



QMS 9001:2015 EMS 14001:2015 CERTIFIED

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@aai.aero

By Speed Post / E-mail

Ref. No. AAI/CL/ENGG(E)/237/WO-51/॥३

Date: 01.10.2024

03

M/s POLYPHASE ENGINEERING PVT.LTD.,
#90, 4th Cross,
14th Block, Nagarbhavi 2nd Stage,
Bengaluru - 560 072

Name of Work : Replacement of AMF panel and bus duct in new power house at Calicut International Airport.

Ref : Your financial bid opened on 23.09.2024

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 after negotiation totaling to **Rs. 71,95,000/- (Rupees Seventy One Lakhs Ninety Five Thousand only) (excluding GST) which is 14.4% below the justified cost of Rs. 84,08,952/-**
2. Asst. 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 Asst. Gen. Manager (Engg-Elect), AAI, Calicut International Airport by **10.10.2024** 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.7,19,500/- (Rupees Seven Lakhs Nineteen Thousand and Five Hundred 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)

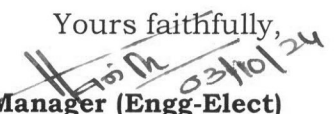
हरी पी.आर / HARI P.R
स.म.प्र(इं.-वि.) / AGM(E-E)
भा.वि.प्रा.कलिकट अंतर्राष्ट्रीय हवाई अड्डा
AAI, Calicut International Airport

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.67 & 89 of GCC of tender and rules of Central and State Government.
6. You are also directed to contact Manager (Engg-Elect), 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 **06 (Six) 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. AAI has registered as a buyer under TREDS and vendors may avail the benefits of TREDS, a govt. of India initiative
11. The period within which payment would be released to MSME vendors after submission /processing of invoices/claims is 45 days.
12. 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.

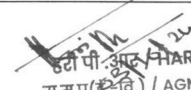
Thanking you,

Encl: SOQ

Yours faithfully,


Asst. General Manager (Engg-Elect)
For and on behalf of the Chairman
Airports Authority of India

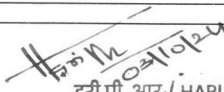
SCHEDULE OF WORK					
Name Of Work: Replacement of AMF panel and bus duct in new power house at Calicut International Airport .					
Item.No	Description	Unit	Qty	Rates	Amount
1(a)	Supply, installing by suspension on ceiling/along the wall/ground as per site conditions, testing and commissioning of following capacity Sandwich Type busbar trunking for use on 3 phase 4 wire 415 V, 50Hz A.C. supply with metal clad enclosure having IP-54 rating after fixing the tap off boxes and accessories, made of 1.6mm thick steel sheet duly powder coated in convenient sections complete with 4 Nos aluminium bus bars having current density as per standards (130A/sq cm) at nominal current rating, necessary joints, elbow joints & expansion joints and bends, continuous earthing with 2 Nos aluminium strip of suitable size (one on each side)/ as per OEM standards including, G.I. clamping brackets, suspenders, angle iron bracket, steel fasteners, connecting to earthing system etc. as required. Note: The bus trunking shall be measured along the length of enclosure. 1250 A, Isc=50 kA for 1 second	Mtr	120	16,500.00	19,80,000.00
1(b)	1250A Flange Ends	No	8	17,500.00	1,40,000.00
1(c)	1250A flexible Copper RYBN	Set	8	30,500.00	2,44,000.00
1(d)	Adapter box for bus duct	No	8	20,000.00	1,60,000.00
2	Fabrication, Installation, Testing and commissioning of automatic mains failure control suitable for 750 KVA silent type DG set complete with relays, timers, set of CTs for metering & protection and energy analyser to indicate currents, phase and line voltages, frequency, power factor, KWH, KVARH, KVAH & provision for all necessary protections as below, control cabling from AMF panel to diesel engine and elsewhere if required, all complete and inter locking including the following: 2 Nos. 1250 Amp (Isc=50 kA for 1 second, Icu=Ics), 4 pole electrically operated draw out type, motorised with cradle type 3 position ACB with electronic release for O/C & E/F and shunt trip Auto/Manual/Test/Off selector switch Protections for earth fault, over current, reverse power, over voltage, over frequency, under frequency, battery charger fail and protections like differential relay trip, short circuit trip, restricted earth fault trip, common faults from DG trip, master trip etc. The above protections shall be provided in the AMF relay and there shall be provisions for OV/UV protection separately in the AMF panel for the mains supply as required (mains tripping shall be in non essential panel). 3 Sets of current transformers 5 P 10 accuracy for protection and 15 VA class-I for metering Energy analyser unit to indicate current, voltage, frequency, power factor, and KWH. Indicating lamps for load on mains and load on set Fuse for instruments	Set	2	9,30,000.00	18,60,000.00


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Item.No	Description	Unit	Qty	Rates	Amount
	Battery charger, either complete with transformer/ rectifier, D.C. voltmeter and ammeter, selector switch for trickle, off and boost and current adjustment or shall have SMPS system with all the above adjustments.				
	Main supply failure monitor				
	Supply failure timer				
	Restoration timer				
	Control unit with three impulse automatic engine start/stop and failure to start lockout.				
	Impulse counter with locking and reset facility. ON/OFF/Control circuit switch with indicator				
	Audio annunciation as per technical specification.				
	Supply, Installation, Testing & Commissioning of indoor type floor mounted metal clad, 11 kV Switch Board VCB panel with 5 Nos. VCBs, totally enclosed & fully interlocked, truck mounting, horizontal draw out, horizontal isolation type vacuum breaker as per IS / IEC 62271-100 (2007) for breakers & 200 (2003), for panels / IS3247 as amended up to date, having capacities as mentioned below, free standing extensible on both sides, single break, trip free mechanism, motorised charged and auto/ manually closing breaker suitable for use on 11 kV, 3 Phase, 50Hz A.C. supply with short circuit fault level of 150 MVA, complete with self contained short time current 26.3 kA for 3 sec, Internal Arc Test for AFLR 26.3 kA for 1 sec at individual compartments i.e busbar, VCB, and cable compartment, rack in and rack out mechanism, air insulated but encapsulated copper bus bars capacity meeting fault level current, breaker featured with mechanical ON / OFF indicator with hand trip device, Breaker control TNC switch, local/remote and all accessories such as shunt trip coil, and auxiliary switch of 6NO+6NC, motorised and manually operated spring assisted closing mechanism, emergency trip push button, interconnections, space heaters, earthing, etc. and equipped with following switchgears and accessories, connections suitable for cable upto 3C x 300 sqmm XLPE cable of 11 kV grade (cable entry from bottom). Separate earthing switch/ earthing truck shall be provided for Cable earthing . The earthing truck / earthing switch shall be so designed that it is impossible to earth a live. cable terminations suitable for 3C x 300 sq.mm XLPE 11 kV cable. DC voltage required shall be taken from existing station battery available at site/ as per OEM. Existing station DC voltage is 30 V. Note: If existing battery cannot be used, necessary alterations to use the same shall be included in scope without any additional cost.				
	A. Incomer 2 No. which are Electrically and Mechanically Interlocked each consisting of following :				
	1 No. of 1250 Amp , 11 KV, 3 Ph, 3P VCB for incoming supply and having cable end box suitable to receive up to 3 x 300 Sq.mm, 11 kV XLPE cable.				
	1 No - Multifunction Meter with accuracy class 0.5 LED display of I ,V, Hz, Active, Reactive , Apparent Power & Energy, Power factor, %THD , Maximum demand load, (complying with IEC61557-12) with RS 485 & Ethernet port and protection MCB and required accessories to complete the system.				


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Item.No	Description	Unit	Qty	Rates	Amount
3	3 No. Cast resin drawout type PTs 11 KV / $\sqrt{3}$ / 110 $\sqrt{3}$, class 0.5,100 VA burden including HT HRC fuse on 11 KV Side and MCBs on secondary side protection.	JOB	1	24,00,000.00	24,00,000.00
	3 No. Cast resin insulated Dual core 3 CTs 200 / 100 / 5-5A of 15VA burden and accuracy Class -0.5 for metering and class 5P10 for protection.				
	Analog Voltmeter (0-12 kV) with MCB protection with 1 No selector switch and Analog Ammeter (0 - 200 A) with ammeter selector switch - 1 set.				
	Aux. relays for Anti Pumping & indication,Trip Circuit supervision relay & Master Trip Circuit Relay. - 1 Set				
	1 No. Micro processor based over current, short circuit 50,50 N & earth fault numerical IDMT relay with having RS 485 modbus communication facility consisting 3 element for over current relay and one earth fault capable of storing last 10 trip history. Arc Flash Protection Shall be provided: Sensing of any ARC produced in any of the 3 chambers i.e. Breaker, Cable and Busbar apart from Protection features, along with arc sensors , fibre cables etc. along with other accessories to complete the system.				
	1 No. Over & under voltage protection relay				
	1 No. Over & under frequency relay				
	1 No. Alarm annunciator with minimum 8 windows and buzzer, ACK, rest, test push button for transformer faults and electrical faults in respective window.				
	B. Busbar				
	1250 Amps TP, 12 kV Copper Bus bar with heat shrinkable insulated sleeves with cast epoxy insulator to withstand full short circuit currents upto 26.3 kA for 1 second.				
	C. Outgoings 3 Nos each consisting of following;				
	1 Nos. 1250 Amp 11 KV VCB horizontal draw out type VCB with motorized spring charge mechanism, T/N/C switch and required safety switchgears complete.				
	Aux. relays for Anti Pumping & indication, Trip Circuit supervision relay & Master Trip Circuit Relay				
	1 No. Micro processor based over current, short circuit 50,50 N & earth fault numerical IDMT relay with having RS 485 modbus communication facility consisting 3 element for over current relay and one earth fault capable of storing last 10 trip history.				
	1 No. Micro processor based over current, short circuit 50,50 N & earth fault numerical IDMT relay with having RS 485 modbus communication facility consisting 3 element for over current relay and one earth fault capable of storing last 10 trip history. Arc Flash Protection Shall be provided: Sensing of any ARC produced in any of the 3 chambers i.e. Breaker, Cable and Busbar apart from Protection features, along with arc sensors , fibre cables etc. along with other accessories to complete the system.				
	3 No. Cast resin insulated Dual core 3 CTs 100 / 50 / 5-5A of 15VA burden and accuracy Class -1 for metering and class 5P10 for protection.				
	1 No. Auxiliary relays for transformer faults WTI with alarm, trip and hooter				


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Item.No	Description	Unit	Qty	Rates	Amount
	1 No. Alarm annunciator with minimum 8 windows and buzzer, ACK, rest, test push button for transformer faults and electrical faults in respective window. D. All I/C & O/G Breaker have following Accessories & indication 6A MCB for spring charge DC Control Supply healthy & fails Surge Arrestor of type 1, 11 kV grade shall be provided for all phases of each incomer AC Supply control ON/OFF Switch Circuit breaker failure Alarm indication VCB spring charge indication LED Illumination lamp ON / OFF with limit Switch T-N-C (Trip, Neutral, Close) breaker control switch with indication arrangement. All control wiring with protection & test terminal block as required. Emergency trip push button 2A MCB for lamp 60 watts space heater with thermostat 16 Amp MCB for space heater and plug point 6/16 Amps 3 Pin with piano type switch socket outlet Scope of the work includes dismantling of existing HV panel, removing and refixing of all existing HT cables connected, earthing and any necessary alterations for installing new HV panel such as providing and fixing of channel supports, dismantling of existing base for facilitating the cable entry etc as required.				
4	Retrofitting by replacement of existing Merlin Gerin make 800 A ACB including rack in rack out mechanism in LT panel with same rating equivalent make and communicable accessories as per the existing ACB with complete bus bar modification as required. The retrofitting shall ensure that there is no gap in the LT panel enclosure after panel modification.	Job	3	1,37,000.00	4,11,000.00
Total (ex. GST) (Rs.)					71,95,000.00

(Rupees Seventy One Lakhs Ninety Five Thousand only)


 Assistant General Manager(E-E)
 AAI, Calicut International Airport

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