Title: <u>**Quotation of PLC Based Control System.**</u>

We intend to purchase the items specified at **page-2-3**:

Kindly send us your best offer in accordance with the following General Conditions as stated below:

General Conditions:

(a) *<u>Submission of Quotation:</u>*   Quotation may be sent immediately through Fax or E-mail but Original Proforma Invoice **along with detailed technical brochures / literature** must reach us by mail before the last date mentioned below

(b) *<u>Last Date of Quotation:</u>*   **24-06-2019.**

(c) *<u>Validity</u>:*   At least 90 days

(d) *<u>Price Basis</u>:*   Firm and Fix C&F Prices

(e) *<u>Payment Mode</u>:*

- We accept payment through LC with condition that all domestic bank charges will be borne by us while all bank charges in beneficiary's country including all LC conformation (if desired by the supplier) charges will be borne by the beneficiary.

- We accept Pre-payment only against unconditional & irrevocable Bank Guarantee through First Class bank.

Note:
- It is preferable to provide the quotation in RMB currency.
- The quotations, which do not fulfill above terms will be rejected.
- Equivalent brands that can fulfill our requirements, can be quoted too.
- Confirm that you will provide a complete functional unit as per control logic and HMI displays requirement (these requirements will be supplied later). Furthermore, you will be responsible to conduct the FAT and SAT in the presence of end user representatives.
- Confirm to provide free of cost Training of HMI development, Logic development and system deployment for our 3 persons. However, air ticket, boarding/ lodging will be on buyer's account.

Sr. #	Description/Specifications/	Qty Required
1)	PLC based Control System	01 unit (Complete)
	a) PLC (Programmable Logic Controller): Make: Allen-Bradley, Siemens, Honeywell Origin: Western Europe, Japan, Singapore Required I/O Capacity: (min.) Digital Input: 96, Signal 24VDC Digital Output: 24, Signal 24VDC Analog Input: i. Loop powered: 96, Signal 4-20 mA ii. Field powered: 24, Signal 4-20 mA Mounting: DIN rail Power supply: Included Program Memory: Max Possible with battery backup Logic Development Programming Language: Structured Text, Ladder, Functional Blocks, Instruction List Scan Cycle: less than 500 ms HMI updating Time: 1 sec. Documentation: Complete Instruction Manual(s) and detailed engineering documents.	01 No
	b) Operator and Engineering Machines and Software	
	i. Latest Branded (Dell/HP) Compatible Operator Machine (core i7 8th Generation, RAM 8 GB, Hard Disk 1 TB) with 19 inch Display Screen (LCD/LED), Resolution (min) 1024 x 768 pixels, with licensed Windows Operating System.	03 Nos
	ii. Latest Branded Engineering Laptop (Dell / HP) or equivalent machine (core i7 8th Generation, RAM 8 GB, Hard Disk 1 TB) with licensed windows operating system.	01 No
	iii. HMI Development, configuration and customization software for development of graphical display screen, with necessary license.	01 No
	iv. Runtime environment software for execution/ deployment of HMI, with necessary license.	03 Nos.
	v. Logic Development environment and uploading and downloading software, with necessary license.	01 No

c) PLC and Marshalling Cabinet:
   i.   Control panel for PLC, I/O interfaces (I/O modules) and field wiring termination blocks with complete system accessories. CP should be off white powder painted and made of GI plate of Gauge 14 minimum.
   ii.   Interposing relays and Electromechanical relay output with screw terminals for digital IOs.
   iii. Terminal blocks must be of best quality (WESTERN EUROPEAN OR USA MAKE).
   iv. All terminals and terminal blocks should be properly tagged as per American or European standard.
	01 No

PLC cabinet and marshalling cabinet must be dust proof and all items should be laid out with good spacing (screwed). d) Miscellaneous: i. Redundant field power supplies for IOs: Input voltage = 220V AC, Output voltage=24 V DC, current 20 Amps.	02 Nos
ii. Communication Network: Programming/ Engineering and Operator Machine communication with PLC: Ethernet. iii. The supply should be a complete functional unit as per control logic and HMI displays requirement (These requirements will be supplied later). The supplier will be responsible to conduct the FAT and SAT in the presence of end user representative(s).	01 No
e) Training: HMI development, Logic development, and system deployment.	3 Persons