







 SepidDasht Steel Co	 MSE	National Iranian Steel Company SEFIED DASHT CHAHARMAHAL VA BAKHTIARI STEEL COMPLEX	 YAMU	 FOOLAD PAYA	 MCC- CERI	 KDD
			Date: June. 2021			

In the name of God

Tender documents for CBSCO Automation System Commissioning Activities

1 Preface

CBSCO (Sepiddasht Steel Company -Charmahal Province) is a complete steel making company that are under construction. This company consists complete areas for production slab ingot including EAF, LF, CCM, MH, WTP and etc.






The purpose of this document is to discuss the detailed activities for commissioning the Automation system of CBSCO in EAF, LF and CCM.

The Automation system is designed based on Open Architecture DCS capable of communicating with other intelligent systems such as PLC's. The configuration is arranged such that any single point failure does not affect the continuous operation of the plant. The system is including complete hardware and software for establishing CBSCO Automation system.

2 Scope of work

Commissioning of the Automation system of SDSCO is including the following subjects as Scope of work of this tender. The contractor is fully responsible for all following described items.

3.1) Contractor experience: *Bidders must have experiences in SMP Automation and commissioning including EAF, LF and CCM. The experiences should consists all relevant activities including Hardware and Software engineering/programming, Industrial Networks, Signal Check, Function check, Cold test, Warm test and final Commissioning. In this regard, the resume and previous project references should be submitted along with the technical offer by the bidders.*

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3.2) Review and Endorsement of the control application software: *The Application software of Automation system is based in Siemens S7- Wincc and will be submitted to the contractor to survey at the start of the contract. All functions in the mentioned softwares, should be checked, verified and endorsed by the contractor. The contractor should inform MME for any required modification in the softwares and after approval of MME, the software will be modified by contractor. The bidder shall consider this activity in the proposal schedule time and shall mention all prerequisite required documents and softwares in the offer for that. Obviously after this activity, the contractor will be fully responsible for all parts and functions of the CBSCO Automation application software.*

3.4) SAT: *Site acceptance test (SAT) is in the scope of the contract. The contractor is responsible to do the SAT for all Automation system software functions in the Sefiddasht SMP site with specified time schedule and procedure.*

3.5) Power up and installation the softwares: *The Automation system equipment will be installed in the site location by others. The contractor should power up the system and install all softwares including ES, OS, system softwares and all Automation softwares and etc. The application softwares must be installed completely and the networks including Profibus, Ethernet and etc. will be checked to work properly for all nodes. All nodes for Automation system must work properly without any problem and the contractor is responsible for that.*

3.6) SAT: *Site acceptance test (SAT) is in the scope of the contract. The contractor is responsible to do SAT in site with specified time schedule and procedure. Providing all facilities for SAT is in the scope of the contractor work.*

3.7) Commissioning: *For Automation system, the contractor is responsible to install all softwares and licenses in the HMI computers that the Control and Monitoring system to be ready for start I/O check and Function test.*

I/O check and function check activities are in the contractor responsibility as the contractor is responsible for the control – monitoring functions. The contractor is responsible on the

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commissioning activities from signal check and Function check up to Final Warm start of the plant and do the production. During this period, the contractor is responsible to modify any probable software faults for assuredness the perfect performance of the Automation system.

There are some packages in the plant such as: Electrode regulation, Cutting machine, Marking machines, Lime/Carbon injection system, Wire feeder and etc. These packages have distinct Siemens control system. Signal check and function check and cold and warm commissioning of these packages are in the scope of the contract.

The contractor should cooperate for establish the data communication between plant DCS and all other packages Automation systems. Providing all required hardware/software for the communication is in the scope of the contract.

Also cooperation to establish data communication between Automation systems Level 1 and Level 2 is in the scope of the contract. The contractor to do the required software activities to establish this communication.

3.9) Support: *The contractor must support the Automation system at least 3 months after commissioning and normally working of the plant and making production.*






During this 3 months, the contractor is responsible to do troubleshooting as soon as possible any probable fault in the Automation system. Any changes in the system that requested by the Client, should be informed to MME and after approval of MME, the contractor to implement that.

3.10) Man-Day: *By consideration of the quantity of I/Os in each area (EAF, LF, CCM) and the previous experiences, the contractor should estimate total Man-Day required to implement all a.m. activities. The estimated Man-Day must be mentioned in the offer for each area separately.*

3.11) Documentation: *The contractor shall consider to provide and submit the following documents:*

3.11.1) Documents that is required in the technical offer:

- 1- Company resume and relevant references
- 2- Time Schedule of all Activities

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3- List of required documents and softwares to do and finalize all activities in the scope of the contract.








Documents that should be submitted during the contract.

- 1- SAT procedure
- 2- Final I/O list.
- 3- Final application software program as as built version.

3.12) I/O quantity: The estimated quantity of I/Os in each area are as following table:

Area	DI	DO	AI	AO
EAFF	476	131	156	10
LF	409	136	64	6
CCM	1886	694	172	37

Also there is few Pulse signals to be considered for commissioning.

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Important Notes:

- 1- *The bidder must have experiences in Steel making plant commissioning including EAF, LF and CCM. The resume and relevant references projects shall be submitted along with the technical offer.*
- 2- *The technical offers should be submitted by the bidders including describing the circumstance and sequences of all activities and relevant time schedule. Also the estimated required man-day for all activities base on the previous experiences, should be mentioned in the technical offer in separated and distanced records. A sample format of that is as following:*

Row	Activity	Man-Day
1	<i>Software review, modification and verification</i>
2	<i>SAT</i>
3	<i>I/O check for EAF</i>
4	<i>EAF Commissioning</i>
5	<i>LF</i>
...

- 3- *After surveying and finalizing the technical offers, the commercial offers should be submitted by the bidders in closed sealed envelopes. The commercial offer should be based on Man-Day price. All expenses including travel and accommodation expenses and etc. is in the responsibility of the contractor and must be considered in the commercial offer.*