

NON COMPREHENSIVE AMC FOR AUTONOMOUS CATHODE TEST FACILITY

1. Definitions

The term LPSC (B) or Department shall mean Liquid Propulsion Systems Centre, HAL IInd stage, Bangalore – 560 008 service receiver. The term service provider shall mean vendor. Service provider shall provide non-comprehensive annual maintenance service for a period of 2 years or till the completion of AMC visits whichever is later.

This document describes the non-comprehensive annual maintenance service of SCADA (Wincc based) system in vacuum test facilities.

Introduction

Electric Propulsion Test Facility Division ETF-D of LPSC, Bangalore is involved in the development and qualification testing of Stationary Plasma Thrusters (SPT). High vacuum test facilities are established by the division to carry out testing of plasma thrusters & cathodes. Win CC based SCADA system is being utilized to carry out the vacuum chamber operations remotely using PC.

1.1. Description: Autonomous Cathode Test Facility (ACTF)

OEM list of major equipment

S. No.	Item	Make	Specification	Qty.
1	SCADA System	Wincc based	Instrumentation to indicate vacuum chamber operational parameters like vacuum, temperatures, status indications of vacuum elements, valve position indicators etc. continuously by PLC software package on a dynamic screen based mimics (Wincc, SCADA system)	1 Nos

2. Type of Contract:

The proposed Annual Maintenance Contract shall be of non-comprehensive type. Spares required for the AMC will be procured by LPSC and inventory will be maintained by LPSC.

Duration of contract : 4 visits over a period of 2 years or till the completion of AMC visits
whichever is later

Type of contract : Non-Comprehensive

3. Frequency of AMC

3.1 Preventive maintenance:

- AMC shall be carried out two times in a year with six months of interval.
- A log book has to be maintained for every visit. The log book shall contain nature of complaint, time taken for servicing, and signature of the indenter and party.
- Maintenance to be completed in 5 working days
- Vendor has to provide a list of essential spares required for maintenance and a budgetary offer of the same along with quotation of AMC. The vendor has to hold the price quoted for spares during the period of AMC order. This amount should not be mentioned separately in price bid only

3.2 Breakdown maintenance:

- Vendor has to provide unlimited number of break down calls at free of cost.
- Break down maintenance call has to be attended within 48 hrs from the time of intimation/complain.
- If essential spares are not available with LPSC(B) for the restoration of system during any breakdown call, a separate purchase order will be placed with party for the procurement of required spares at the rates as submitted along with AMC quotation will be considered. A prior approval has to be taken for supply of emergency essential spares from the contract manager at LPSC

4. Scope of AMC:

1.	Maintenance activities for control system: PLC network
1.1.	Update the number of DI/DO cards available at facility. Ensure proper numbering is available on cards is visible.
1.2.	
1.3.	Physically verify individual PLC digital inputs and digital outputs. Identify and record in logbook the damaged channels/ports of DI/DO and reason of failure.
1.4.	Check proper working of PLCs, check the condition of battery cells and replace if required. Record in logbook about the cell replacement date.
1.5.	Verification of mimic simulation of all digital inputs and outputs. Carry out the functional verification of all the analogue input readings to PLC.
1.6.	Check for proper operation of network cards i.e NI cards, MOXA hub installed on control panels by pinging and recording the values in log book.

1.7.	Check low and high range vacuum set points in vacuum gauge controller for each pressure range and also their corresponding relays. It has to be recorded in the logbook and verify relay operation with set points. Check gauge controller display for proper functioning and replace the same if necessary.
1.8.	Identify the defects and replace the network cards if necessary. Spares will be provided by LPSCB
1.9.	Cross verify all safety interlocks from the last AMC visit, if any changes are observed, inform to facility in-charge and update the interlock list accordingly.
1.10.	Clear and take the backup of SCADA data and check the mimic. Copy of the backup should be provided to LPSCB.
1.11.	Check the health of 3.6V batteries in the PLC and replace if necessary
2.	Other Terms & conditions
2.1.	Party should hold AMC prices till the completion of the contract.
2.2.	The non comprehensive AMC charges shall include cost of travel, accommodation and conveyance to vendor's service team.
2.3.	Preventive maintenance should be well planned and shall be executed within 7-10 working days from the date of start of the maintenance work.
2.4.	All emergency breakdown calls have to be attended within 48 hours of intimation to the party. Vendor has to provide any number of breakdown calls for free of cost.
2.5.	Party shall submit quote for all the spares required to maintain the vacuum chamber along with the AMC quotation. (i.e separate price list of all spares must be submitted in the price bid
2.6.	LPSC shall provide spare parts required for the repair/ maintenance of equipments. However during any maintenance call if required essential spares to restore the equipment are not available with LPSC B, then party shall supply the spares as and when required during the AMC contract period for which a separate purchase order shall be placed later and payment shall be made after installation & testing at LPSC B. however party shall submit a quote for essential spares. The old worn out parts which will be replaced by new parts will be property of LPSC B and hence they have to be surrendered to department and due acknowledgement to be obtained from proper authority.
2.7.	Party shall replace spares of low cost amount to a total value of INR 10,000/- at free of cost during each AMC visit for which LPSC shall not pay /refund the amount.

5. Commercial Terms

1	Price
1.1	The contract is for the non-comprehensive annual maintenance service of SCADA system for high vacuum chamber. Price indicated is firm, fixed and valid for a period of 2 years from the date of purchase order or till the completion of the AMC visits whichever is later. However, it can be terminated by either party giving one month notice in writing.

2	Removal of equipments to contract works
2.1	The contractors shall make all the efforts to repair as far as possible the systems covered under the contract at our premises. However, in case any system is not covered under this contract is to be taken out to contractors premises for repair shall be subject to furnishing of bank guarantee towards the cost of item and valid till returning of the item.
2.2	In case if any imported or indigenous items need to be serviced at the service center of OEM, the same has to be sent to the concerned OEM for servicing by the party and the cost towards freight, transportation, servicing has to be borne by the party. However cost of spares replacement will be done by LPSC
3	Payment terms
3.1	Maintenance charges shall be paid every Half year proportionately to completion of each satisfactory service visit. After completion of each preventive maintenance service visit, a service report has to be signed by the contractor, indenter and shall be approved by competent authority to indicate the service has been conducted and the system is working satisfactorily. The certified report shall be submitted to Sr. Accounts officer, LPSC along with bill/invoice in duplicate with a copy to purchase order.
4	Liquidated Damages
4.1	If the ordered items are not supplied within the delivery schedule, LD shall be levied from your bill @ 0.5% of the order value per week or 0.5% of the value of the stores for which the delivery is delayed for each week of delay subject to a maximum of 10% of the order value. (NOTE : This is a mandatory clause)
5	Security Deposit
5.1	Vendor has to furnish a Bank Guarantee for 3% of the order value within 10 days of receipt of order towards the faithful execution of the order valid till the completion of the scope of work as per order plus sixty days. (This will be returned to you immediately on execution of the order satisfactorily as per order terms. In case of non-performance / poor performance, the amount will be forfeited)
6	Performance Bank Guarantee (PBG)
6.1	Vendor has to submit a PBG from a Nationalised / Scheduled Bank for 3% of the order value towards the performance of the system at the time of supply valid till the completion of warranty period plus 60 days as per the format provided by the Department. OR 10% of the order value shall be with held till the completion of Warranty Period plus 60 days
7	Security Deposit cum Performance Bank Guarantee (SD cum PBG)
7.1	In case, if vendor is unable to provide two separate BGs, i.e., one for SD and one for PBG, they can submit a combined BG for SD cum PBG within 10 days of receipt of order for 3% of order value valid till the completion of total contractual obligation (i.e., supply period + warranty period + 60 days) as per the format provided by the Department
8	Arbitration
8.1	In the event of dispute or difference arising out of or in connection with this purchase

	order/contract, which cannot be resolved through amicable settlement by mutual consultation, the same shall be settled under the Rules of Arbitration & Conciliation act 1996 under the Indian statute only, whose decision shall be final and binding on both the parties
9	Jurisdiction
9.1	The courts in and around the city of Bengaluru alone shall have jurisdiction to deal with and decide any matter or dispute whatsoever arising out of this agreement including those arising under the Arbitration Act
10	Insurance
10.1	Being a Government of India Department, Insurance is not required at our cost. Please ensure the safe delivery of the ordered item with proper AIR / SEA / ROAD worthy packing
11	Fall Clause
11.1	The rate charged for the work/supply shall in no event exceed the rates for similar work/supply to any other party during the said period of AMC contract. If at any time during the said period, reduction on the charges for similar work/supply to other customer extended by you (vendor), shall forthwith notify to the Purchase & Stores Division. LPSC and rate payable under the contract after the rate, coming into force of such reduction shall stand correspondingly reduced and refunded to us.
12	Compensation for damages caused for persons, goods & property
12.1	The party shall indemnify and hold harmless, LPSC B and or any officer employees assignee thereof, against any loss, damage or expense resulting from damage to property or personnel injury arising out of willful misconduct or gross negligence of the party or their personnel in the execution of the work under this contract. The party shall at its expense defend any suit or proceedings brought against LPSC B on account thereof, and shall satisfy all judgments and pay all expenses which may be incurred or rendered against them or any of them in connection therewith. LPSCB shall not be responsible for any damages, loss, claims, financial and other injury for any personnel in the course of their service or for payment towards any compensation.

