. The conveyors are connected directly to the lift which will deliver the material to different levels of the ASRS system. The mother-child system will then store the pallets in the designated location.

e. BLOCK- I (OFFSET SECTION)

When the material is required, the ASRS will deliver the material to the exit conveyor via the lift. The AGV/AMR will pick up the pallet from the exit conveyor of ASRS of seasoning section and deliver it to the Block 1 printing machines.

The AGV/AMR will deliver the Pallets in the Block I delivery area on the scissor lifts. The operators will pick up the pallets using the hand operated pallet truck and then the papers will be loaded on the machine. Once the printing is done the pallets will be loaded back on the AGV/AMRs and it will deliver the pallets to the Block-I ASRS system.

f. BLOCK- II (INTAGLIO SECTION)

The AGV/AMR will pick up the pallet from the Offset section ASRS and deliver it to the Block- II printing machines (Intaglio).

The AGV/AMR will deliver the Pallets in the Block II delivery area on the scissor lifts. The operators will pick up the pallets using the hand operated pallet truck and then the papers will be loaded on the machine. Once the printing is done the pallets will be loaded back on the AGV/AMRs and it will deliver the pallets to the Block-IIASRS system.

g. BLOCK- III (NUMBERING SECTION)

The AGV/AMR will pick up the pallet from the Offset or Intaglio section ASRS and deliver it to the Block- III printing machines (Numbering Section).

The AGV/AMR will deliver the Pallets in the Block III delivery area on the scissor lifts. The operators will pick up the pallets using the hand operated pallet truck and then the papers will be loaded on the machine. Once the printing is done the pallets will be loaded back on the AGV/AMRs and it will deliver the pallets to the Block-IV (Number sheet storage section) ASRS system.

Note: Maximum Clearance Height available for ASRS across the plant is 4.5mts

The EOI submitted by the firm should cover the following:

- a. Detailed technical specifications in details of the proposed facility/system.
- b. Layout and dimensions of the proposed equipment's /system.
- c. Process flow chart.
- d. Detailed project report.
- e. Customers list and Purchase Order copies of the customers to whom similar kind of equipment/ system have been supplied in the past with details of the equipment/ system and their addresses along with phone, fax and email addresses and performance report from them.
- f. Time required for successful installation and commissioning of the equipment.
- g. The participating firm must also note requirement of warranty for 3 years and after completion of warranty, CAMC for seven year.
- h. The participating firm must also note requirement of after sales service for 7 years after successful completion of warranty period.
- i. Budgetary offer for the proposed system must broadly include taxes/duties FOR Currency Note Press, Nashik basis.

10. Important Instructions to Bidders for submission of the documents:

- a. The interested & experienced bidder should also be required to submit along with Expression of Interest, a list of customers to whom they have supplied such equipment/ systems with details and performance report from their clients.
- b. The participating bidder shall have carried out the similar project in last 7 years ending March 2022. The firm shall provide Purchase Order copies of the customers to whom such equipment/ system have been supplied in the past 7 years with details of the equipment/ system and their addresses along with phone, fax and email addresses and performance report from them.
- c. The Participating bidder should give a declaration that they have not been blacklisted or debarred for dealing by Government of India or any Government in the past.
- d. The documents in support of Expression of Interest need to be submitted duly signed by the authorized representative of the applicant with name and designation of the signatory.
- e. The documents in support of Expression of Interest (viz. Supply order details/ Installation Certificates/ Addresses of customers and their contact numbers) need to be submitted duly signed by authorized representative of the applicant.
- f. The principal bidder will have to directly participate in this EOI. Participation of any authorized firm by any principal bidder will not be considered.

11. For the purpose of evaluation of EOI offers, each interested participant will have to submit the following details:
 - a. Project Experience of similar projects in last Seven Years ending 31.03.2022
 - 3 Nos of min Rs. 8 Cr. in value OR
 - 2 Nos of min Rs 10 Cr. in value OR
 - 1 No of min Rs 16 Cr. in value
 - b. Confirmation of adherence to the Description & Technical Brief given by CNP, Nashik in this EOI.

12. Procurement Process:

Following are the details of this procurement process:

 - i. At first, the Expression of Interest is being floated for above mentioned instrument.
 - ii. The firms intending to participate in the EOI have to present a detailed presentation at CNP, Nashik regarding their offers of equipment/system and the cost for such visits shall be borne by firms only.
 - iii. After evaluation of the responses received, a Tender will be floated incorporating all the terms and conditions, specification as per buyer's requirement. An Open tender will be floated for active participation of bidders.

13. The Bid shall be submitted in English Language only. The Authenticated copies of the documents in support or applicant's claim may be submitted in English Language.

14. The bidders will be required to give a presentation of the offered equipment/system by them on mutually agreed date after submission of the offer and factory visit may be arranged, if required.

15. The bidder / applicant should submit the detailed brochures / leaflets / specification of the system offered.

16. The audited balance sheet and Profit & Loss Account statement for last three financial years ending 31.03.2021 are to be submitted along with the proposal i.e. for 2018-19, 2019-20 & 2020-21. The bidder should not be in loss for more than one year and net worth should not be eroded by more than 30% in last three financial years ending 31.03.2021.

17. Each interested participant will have to submit relevant Quality Accreditations and a Brief of how After Sales Support and Product Support will be provided.

18. The dully filled details along with supporting documents should be sent in a sealed envelope super scribing "Expression of Interest forSupply, Installation, Testing and Commissioning of Automatic Guided Vehicles used for Transportation of Material along with Automatic Vertical Storage/Retrieval System.The same may be submitted in person or through courier/ registered post/ speed post so as to reach the following address on or before the prescribed date and time.

The Chief General Manager,
Currency Note Press,
Jail Road,Nashik Road-422 101
Maharashtra, India
Phone No. +91 253 2454493, Fax No: +91 253 2464100
Email: purchase.cnpnashik@spmcil.com

Last date and time for receipt of Expression of Interest:15.07.2022 - 14:30 Hours

Date and time of opening of Expression of Interest on:15.07.2022 - 15:00 Hours

Place of opening of Expression of Interest:Currency Note Press, Jail Road,Nashik Road
422 101, Maharashtra, India

(V. KIRAN KUMAR)
JT. GENERAL MANAGER (MATERIAL)
FOR CHIEF GENERAL MANAGER

STORES

AUTOMATIC TRUCK LOADING SYSTEM

700 Mtrs

SEASONING SECTION

GANGWAY

FG STORAGE (BLOCK VI)

GANGWAY

AUTOMATIC PACKING
BLOCK V

FINISHING 04 NOS. BFS & 03 NOS. SNIM
BLOCK IV

NUMBER SHEET

GANGWAY

GANGWAY (LINK DOOR)

VIEWER GALLERY

SIMULTON M/C'S 04 NOS.
BLOCK I

INTAGLIO M/C'S 04 NOS.
BLOCK II

NUMBERING M/C'S 05 NOS. & 01
NO. SIMULTON M/C FOR LOWER
DENO.
BLOCK III

GANGWAY

49 mtrs.

67 mtrs.

32.90 mtrs.

