



भारतीय विमानपत्तन प्राधिकरण
AIRPORTS AUTHORITY OF INDIA

कलिकट अंतर्राष्ट्रीय विमानपत्तन / CALICUT INTERNATIONAL AIRPORT

कलिकट विमानपत्तन(पी.ओ.) केरल / Calicut Airport (P.O.), Kerala - 673 647

दूरभाष Phone : 0483 2719475, फैक्स/Fax : 0483 2711406, ई-मेल E mail : dgmelect_calicut@aii.aero

By Regd.AD/E-mail

Ref. No. AAI/CL/ENGG(E)/164/WO-13/231

Date: 02.11.2022

M/s SG Technofab Pvt. Ltd.,
B 46 - 217,
New Ashok Nagar,
Delhi - 96

Name of Work : Replacement of chiller Units of HVAC System at Calicut International Airport

Ref: Your financial bid opened on 17.10.2022 and reverse auction on 19.10.22.

Dear Sir(s),

1. Your e-tender for the work mentioned above is hereby accepted on behalf of the Chairman, Airports Authority of India at the item rates quoted by you (along with the reverse auction rates) totaling to **Rs.2,74,05,233/- (Rupees Two Crores Seventy Four Lakhs Five Thousand Two Hundred and Thirty Three Only)** (SITC + AICMC for 5 years after DLP of 24 months)
2. Jt. Gen. Manager (Engg-Elect), AAI, Calicut International Airport shall be the Engineer-in-Charge of the work. You are requested to attend the office of Jt. Gen. Manager (Engg-Elect), AAI, Calicut International Airport by **16.11.2022** to sign and complete the contract agreement. The contract agreement shall be executed on a non-judicial stamp paper of value **Rs.200/- (Rupees Two Hundred only)** and the cost of the stamp paper shall be borne by you.
3. The earnest money deposited by you along with tender will be released by AAI through NIC-CPP portal on processing your RA bills. Please deposit **Rs.27,40,523/- (Rupees Twenty Seven Lakhs Forty Thousand Five Hundred and Twenty Three only)** towards security deposit within 10 days from the date of issue of this letter failing which, the same will be deducted as per condition of Clause No.1 A at page No. GCC 16 of contract document.
4. Within 30 days of issue of acceptance letter, you shall submit to AAI, a Performance Guarantee as per condition of Clause 9 on page SCC 3 for an amount of Rs.....(Rupees.....Only) in the form of Bank Guarantee on the Proforma appended at Annexure ...onof Contract Document (If it is applicable).



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5. You are requested to comply with the provisions of Contract Labour (Regulation and Abolition) Act of 1970 and Contract Labour (Regulation and Abolition) Central Rules 1971 Child Labour (Prohibition & Regulation) Act 1986, Construction of Works (Regulation of Employment and Condition of Services) Act 1996, Building and other construction Workers Welfare Cess Act 1996 as specified in Clause 37 on Page No.66 & 88 of GCC of tender and rules of Central and State Government.
6. You are also directed to contact Manager (Engg-Elect)- II, AAI, Calicut International Airport immediately who will arrange to hand over the site.
7. Please note that the time allowed for carrying out the work shall be **05 (Five) Months** and same shall be reckoned from the 10th day of issue of this letter.
8. Any further correspondence in connection with the contract should normally be addressed to the Engineer- In- Charge.
9. Please note that the awarded rate is exclusive of GST and you are required to submit valid GST invoices for effecting payment.
10. Please acknowledge the receipt and return the duplicate copy of this letter enclosed herewith after signing it to the undersigned as a token of acceptance.

Thanking you,

Encl: SOQ

Yours faithfully,



Philip 02/11/2022
Asst. General Manager (Engg-Elect) -I
For and on behalf of the Chairman
Airports Authority of India

Airports Authority of India
Engineering Wing (Electrical)
SR, Calicut International Airport, Calicut-673 647
SCHEDULE OF QUANTITIES

Name of work : Replacement of Chiller Units of HVAC System at Calicut International Airport.

Sl. No	Item Description	Qty	Unit	Rate	Amount
	SUB HEAD I :SITC OF CHILLER AND ASSOCIATED WORKS				
1	SUB HEAD I :SITC OF CHILLER AND ASSOCIATED WORKS Supplying, Installation, Testing and Commissioning of SCREW TYPE WATER CHILLING UNIT complete with compressor, motor, water cooled condenser, insulated chiller, flow switch at chiller and condenser, vibration isolators, integral refrigerant piping and wiring, all required accessories, automatic and safety controls mounted in central console panel complete as per specifications. Capacity at specified design conditions: 450TR+/- 1.5% tolerance Motor shall be suitable for 400 ± 10% 50 Hz, 3 phase AC supply. meeting criterion as per ASHRAE standard 90.1-2007 and high efficiency. a. Integrator capable of giving industry standard (Modbus/LonWorks/ Bacnet) output to and compatible to existing BMS system (Siemens Desigo CC) for critical 22 parameters including instantaneous KW/TR indication complete as per the technical specification. b. Automatic VFD to ensure that starting current shall not exceed the full load current and harmonic filter to achieve current harmonics levels post mitigation to ≤5%. c. Flanged connection shall be provided for chilled and condensing water pipes. d. Chiller Installation on Ground Level. e. Cable termination adapter box. f. Hinged / bolted marine boxes for chiller and condenser. g. Chiller should be able to unload below 25% at constant condenser entering temperature i.e. 31 Deg. C h. All necessary sensors, controls, hardware, software and other accessories etc as required shall be inclusive. i. The cost quoted shall be inclusive providing suitable foundation, modifying the water connections, capacity matching of existing pumps to suit the new chillers in the most energy efficient manner, as per the recommendations of pump manufacturer, Integrating the chiller with existing BMS/AMS system along with required hardware, software, firmware etc., interconnection between different units/devices in an approved manner, duly protected. Chiller Chilled Water IN 12.2°C / Chilled Water OUT 6.6°C / Fouling Factor 0.0005 FPS / Chilled Water Flow 870 USGPM (minimum) Condenser : Condenser Water IN 31 deg C / Condenser Water OUT 36.2 deg C / Fouling Factor 0.001 FPS / Condensing Water Flow Rate 1080 USGPM (minimum) / i) Minimum COP as per AHRI Condition : 5.75 / ii) Minimum IPLV (COP) as per AHRI Condition : 8.8 / ii) Maximum power consumption of chiller at 100% load at AHRI condition : 0.61 IKW / TR / Chilling machines as described above	3	Job	69,66,678.99	2,09,00,036.97
2	Dismantling of existing 360 TR vertical screw type chiller units, foundation and associated accessories., including shifting the same from the HVAC plant location to dismantle items store located not more than 200 metres away.	7	Job	72,995.84	5,10,970.88

Pdub
22/11/2022

Sl. No	Item Description	Qty	Unit	Rate	Amount
3	INSULATED CHILLED WATER PIPE LINE : Providing & fixing the following factory rolled MS Heavy Class (BIS 3589) Exposed chilled water pipes with specified wall thickness cut to required lengths and installed with all welded joints with necessary fittings like bends, elbows, tees, reducers, sockets etc. fabricated to size and shape in workshop or brought out ready made where available of acceptable quality including thermal insulations of expanded polystyrene(EPS)/extruded polystyrene(XPS) as required complete as per technical specifications and covering the suitable insulation with 500 gsm polythene faced hessian and secured with 0.5mmx20mm GI wire mesh and two coats of cement plaster (each layer not less than 10mm) as per specifications etc. In case of trenches complete digging and back filling of soil shall be done . All buried pipes shall be surrounded on all sides by sand cushion of not less than 15 cms. 250 mm dia MS pipes. (Minimum 6 mm thick)	25	M	4,575.80	1,14,395.00
4	NON INSULATED CONDENSER WATER PIPE LINE : Providing & fixing the following factory rolled MS Heavy Class (BIS 3589) pipes with specified wall thickness cut to required lengths and installed with all welded joints, providing and fixing in position necessary fittings like bends, elbows, tees, reducers, sockets , MS flanges & supports as required complete as per technical specifications, fabricated to size and shape. 250 mm dia MS pipes. (Minimum 6 mm thick)	25	M	3,256.04	81,401.00
5	Providing and fixing in position the following CI butterfly valves duly insulated for chilled water line as required complete as per technical specifications. 250 mm dia Valves.	6	Job	20,975.16	1,25,850.96
6	Providing and fixing in position the following CI manual balancing valves with flow measurement part duly insulated for chilled water line as required complete as per technical specifications. 250 mm dia Valves.	3	Job	1,02,261.45	3,06,784.35
7	Providing and fixing in position the following CI manual balancing valves with flow measurement part for condenser water line as required complete as per technical specifications. 250 mm dia Valves.	3	Job	1,00,941.69	3,02,825.07
8	Providing and fixing in position the following CI butterfly valves for condenser water line as per specification as required. 250 mm dia Valves.	3	Job	19,655.39	58,966.17
9	Supply, installation, Testing and commissioning of motorized Butterfly valves along with ON/OFF actuators and BMS compatability for butterfly valves of following line sizes. 250 mm dia pipe size	3	Job	73,924.70	2,21,774.10
10	Supply of following size PVC sheathed, PVC insulated/XLPE armoured aluminium conductor cable of 1.1 KV grade conforming to IS 7098 Part I etc. as required. 3 C x 300 Sq.mm.	75	M	1,423.32	1,06,749.00

Reddy
02/11/2022

