



**Government of West Bengal
Irrigation & Waterways Directorate
Office of the Executive Engineer
Metropolitan Electrical Division
Jalasampad Bhawan (4th floor)
Salt Lake City, Kolkata-700091
Telephone No-03323215609
Email Id: eemed.iwd@gmail.com**

NOTICE INVITING EXPRESSION OF INTEREST

Memo No: 1028/ 7E-16/2019-20

Dated:- 24.05.2019

N.I.E.O.I No - WBIW/EE/MED/ EOI- 01 of 2019-2020

Request for Expression of Interest for "Electrical Installation work for "Two nos electrical sub-station and Supply & Laying necessary cable from Sub-station to different building" in connection with proposed "Administrative & residential units, laboratories, sports complex, Auditorium etc. in connection with infrastructure development for River Research Institute at Haringhata, Nadia" is being invited by the Executive Engineer, Metropolitan Electrical Division, Irrigation & Waterways Directorate on behalf of the Governor of West Bengal from eligible and resourceful agencies/OEM/OEM authorized dealer having sufficient financial capability and credentials for execution of similar nature of work.

Issue of EoI documents :

The EoI documents can be downloaded from the departmental website: www.wbiwd.gov.in

Submission of EoI :

The intending agencies/OEM/OEM authorized dealer should submit their EoI for the work as cited above in a sealed envelope super scribing on the top "Electrical Installation work for "Two nos electrical sub-station and Supply & Laying necessary cable from Sub-station to different building" in connection with proposed "Administrative & residential units, laboratories, sports complex, Auditorium etc. in connection with infrastructure development for River Research Institute at Haringhata, Nadia" in the tender box to be available at the Office of the Executive Engineer, Metropolitan Electrical Division, Jalasampad Bhawan, (4th floor), Bidhannagar, Kolkata – 700091.

The intending agencies/OEM/OEM authorized dealer should submit their EoI as per list of items enclosed herewith. Rates and amounts should be filled up properly.

The quoted rates should be inclusive of all taxes/duties all complete.

Before submitting EOI, the intending contractor/bidder should make themselves acquainted thoroughly with the local conditions prevailing at site of implementation of the work by undertaking field inspections and taking into consideration all probable likely factors and difficulties to be involved in execution of the work as per specification in all respects including transportation of materials, communication facilities, climate conditions, availability of materials in the market etc. and no claim whatsoever will be entertained on those accounts afterwards. He/She may contact this office in any working day in between 11 am to 3 p.m. intending agencies or their authorized representatives may remain present while opening of the sealed covers containing EoI's.

Selection of appropriate EOI is entirely vested upon the Quotation-cum-Bid Evaluation Committee (QBEC). The committee reserves the right to accept or reject any or all EoIs without assigning any reason thereof

Since, the Notice Inviting Expression of Interests (EoIs) is being made for subsequent Tender, no work order will be issued in favour of any agency against the EoI's. No payment whatsoever would be borne by I & W Department for submission of EoIs.

The intending agencies should submit the following and self-attested copies of the same are to be submitted with the EoI.

i) Credential Certificate:-

BOQ duly authenticated by issuing authority and work order.
Completion Certificate of 100% completed work of similar nature.

ii) Annual Turnover from business:-

Profit and loss accounts statement in the prescribed form with annual turnover of last three financial years or during the period since formation of the company/ Firm/society, if it was set up in less than three year period.

iii) Company Details like Trade license and others documents.

iv) Professional Tax Payment Certificate (PTPC) or Challan.

v) PAN Card.

vi) GST Registration Certificate.

vii) Latest I.T. Return.

Pre Bid Meeting :

Pre Bid meeting will be held in the office chamber of the EOI Inviting Authority on 03.06.2019 at 5 pm in order to acclimatize the prospective contractors/bidders through an interactive open session, replying to their queries, and clear doubts in connection with the work/s, if any.

Schedule of Dates for EoI's :

| Sl No. | Activity | Date & Time | Remarks |
|--------|-----------------------------|---------------------------|---------|
| 1 | Publishing Date | 24.05.2019 | |
| 2 | Pre Bid Meeting | 03.06.2019 at 5.00 P.M | |
| 3 | E.o.I submission start date | 04.06.2019 From 10.00 A.M | |
| 4 | E.o.I submission end date | 10.06.2019 upto 3.00 P.M | |
| 5 | E.o.I opening date | 10.06.2019 at 3.30 P.M | |

(S.Basu)
Executive Engineer
Metropolitan Electrical Division
I & W Dte., Govt. of West Bengal

Schedule of Work

Name of Work: Electrical Installation work for "Two nos electrical sub-station and Supply & Laying necessary cable from Sub-station to different building" in connection with proposed "Administrative & residential units, laboratories, sports complex, Auditorium etc. in connection with infrastructure development for River Research Institute at Haringhata, Nadia"

| SL NO | Description of Items | Qty | Unit | Rate(Rs) | Total Amount with Taxes(Rs) |
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| 1 | <p>CONSUMER 3 PANEL VCB BREAKER AT SUBSTATION-II :- Supply, delivery storing at site erection testing and commissioning of indoor floor mounted metal clad totally enclosed horizontal cubical fully compartmentalized extensible on either side HT panel as including supplying necessary mounting channel and all other accessories complete as follows:-</p> <p style="text-align: center;">(A) INCOMER:</p> <p>(i) 1-No 630A,TP,11KV (rupturing capacity 25 KA for 3 second), vacuum circuit breaker (VCB), motor operated spring charge electrically/manually operated fully draw out type.</p> <p>(ii) 1-set (3nos) dual core cast resin type CT. core 1 : 100/5A, 15VA, CL-1 for metering. Core 2 :- 100/5 A, 15VA, class-5 P 10 for protection ckt. STC- 25KA for 3 sec.</p> <p>(iii) 1 set draw out type 11KV/rt3 : 110V/rt3, 100VA star/star dry type potential transformer with primary and secondary MCB Fuse protections.</p> <p>(iv) 1 set metering unit consisting of flush mounting digital type tri vector meter with accuracy class 0.5 with maximum demand indicator at 30 minutes interval, 0-15 KV digital voltmeter (class-0.5) with selector switch, 0-100A digital ammeter (class-0.5) with selector switch.</p> <p>(v) 1-set cable termination box suitable for 3CX185 sq.mm11KV XLPE Al cable.</p> <p>(vi) 1-set Digital type programmable relay (MICOM P127 or equivalent) with two elements for O/C and one element for E/F protection, over voltage & under voltage protection with time and current setting (70%-100% for current and 0.3-1.0 for time setting).</p> <p>(vii) 1set of breaker controlling accessories like breaker control switch, local remote selector switch, master trip lock out rela, trip ckt supervision relay, DC supervision relay, push button, adequate indicating light (LED) (as shown in SLD), necessary contractor unit, PCB based RS-485 port for data communication.</p> <p>(viii) 1 set of annunciator and buzzer unit.</p> <p>(ix) 1set of power pack unit (100V AC to 30V DC, 300VA)</p> <p>(x) 1 set of panel illuminating lamp, space heater, with thermostat, 15 plug socket unit.</p> | 1 | Job | | |

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| | <p>(xi) 2-sets 30V DC shunt trip coil for tripping with power pack unit (xii) Earth bus bar and all other accessories complete</p> | | | | |
| | <p style="text-align: center;">(B) BUS BARS:</p> <p>1-set 630A, 475MVA (25 kA for 3 second) continuous rated copper bus bar with insulating sleeves.</p> <p style="text-align: center;">(C) OUTGOING:</p> <p>2 nos compartment for outgoing to 500 KVA transformer and each containing following equipments:-</p> <p>(i) 1-No 630A,TP,11KV (rupturing capacity 25 KA for 3 second), vacuum circuit breaker (VCB), motor operated spring charge electrically/manually operated fully draw out type.</p> <p>(ii) 1-set (3nos) dual core cast resin type CT. core 1 : 50/5A, 15VA, CL-1 for metering. Core 2 :- 50/5 A, 15VA, class-5 P 10 for protection ckt. STC- 25KA for 3 sec.</p> <p>(iii) 1-set metering unit consisting of flush mounting digital type 0-50A digital ammeter (class-0.5)with selector switch.</p> <p>(iv) 1-set cable termination box suitable for 3CX185 sq.mm11KV XLPE Al cable.</p> <p>(v) 1-set Digital type programmable relay ((MICOM P122 or equivalent)) with two elements for O/C and one element for E/F protection with time and current setting (70%-100% for current and 0.3-1.0 for time setting).</p> <p>(vi) 1set of breaker controlling accessories like breaker control switch, local remote selector switch, master trip lock out relay, trip ckt supervision relay, DC supervision relay, auxiliary relay for transformer protection(alaram & trip ckt.) push button, adequate indicating light (LED) (as shown in SLD), necessary contractor unit, PCB based RS-485 port for data communication.</p> <p>(vii) 1 set of Hotter and buzzer unit.</p> <p>(viii) 1set of power pack unit (100V AC to 30V DC, 300VA)</p> <p>(ix) 1set of panel illuminating lamp, space heater, with thermostat, 15 plug socket unit.</p> <p style="text-align: center;">(D) PANEL COMPERMENT:</p> <p>Adequate size of 3 nos cubical compartment body made by:-</p> <p>(i) Outer side -sheet steel ALU/Zn coated CRCA, thickness 2.0mm.</p> <p>(ii) Inner side - sheet steel ALU/Zn coated CRCA, thickness 1.6 mm.</p> <p>(iii) Front door/ Rear door cover/ Gland plate - sheet steel ALU/Zn coated CRCA, thickness 2.5 mm.</p> | | | | |

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| 2 | <p style="text-align: center;">TRANSFORMER:</p> <p>Supply delivery storing at site erection testing and commissioning of 500KVA, 11KV/433V volts 3 phase, 50Hz delta/star, Dyn 11 indoor ONAN type with off load tap changing on HT side (+5%, +2.5%, +0%, -2.5%, -5%), transformer in IP23 enclosure with copper windings and having HT cable boxes(with 17.5 KV,250A porcelain bushing and epoxy insulator) and LT cable boxes with copper gland plate suitable for terminating of 11KV, 3CX 185 sq.mm AL, XLPE armoured cable and 2 nos 1.0KV grade , 3.5C X 400 sq.mm (AL) XLPE, armoured cable on the secondary side, Oil temperature indicator(OTI), winding temperature indicator, (WTI), Magnetic Oil Level Gauge, Gas operated relay, marshalling box with necessary electrical equipments, three channel temp scanner for continuous monitoring of the windings with supply of all associated materials and accessories like mounting channel bolts, nuts, washer screw clamps painting earthing etc and conforming to specifications as laid down in the contract. Cost including supply, laying and fixing of necessary control wiring for transformer protection from marshalling box to HT panel.</p> | 4 | Job | | |
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| 3 | <p style="text-align: center;">LT PANEL-1 (at Sub-station-I):</p> <p>Supply delivery storing testing commissioning of 415V (35MVA) TPN floor mountings free standing LT panel made of 14 SWG CRCA sheet steel extensible on either side totally enclosed, dust and vermin proof self supported free standing unit with base channel, multiplier, compartmentalized cubical, front access type construction with details of feeders as given below . LT panel shall be suitable of 500/415V 50Hz, 3 phase and neutral system. Painting with two coats of epoxy paint over two coats of epoxy primer of approved make complete with front operated incoming and outgoing switch gear, cable alley provision for cable entry from top to bottom, necessary meters, internal wiring with 1.1KV copper wire(2.5 sq.mm) HRC fuse protection , terminal blocks, selector switch etc.</p> <p style="text-align: center;">(A) INCOMER:</p> <p>(i) 2 nos 800A & 1no- 1000A, 500/415V, 4 pole, 50KA, EDO type microprocessor based air circuit breaker (ACB) with O/L, S/C, E/F protection.</p> <p>(ii) 2 sets- 800/5A & 1 set of 100/5A class 1.0, 15VA CTs for metering and 15VA, 5p10 for protection.</p> <p>(iii) 3 sets- combined OC/EF/OC IDMTL type release with time and current settings (70%-100% for current and 0.3-1.0 for time settings) and instantaneous type SC protection with CTs as specified above.</p> <p>(iv) 3 sets of metering compartment consisting of flush mounting 0-500V digital voltmeter, 0-100A digital ammeter, digital KWH meter, digital Pf meter with necessary selector switch and protection MCB.</p> <p>(v) 3 sets of breaker controlling accessories like push button, tripping coil, auxiliary contractor and sufficient LED indicating lamp.</p> <p>(vi) 3 sets dry type 415KV/rt3:110V/rt3, 50VA, class-1 star/star dry type potential transformer with primary and secondary MCB protections.</p> <p>(vii) 3 sets main and auxiliary contact block with phase barriers.</p> <p style="text-align: center;">(B) BUS COUPLER:</p> <p>(i) 1no- 1000A, 500/415V, 4 pole, 50KA, EDO type microprocessor based air circuit breaker (ACB) with O/L, S/C, E/F protection.</p> <p>(ii) 1 set of 100/5A class 1.0, 15VA CTs for metering and 15VA, 5p10 for protection.</p> <p>(iii) 1set- combined OC/EF/OC IDMTL type release with time and current settings (70%-100% for current and 0.3-1.0 for time settings) and instantaneous type SC protection with CTs as specified above.</p> <p>(iv) 1 set of metering compartment consisting of flush mounting 0-1000A digital ammeter, digital KWH meter.</p> | 1 | Job | | |
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- (v) 1 set of breaker controlling accessories like push button, tripping coil, auxiliary contractor and sufficient LED indicating lamp. contractor and sufficient LED indicating lamp.
- (vi) 1 set-main and auxiliary contact block with phase barriers.

(C) BUS BARS:

1200A, 500/415V ,50Hz, 50KAfor 1second, TPN (Ph, N & E)continuous rated fully insulated copper bus bars as per SLD complete with insulating PVC sleeves.

(D) OUTGOING:

consisting of separate compartment with following size MCCB of 415V, 35KA , 4P breaking capacity, thermal magnetic release with speeder link and connector unit :-

- (i) 2 nos 400-500A MCCB for 2 nos 300VAR capacitor bank panel.
- (ii) 1 no 320-400A MCCB
- (iii) 2 nos 250-320A MCCB
- (iv) 1 no 160-200A MCCB
- (v) 1 no 100-125A MCCB
- (vi) 1 no 80-100A MCCB
- (vii) 1 no 50-63A MCCB
- (viii) 2 nos 32-40A MCCB
- (ix) 2 nos spare compartment for 100A MCCB (only compartment)
- (x) 2 nos spare compartment for 200A MCCB (only compartment)

(E) EARTH BUS BARS:

Continuous earth bus bar by G.I flat running for body earthing for the substation equipment (appropriate size as per IS code) and by Cu bar for transformer neutral earthing.

(F) PANEL COMPERMENT:

Adequate size of cubical compartment body made by:-

- (i) outer side -sheet steel ALU/Zn coated CRCA, thickness 2.0mm.
- (ii) Inner side - sheet steel ALU/Zn coated CRCA, thickness 1.6 mm.
- (iii) Front door/ Rear door cover/ Gland plate - sheet steel ALU/Zn coated CRCA, thickness 2.5 mm.

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| 4 | <p style="text-align: center;">LT PANEL-2 (at Sub-station-II):</p> <p>Supply delivery storing testing commissioning of 415V(35MVA) TPN floor mountings free standing LT panel made of 14 SWG CRCA sheet steel extensible on either side totally enclosed, dust and vermin proof self supported free standing unit with base channel, multiplier, compartmentalized cubical, front access type construction with details of feeders as given below . LT panel shall be suitable of 500/415V 50Hz, 3 phase and neutral system. Painting with two coats of epoxy paint over two coats of epoxy primer of approved make complete with front operated incoming and outgoing switch gear, cable alley provision for cable entry from top to bottom, necessary meters, internal wiring with 1.1KV copper wire(2.5 sq.mm) HRC fuse protection , terminal blocks, selector switch etc.</p> <p style="text-align: center;">(A) INCOMER:</p> <p>(i) 2 nos 800A & 1no- 1000A, 500/415V, 4 pole, 50KA EDO type microprocessor based air circuit breaker (ACB) with O/L, S/C, E/F protection.</p> <p>(ii) 2 sets- 800/5A & 1 set of 100/5A class 1.0, 15VA CTs for metering and 15VA, 5p10 for protection.</p> <p>(iii) 3 sets- combined OC/EF/OC IDMTL type release with time and current settings (70%-100% for current and 0.3-1.0 for time settings) and instantaneous type SC protection with CTs as specified above.</p> <p>(iv) 3 sets of metering compartment consisting of flush mounting 0-500V digital voltmeter, 0-100A digital ammeter, digital KWH meter, digital Pf mater with necessary selector switch and protection MCB.</p> <p>(v) 3 sets of breaker controlling accessories like push button, tripping coil, auxiliary contractor and sufficient LED indicating lamp.</p> <p>(vi) 3 sets dry type 415KV/rt3 : 110V/rt3, 50VA, class-1 star/star dry type potential transformer with primary and secondary MCB protections.</p> <p>(vii) 3 sets-main and auxiliary contact block with phase barriers.</p> <p style="text-align: center;">(B) BUS BARS:</p> <p>1000A, 500/415V ,50Hz, 50KAfor 1second, TPN continuous rated fully insulated copper bus bars as per SLD complete with insulating PVC sleeves.</p> <p style="text-align: center;">(C) BUS COUPLER:</p> <p>(i) 1no- 1000A, 500/415V, 4 pole, 50KA , EDO type microprocessor based air circuit breaker(ACB) with O/L, S/C, E/F protection.</p> <p>(ii) 1 set of 100/5A class 1.0, 15VA CTs for metering and 15VA, 5p10 for protection.</p> | 1 | Job | | |
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(iii) 1set- combined OC/EF/OC IDMTL type release with time and current settings (70%-100% for current and 0.3-1.0 for time settings) and instantaneous type SC protection with CTs as specified above.
 (iv) 1 set of metering compartment consisting of flush mounting 0-1000A digital ammeter, digital KWH meter.
 (v) 1 set of breaker controlling accessories like push button, tripping coil, auxiliary contractor and sufficient LED indicating lamp.
 (vi) 1set-main and auxiliary contact block with phase barriers.

(D) OUTGOING:

consisting of separate compartment with following size MCCB of 415V, 35KA , 4P breaking capacity, thermal magnetic release with speeder link and connector unit :-

- (i) 2 nos 400-500A MCCB for 2 nos 300VAR capacitor bank panel.
- (ii) 1 no 200-250A MCCB
- (iii) 1 no 160-200A MCCB
- (iv) 2 nos 125-160A MCCB
- (v) 1 no 100-125A MCCB
- (vi) 1 no 80-100A MCCB
- (vii) 8 nos 50-63A MCCB
- (viii) 1 no 40-50A MCCB
- (ix) 2 nos spare compartment for 100A MCCB (only compartment)
- (x) 2 nos spare compartment for 200A MCCB (only compartment)

(E) EARTH BUS BARS:

Continuous earth bus bar by G.I flat running for body earthing for the substation equipment (appropriate size as per IS code) and by Cu bar for transformer neutral earthing.

(F) PANEL COMPARTMENT:

Adequate size of cubical compartment body made by:-
 (i) Outer side -sheet steel ALU/Zn coated CRCA, thickness 2.0mm.
 (ii) Inner side - sheet steel ALU/Zn coated CRCA, thickness 1.6 mm.
 (iii) Front door/ Rear door cover/ Gland plate - sheet steel ALU/Zn coated CRCA, thickness 2.5 mm.

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| 5 | <p>AUTOMATIC POWER FACTOR CORRECTION UNIT: Supply , installation, testing and commissioning of 300KVAR, 415V, 50Hz, APFC panel with heavy duty capacitor bank (heavy duty gas filled capacitor 30KVARx 10 nos) for P.F improvement, self healing metalized polypropylene equipped, copper reactor for harmonic with contractor, filter with over-pressure safety device & discharge resister, microprocessor based APFC relay (9+1 steps), Branch protection by MCCB, IP-42 protection , division should be suited by the capacitor duty contractor to achieve PF 0.95.</p> | 4 | Job | | |
| 6 | <p>Testing , commissioning of all electrical equipments (for two no. sub-station), supply and laying of all safety equipments (like- fire extinguisher, fire bucket, LT & HT rubber mat, Danger notice board, shock treatment chart etc sufficient quantity for two nos sub-station)) as per relevant code of practice including taking permission to switch on the power supply from the Electrical Inspector.</p> | 1 | Job | | |
| 7 | <p>Supply , installation, testing and commissioning of fully enclosed sound proof one no 500 KVA & one nos 250KVA diesel generator set with AMF & Synchronizing control panel consisting of:- (A) Diesel Engine:- two nos multi cylinder, liquid cooled, turbo charged with after cooled, and developing sufficient BHP @1500 RPM, vertical engine, electric start, 4 stoke, designed to run continuously at 1500 RPM conforming to IS 10002, ISO-3046, BS 5514 standard with an over load capacity of 10% for one Hr in every 1231 Hrs operation. Diesel engine comply with NEW CPCB NORMS. The diesel engine comprise with radiator with fan, Micro fuel pump with G3 Governor, dry type air cleaner, Exhausted silencer, Lube oil filter (spin on type),Fuel oil Filter(spin on type), 24V Electric starting system, battery charging alternator, Stop solenoid, Lube oil pressure gauge, water Temp gauge, Ammeter Battery charging- cool super plus coolant, first fill of lube oil. (B) Alternator:- one no 500KVA & one no 250KVA alternator suitable for continuous operation rated at 1500 rpm 415V 0.8pf,50Hz, 3ph.in SPDP enclosure self-regulated , Brush less, floor mounted with ball or bearing on end shields. The alternator conforms to Is:4722, BS EN 60034-1 &will be suitable for tropical condition. (C) Base Frame:- suitable to couple above engine and alternator made from steel sheet metal. (D) Fuel Tank:- 8 hrs capacity, with inlet and out let arrangement, air vent, drain plug arrangement, (E) Batteries:- 12V maintenance free dry type suitable size .</p> | 1 | Job | | |

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| <p>(F) Control Panel:- Totally enclosed, sheet steel construction with powder coated paint control panel fitted inside acoustic enclosure having following safety and display parameters for each DG set :-</p> <p>(i) Generator display parameters:- phase voltage, line current, frequency and PF, Average voltage, average current, KW/phase and total KW, KWH, KVA & KVAR.</p> <p>(ii) Engine display parameters:- oil pressure, Engine temperature, fuel status, engine speed, battery voltage, engine hours.</p> <p>(iii) Electrical safety along with display:- Over current protection through microprocessor based ACB, Over voltage/under voltage protection, phase failure, phase sequence reverse, over load, over/under speed, field failure, unbalance loading, stator winding failure (Differential protection), earth fault protection.</p> <p>(iv) Mechanical safety along with display:- Under/over speed, Low lube oil pressure, high engine coolant temperature, low coolant temperature, low coolant level, low fuel level, high canopy temperature.</p> <p>(G) Enclosure:- Technical feature of acoustic enclosure:-</p> <p>(i) Modular construction, sheet steel, industrial door locking system with high quality EDPN gasket.</p> <p>(ii) Ant rusting water proof body.</p> <p>(iii) Sound proofing the enclosure by fire resistant, quality foam conforming to IS:- 8133.</p> <p>(iv) Emergency push button to stop from outside.</p> <p>v) Noise level does not exceed 75dbA at a distance of 1-meter average around the set.</p> <p>H) Synchronizing control panel for parallel operation of DE set:- Microprocessor based synchronizing facility with necessary protection shall be provided in the AMF/Synchronizing control panel and controlling the operation of three nos ACB at LT panel. (bus bar is to be selected for parallel operation of two nos maximum 500KVA DG set)</p> | | | | |
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| 8 | <p>Supply , installation, testing and commissioning of fully enclosed sound proof one nos 380KVA diesel generator set with AMF & Synchronizing control panel (for existing 200KVA & new 380KVA Diesel generator set) consisting of:-</p> <p>(A) Diesel Engine:- One no multi cylinder, liquid cooled, turbo charged with after cooled, and developing sufficient BHP @1500 RPM, vertical engine, electric start, 4 stoke, designed to run continuously at 1500 RPM conforming to IS 10002, ISO-3046, BS 5514 standard with an over load capacity of 10% for one Hr in every 1231 Hrs operation. Diesel engine comply with NEW CPCB NORMS. The diesel engine comprise with radiator with fan, Micro fuel pump with G3 Governor, dry type air cleaner, Exhausted silencer, Lube oil filter (spin on type), Fuel oil Filter (spin on type), 24V Electric starting system, battery charging alternator, Stop solenoid, Lube oil pressure gauge, water Temp gauge, Ammeter Battery charging- cool super plus coolant, first fill of lube oil.</p> <p>(B) Alternator:- One no 380KVA alternator suitable for continuous operation rated at 1500 rpm 415V 0.8pf, 50Hz, 3ph.in SPDP enclosure self-regulated , Brush less, floor mounted with ball or bearing on end shields. The alternator conforms to Is:4722, BS EN 60034-1 & will be suitable for tropical condition.</p> <p>(C) Base Frame:- Suitable to couple above engine and alternator made from steel sheet metal.</p> <p>(D) Fuel Tank:- 8 hrs capacity, with inlet and out let arrangement, air vent, drain plug arrangement,</p> <p>(E) Batteries:- 12V maintenance free dry type suitable size .</p> <p>(F) Control Panel:- Totally enclosed, sheet steel construction with powder coated paint control panel fitted inside acoustic enclosure having following safety and display parameters for each DG set (one nos 200KVA & one no 380KVA diesel generator set) :-</p> <p>(i) Generator display parameters:- phase voltage, line current, frequency and PF, Average voltage, average current, KW/phase and total KW, KWH, KVA & KVAR.</p> <p>(ii) Engine display parameters:- oil pressure, Engine temperature, fuel status, engine speed, battery voltage, engine hours.</p> <p>(iii) Electrical safety along with display:- Over current protection through microprocessor based ACB, Over voltage/under voltage protection, phase failure, phase sequence reverse, over load, over/under speed, field failure, unbalance loading, stator winding failure (Differential protection), earth fault protection.</p> | 1 | Job | | |
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| <p>(iv) Mechanical safety along with display:- Under/over speed, Low lube oil pressure, high engine coolant temperature, low coolant temperature, low coolant level, low fuel level, high canopy temperature.</p> <p>(G) Enclosure:- Technical feature of acoustic enclosure:-</p> <p>(i) Modular construction, sheet steel, industrial door locking system with high quality EDPN gasket.</p> <p>(ii) Ant rusting water proof body.</p> <p>(iii) Sound proofing the enclosure by fire resistant, quality foam conforming to IS:- 8133.</p> <p>(iv) Emergency push button to stop from outside.</p> <p>v) Noise level does not exceed 75dbA at a distance of 1-meter average around the set.</p> <p>H) Synchronizing control panel for parallel operation of one nos 200KVA & one No 380KVA DG set:-</p> <p>Microprocessor based synchronizing facility with necessary protection shall be provided in the AMF/Synchronizing control panel and controlling the operation of three nos ACB at LT panel. (bus bar is to be selected for parallel operation of two nos maximum 500KVA DG set)</p> | | | | |
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(S.Basu)
Executive Engineer
Metropolitan Electrical Division
I & W Dte., Govt. of West Bengal

ACCEPTABLE MAKE :

| Item | Make |
|-----------------------------------|---------------------------------------|
| Panel Board | Schneider/L & T |
| HT VCB | Areava/Siemens/Schneider |
| Air Circuit Breaker | L & T/ Siemens |
| Protection Relay | L & T/ Siemens/ Schneider |
| Contractors | L & T/ Siemens |
| Timer | L & T/ Siemens |
| Over Load Relay | L & T/ Siemens |
| Power Control Cable | Havells/ Gloster/ Nicco |
| Ammeter/ Voltmeter | AE/ L & T |
| Selector Switch | L & T/ AE / Kaycee |
| CT & PT | AE/ Kappa/ Joyti |
| Indicating Lamp | L & T/ Siemens/ Kaycee/ ESBEE |
| Transformer | Kirloskar/ Siemens/ Areava |
| Diesel-Generator Set | Kirloskar/ Siemens/ Areava |
| APFC | L & T/ Siemens |
| Synchronizing Panel for Generator | Make approved by manufacturing agency |

(S.Basu)
Executive Engineer
Metropolitan Electrical Division
I & W Dte., Govt. of West Bengal

Copy submitted for favour of kind information to:

- 1) The Secretary to the Govt. of West Bengal, I&W Department.
- 2) The Chief Engineer, South, I&W Directorate, Govt of West Bengal.
- 3) The Joint Secretary (Works) to the Govt of West Bengal, I&W Department.
- 4) The Deputy Secretary (Works) to the Govt of West Bengal, I&W Department.
- 5) The Superintending Engineer, Metropolitan Drainage Circle, I&W Dte., Govt. of West Bengal.
- 6) The Superintending Engineer, Western Circle-I, I&W Dte., Govt. of West Bengal.
- 7) The Superintending Engineer, Eastern Circle, I&W Dte., Govt. of West Bengal.
- 8) The Superintending Engineer, Mechanical & Electrical Circle, I&W Dte., Govt. of West Bengal.
- 9) The Executive Engineer, Metropolitan Drainage Mechanical Division, I&W Dte.

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- 1) The Assistant Engineer, Metropolitan Electrical Division.
- 2) The SDO/ Metropolitan Electrical Sub-Division.
- 3) The SDO/ Dredger Sub Division No-II.
- 4) The Director of information, Department of Information & cultural Affairs, Nabanna, Shibpur, Mandirtala, Howrah-711102 for wide circulation.
- 5) The Estimating Section, Metropolitan Electrical Division.
- 6) The Accounts Section, Metropolitan Electrical Division.
- 7) Notice Board of Metropolitan Electrical Division.

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