

Government of India
Atomic Fuels Division
 Technical Services Section

Ref.AFD/TSS/BP/19/OPA- 193864

Date 27/09/19

15/10

Sub: Up-gradation of localized Power Distribution system in extrusion press and machining areas at AFD, South site, BARC.

Scope of Work:

Sno	Description	Qty.
1.	Up-gradation of localized Power Distribution system in extrusion press and machining areas at AFD, South site, BARC.	1 Set

Other details:

1. The completion period of this job should be within 6 months from the date of issue of work order.
2. Persons having valid PVC will be allowed to enter BARC to execute the job.
3. Warranty period should be 12 months after completion of work.
4. The payment will be made after the satisfactory completion of the work.
5. Income. Tax and S.C. as applicable will be deducted from the bill.
6. Any delay which is attributed to the contractor is liable for penalty @0.5 % Per Week (MAX 5%) will be imposed on contractor.
7. The offer shall be forwarded as per following guidelines:
 - a) Quotations are to be on printed letter head / quotation format which should consist of Sales tax registration number registered with local ST authority/CST authority/GST, PAN of the firm, service tax registration number etc. Computer generated quotation shall be considered as invalid & rejected.

Sealed offer with tender no and due date legibly written on the sealed envelope should reach through speed post/register post only on or before 07/11/19

To,

B Patidar, (022-25594962)**Atomic Fuels Division****South Site, BARC****Trombay, Mumbai 400 085.**

- b) The contractor with valid electrical licence (issued by competent authority) shall have to visit the site to comprehend the scope of work and equipment condition. The same

will be arranged by the undersigned. The site can be visited between 28/10/2019 to 30/10/2019 on working days between 10:30am to 4:00 pm. however prior intimation of at least three working days is necessary.(Tel : 022 25594968, email: rameshv@barc.gov.in)

The quotation submitted without site visit will not be considered.

Details and Confidentially & Publicity Clause

- I. No party shall disclose any information to any third party concerning the matters under this contract generally. In particular, any information identified as "proprietary" in nature by the disclosing party shall be kept strictly confidential by the receiving party and shall not be disclosed to any third party without the prior written consent of the original disclosing party.

This clause shall apply to the sub-contractor, consultant, adviser or employees engaged by a party with equal force

- II. **"Restricted information" categories under section 18n of the Atomic Energy Act, 1962 and "Official Secret under Section 5 of the Official Secret Act, 1923: -**

Any contravention of the above-mentioned provisions by any contractor, sub-contractor, consultant, adviser or the employees of a contractor will invite penal consequence under the aforesaid legislation.

- III. Prohibition against use of BARC's name without permission for the publicity purpose:

The contractor, sub-contractor, consultant, adviser or the employees engaged by the contractor, shall not use BARC's name for any publicity purpose through any public media like press, Radio, T.V. or Internet without the prior written of BARC. Contractor shall obtain Police verification certificate for all his employees including his supervisors and workers engaged in the work.



(Ramesh V).

SA/F, TSS, AFD



(B. Patidar)

SO/F, TSS, AFD

For & On behalf of President of India

Sl. No.	Name of Items and description	Quantity
1	De-commissioning, De-termination & Removal of existing skeletal power distribution panel and old D.B's.: Job includes removal of the panels, D.B's and cables, cleaning and clearing the site	5 Set
2	Decommissioning, Determination & recovery of existing Old outgoing Supply Cables from existing Old DB's (1.1 KV grade, Copper / Aluminium conductors, armoured, PVC insulated cables of different Rating) & re-termination of same after re-routing partially through existing cable tray & partially along the wall as per site requirement with minor fabrication & Civil work as required with supply & installation of suitable G.I. Saddle & spacer & end termination with suitable glands & lugs at both ends.	Lumpsum
3	Decommissioning, determination & recovery of existing Old outgoing wires from existing Old DB's & re-termination of same after re-routing partially through cable end box/tray & partially along the wall as per site requirement.	Lumpsum
4	Supply, Installation , testing & commissioning of Cubicle type LT Electrical Power Distribution panel with related design, preparation of fabrication drawing, fabrication of panel with powder coated painting, wiring, inspection, testing with following features. 400 Amp, 4 Pole MCCB incomer along with other switchgear components as per technical details: <ul style="list-style-type: none"> • Incomer 4 Pole, 400 Amp, MCCB (SC capacity 25kA) 02 No.'s • Outgoing Feeder of 250 Amp, MCCB (SC capacity 25kA) 01 No. • Outgoing Feeder of 125 Amp, MCCB (SC capacity 25kA) 03 No.'s • Outgoing Feeder of 63 Amp, MCB, 4P 04 No.'s • Outgoing Feeder of 32 Amp, MCB, 4P 08 No.'s • Outgoing cable chamber at extreme ends as desired 02 No.'s each • Bus-Bar chamber 02 No.'s each • Digital Voltmeter & Ammeter with selector switches 01 each. • Power logic PM 5000 series power meters PM 5320 energy meter with Ethernet port, 2 DI, 2 DO, 2 RO, 35 alarms, data logging and accuracy. Make Schneider Electric, compactable for Schneider software. 03 No.'s <ul style="list-style-type: none"> ➤ Back lit LCD display with bar graph ➤ Power and energy metering with 3 phase V, I, P, demand energy, frequency, P.F. ➤ Power quality analysis: THD, Harmonics odd >15, with I/O, 	2 No.'s

	<p>relay alarm and communication.</p> <ul style="list-style-type: none"> ➤ Its associated CT, CAT 6 cable, 5 port industrial grade Ethernet switch all of reputed make and compactable with the entire system all as per standards and as per safety norms. • Earthing bus bar with provision of 2 no.:s each terminals on either sides • Floor mounted approx. size: W-1600 x H-2100 x D-300 (dimensions may change as per actual site requirement). • Free standing type, Single front, non draw out. • Dust & vermin proof conforms to IS 2147 made out of 14/16 SWG CRCA sheet steel as per the standard with seven tank processed powder coated Siemens grey colour (Shade RAL-7032) • Digital meters, back up Fuse/ MCB, MCCB's, Selector switches, indicators, CT's, Bus-Bars <p>Equipped with all components as per IS with desired make with related control & power wiring arrangement from 400 Amp MCCB incomer till other switchgear components, & outgoing Components.</p>	
5	<p>Supply, installation, testing & commissioning of MDS Legrand make DB VTPN double door DPX³ 250 MCCB DB.: 12Ways /Surface mounting type (IP 43 with metal door) 2 No.'s pre-insulated neutral bars, 2 No.'s pre-insulated earth bars Cable ties for cable management Suitable DPX spreader links set</p> <p>DPX³ 250 SERIES MCCB 250 Amp MCCB as MAIN incomer 3 phase 440 V, with 25kA SC capacity. 01 No. 63 Amp MCB 3P 04 No.'s 32 Amp MCB 3P 04 No.'s 20 Amp SP MCB 12 No.'s</p> <ul style="list-style-type: none"> • All Legrand make • Input MCCB as per Distribution Board rating • As per IEC 61439-3 • Surface mountable • Bus bars are fully insulated, shrouded neutral • IP 43. <p>Job also include fabrication, Supply, installation, testing & commissioning of cable termination box for incoming and outgoing cables of above DBs and mounting bracket for D.B.</p>	1 Set
6	<p>Supply, Installation , testing & commissioning of MDS Legrand Ekinox Flexy DB 3 X 14 with MCC Base incomer to DB's:</p> <ul style="list-style-type: none"> • MCCB as incomer to DB's 	1 Set

	<ul style="list-style-type: none"> • Surface mounting type • IP 43 with metal door • 2 No.'s neutral bars • 2 No.'s earth bars • Busbar to be select as per distribution requirement • Cable ties for cable management. • SP MCBs at out going. • 125 Amp MCCB as MAIN incomer with short circuit capacity 25kA, Legrand make, 3P 440V 50Hz • 10/20A SP MCB short circuit capacity 10kA, Legrand (18each) 	36 No.'s
7	Supply and laying of 12/14 SWG bear copper earthing wire + Supply and Laying of Copper earth strip (25 x 3 mm) along with their mounting accessories per IS and site requirement.	Lumpsum
8	Supply and laying 3.5C x 185 Sq.mm 1100 V 50 Hz stranded aluminium conductor, FRLS, armoured PVC insulated cable as per IS 7098.	25 mtrs.
9	Supply and laying and termination of 4 Core x 16 Sq.mm stranded Copper conductor, 1100 V, armoured PVC insulated cable, Outer sheath-FRLSPVC as per IS 7098 Cable for charging above mentioned Distribution Boards from nearest PCC feeder.	100 mtrs.
10	Supply, installation of 32 AMP P17 Tempra plug & socket universal mounting D.B.s "MDS Legrand "make along with 32 Amp TP MCB, plug & socket surface mounting type and its associated supply, cabling, termination and testing of 50 meters stranded copper conductor 6 sq.mm 3.5 C armoured FRLS cable with earthing as per IS.	4 Set

I. General condition

1. All wire and cable used in electric panel shall be FRLS type.
2. Stranded copper wire of at least 1.5 and 2.5 sqmm size shall be used for control wiring.
3. Spacing between electrical components in panel shall be as per the IEC standard (60439).
4. Two earthing points shall be provided on electrical panel.
5. Electrical components used in the panel shall be of reputed make.
6. Panel shall be coated in Siemens gray/ standard with seven tank processing.
7. Proper cooling arrangement shall be made inside the panel to limit temperature with in 40°C.
8. The panel shall be designed for continuous operation (24 hrs X 7 Days).

9. All unwanted, removed fittings, parts, panels are to be disposed as per the instruction of departmental engineer.
10. All panelling and other installation works include earthing as per I.S standard with bare copper conductor.
11. Submit all catalogues, brochures and datasheet of the offered products along with offer.
12. All wires and cables used in panels shall be of suitable colour code and of FRLS type.
13. After completing the job detailed wiring diagram as per ferrule to be provided.
14. Vacant slots in D.B's are to be covered with dummies / covers.


II. Inspection and test:

1. Before starting of fabrication, the contractor shall prepare system layout drawing along with wiring diagram and get approved from purchaser.
2. Before leaving the manufacturing work, all equipments shall have been inspected and tested and the results recorded in test report.
3. The manufacturer shall provide test report of each and every electrical components of power panel and submit at the time of inspection / execution.

III. Following test shall be carried out.

1. Visual and functional check.
2. Continuity test
3. Insulation test
4. High voltage test


(Ramesh Vijayan)
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