

BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

High Pressure Boiler Plant, Tiruchirappalli 620 014, India

(MAINTENANCE & SERVICES DEPARTMENT)

☎: (0431) 2575916/2575242 Fax: (0431) 2576805

e-mail: paul@bheltry.co.in



39-300
ISO 9001

NOTICE INVITING TENDER

01.	Name of work	ARC for Additions & Alterations on Electrical Installations
02.	Enquiry Number:	9451400103/Dt:02.12.2014
03.	Estimated Cost:	₹ 45.46 Lakhs.
04.	Earnest Money:	₹ 1,00,000.00
05.	Tender document cost:	₹ 750.00
06.	Completion Time (Period of Contract)	12 Months (From the date of issue of work order)
07.	Last date for submission of offer	10.00 Hrs on 29.12.2014
08.	Techno Commercial Offer opening date:	10.30 Hrs on 29.12.2014
09.	Price Bid Opening date:	Shall be intimated separately to Technically qualified bidders.
10.	Guarantee Period:	6 (six) Months from the date of actual completion of the every sub work and handing over to Bharat Heavy Electricals Limited.
11.	Area of Work	HPBP-Trichy, CCDP, Coal Research, MHD and unit-II.

The Tender documents can be down loaded from BHEL website/ Govt. website.
(www.bhel.com / tenders.gov.in)

Tender document consists of

A] Part-1: Tech. cum commercial offer -

Part-1A: General Instruction.to Tenderers-	03 pages,
Part-1B: General terms and conditions-	02 pages,
Part-1C: Special terms and conditions-	03 pages,
Part-1D: Qualification Criterion with annexure -	03 pages,
Part-1E: Job description-	22 pages.
Part-1 Sub Total	33 pages

B] Part-2: Price bid –

33 pages.

Total no. of pages: 66 pages.

ISSUING OFFICER

SM/ Planning
Maintenance & Services

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NOTICE INVITING TENDER

Sub: ARC For Additions & Alterations on Electrical Installations

Ref: Enquiry No. 9451400103 / Dated 02.12.2014.

** **

Tender for above mentioned work should be submitted in a sealed cover consisting of three inner sealed covers. First cover shall contain EMD & Tender document cost, second cover shall contain Part-1: Technical cum commercial offer and third cover shall contain Part-2: Price bid. All superscripting the name of work, enquiry number and enquiry due date.

- 1) EMD cover shall contain requisite EMD & Tender document cost in the form of Demand Draft drawn in favour of 'BHEL, Tiruchirappalli. **EMD in any other form will not be accepted.** Tenderers who had already remitted one time EMD should furnish the details of cash receipt No./ date, on the top of EMD cover. Tender without EMD / one time EMD reference will be summarily rejected and Tech. cum commercial offer & price bid shall not be considered.
- 2) Tech. cum commercial offer cover shall contain all documents duly filled and signed by the tenderer in all the pages with documentary evidences for qualifying criteria such as experience, value of work executed in the similar nature of work etc. Any bid without proper documentary evidence for qualifying criteria shall not be considered for further evaluation.

Regd.Office: BHEL House, Siri Fort, New Delhi - 110 049

- 3) The price bid cover shall contain price bid document duly filled in and signed by the tenderer in all the pages. The tenderer has to quote most competitive rates for all the items given in the Bill of Quantities in price bid.

The completed qualification bid and price bid along with requisite **EMD of ₹1,00,000/-** for this work and tender document cost of **₹750/-** shall reach the office of the undersigned on or before **29-12-2014 at 10.00 Hrs.**

The Technical cum commercial offer will be opened on the same day at 10.30 hrs. In case of opening day falls on holiday or happened to be declared as a holiday the receipt and opening of the tender shall automatically fall on the same timing of the next working day. Date and time of opening of the Price Bid shall be intimated only to those bidders whose Tech cum commercial offer is accepted. You / Your authorized representative may participate in the tender opening.

Clarification if any, can be obtained from the undersigned.

Thanking you,

Yours faithfully,
For Bharat Heavy Electricals Limited,

SM/ Planning
Maintenance & Services

Encl:

- 1) Part-1: Technical cum commercial offer.
- 2) Part-2: Price bid.



**BHARAT HEAVY ELECTRICALS LIMITED
HIGH PRESSURE BOILER PLANT
TIRUCHIRAPALLI – 620 014
M & S CONTRACTS (ELECTRICAL)**

GENERAL INSTRUCTIONS TO TENDERER:

01.	Sealed Tender enclosed for the work is hereby invited from contractor holding a valid Electrical contractor's license, issued by Tamilnadu Electrical Licensing Board and experienced in works of similar kind.
02.	Before tendering, the tenderers are advised to inspect the site of work and its environments and be well acquainted with the actual working and other relevant conditions, position of materials and labour. Tenderers are also requested to go through General -Terms and conditions and Special -Terms and conditions of Contract , drawings and specifications and all other documents which form part of the agreement to be entered into.
03.	Tender should be addressed to the Sr.DGM/M&S,2&4-Building,BHARAT HEAVY ELECTRICALS LIMITED, Tiruchirapalli- 620 014 . Full name , address of the Tenderer and the name of the work should be noted on the covers of EMD,Technical bid & Price bid with tender No & due date of opening.
04.	The validity of the offer submitted by the tenderer shall be valid for a period of "Six months" from the date of opening of the tender.
05.	All entries in the tender documents shall be made in one ink.Erasure and over-writing are not permitted. All cancellations and insertions should be duly signed by the Tenderer concerned.
06.	Tenderer should fill in all the required particulars in the blank spaces provided for this purpose in the tender documents along with signature on each and every page of the tender document including corrigendum & the drawing attached there to while submitting their tender.
07.	Unit rates should be quoted in figures as well as in words with reference to each item and for all the items shown in the attached schedule. These rates shall be for the furnished work at site. Amount for each item and the totals page by page and also the grand total amount for the contract should also be filled in by the Tenderer.
08.	Rates for each item of the tender schedule should be quoted in Rupees and paise only, In case any difference in rates quoted to figures and in words, the lower of the rates will be taken as the tendered rate.
09.	Quantities shown in the attached schedule are only approximate and are subject to variation. The rate shall remain firm throughout the contract period. However executed work value shall remain within + 20% (plus Twenty percent) of work order value .
10.	In quoting the rates the tenderer is advised to take into account all factors including any fluctuations in market rates. No claim will be entertained on this account after acceptance of the tender or during the currency of the contract.
11.	Rates quoted shall be inclusive of all royalties, taxes, duties & other taxes except Service tax. Service Taxes as applicable shall be shown extra in the offer. The Bharat Heavy Electricals Limited, Tiruchirapalli will not entertain any claim what so ever in this respect. The applicable Service Tax can be claimed from BHEL, along with monthly bill . While claiming for Service tax, the contractor should produce copies of challans of previous Month/Quarter as proof of deposit of Service Tax, if applicable, along with a declaration that "The Service tax collected from BHEL has been remitted to Service Tax authorities.
12.	If a tenderer find discrepancies or omissions in the drawings or any of the tender documents and should there be doubts as to their meaning, he should at once address the authority inviting the tender for clarifications. Every endeavor is made to avoid any error which can materially affect the basis of the tender but the successful tenderer shall taken upon himself to provide for the risk or any error which may be subsequently discovered and shall make no subsequent claim on account thereof.

Contractor signature/seal

Accepting officer/BHEL

13.	In the event of tender being submitted by the firm, all pages of the tender must be signed legibly by each partner or member of the firm or in their absence, by the person holding the power of attorney on behalf of the firm concerned. In the latter case, a copy of the power of attorney duly attested by a Gazetted Officer must accompany the tender.
14.	Unless the Contractor, whose tender is accepted, signs the contract agreement within seven days (7 days) of the date of the order directing him to do so, the amount of Earnest Money Deposit already deposited by him will be forfeited and acceptance of the tender withdrawn.
15.	If after opening of tenders, a tenderer revokes his tender or increases his earlier quoted rates or after acceptance of his tender does not commence the work in accordance with the instructions of the Engineering-In-Charge, the Earnest Money Deposited by him will be forfeited and acceptance of his tender withdrawn. If only, a part of the work included in the tender has been awarded to the tenderer and the tenderer refuses to take up the work the amount of Earnest Money to be forfeited will be based on the value of the contract so awarded.
16.	The BHARAT HEAVY ELECTRICALS LIMITED, reserves the right to reject any or all the tenders received or accept any tender or part thereof without assigning any reason therefore. In the case of acceptance of the part of tender, time for completion may also be reduced to the extent considered appropriate by the accepting officer.
17.	Tenders not submitted in the prescribed forms are liable to be rejected.
18.	The Contractor who is not in the approved list of contractors of BHEL must submit the following documents along with their offers otherwise offers will be rejected. 01). Copy of work order received from any large reputed firm of similar nature to establish that the tenderer is an independent contractor working on his own. The contractor shall furnish details like name of the contact person, mobile no, email id and address. 02). Copy of performance certificate from atleast 2 reputed large firms or govt. bodies for having executed similar works satisfactorily in the last two years. BHEL reserves the right to verify with original certificate. 03). A certificate from a Bank regarding the tenderer's financial position. (Solvency) 04). License details of the firm or the contractor.
19.	The tender should be accompanied by a list of contracts already held by the contractor at BHEL-Trichy at the time of submission of the tender and giving the following particulars: a). WO reference number and value of contract. b). The balance of work in value remaining to be done for the same.
20.	Tender may be sent by post or dropped in Tender box available at M&S, 2&4-Building, BHARAT HEAVY ELECTRICALS LIMITED, Tiruchirapalli- 620 014. Tender submitted by Post should be sent by "Registered Post/Speed post. These should be posted well in advance with due allowance for any delay in postal delivery. Tender received after the due date of opening of tender shall be rejected.
21.	The Contractor's responsibility under this contract shall commence from the date of work order.
22.	If a tenderer expires after the submission of his tender or after the acceptance of his tender, the BHEL may at their discretion cancel such tender.
23.	The BHARAT HEAVY ELECTRICALS LIMITED, will not be bound by any power of attorney granted by the tenderer or by changes in the composition of the firm, made subsequent to the execution of the contract. They may, however, recognize such power of attorney and change after obtaining proper legal advice, the cost of which will be charged above to the contractor concerned.
24.	If the tenderer deliberately gives wrong information in his tender BHEL, reserves the right to reject tender at any stage.

Contractor signature/seal

Accepting officer/BHEL

25.	Words imparting the singular number shall also be deemed to include the plural number and vice the context so required.
26.	The 'General Instructions to Tenderers' and 'Special Terms and Conditions of Contract' are complementary to each other and where they are in conflict, the ' Special terms and conditions of Contract 'shall prevail.
27.	The expenses for completing and stamping the agreement shall be paid by the contractor.
28.	Tenderer shall not increase their quoted rates, in case BHEL, calls for negotiation for reduction of rates. Such negotiations shall not amount to cancellation or withdrawal of the original offer and the rates originally quoted shall be binding on the tenderers for the period of three months from the date of opening of tenders. (If price negotiation held on any tender, the revised offer should be submitted within a week.)
29.	All contractors will have to produce PAN/income tax clearance certificate from the Income Tax concerned along with their tender. The contractor whose Income is not taxable will be required to give affidavit for their income on the prescribed form. If the successful tenderer fails to produce the PAN/income tax clearance certificate within the stated period, the Earnest money deposit and the Security Deposit of the tenderer may be forfeited and the contract terminated.
30.	TENDERERS ARE REQUESTED TO COVER THEIR EMPLOYEE (SUPERVISORS AND LABOURERS) UNDER PF/ESI/GROUP INSURANCE/CONTRACT LABOUR REGULATIONS ACT.
31.	THE GENERAL INSTRUCTIONS TO TENDERER shall be deemed to form an integral part of the work to be entered into.



BHARAT HEAVY ELECTRICALS LIMITED
HIGH PRESSURE BOILER PLANT
TIRUCHIRAPALLI – 620 014
M & S CONTRACTS (ELECTRICAL)

GENERAL TERMS AND CONDITIONS

A	EARNEST MONEY DEPOSIT:	
	Tender must be accompanied by Earnest Money for the amount mentioned in tender notice, pledged to BHEL, Trichy in any of the forms mentioned below. The Earnest Money Deposit will be refunded to the unsuccessful tenderers within 15 days of acceptance of the award of work by successful tenderer. In the case of successful tenderer, the Earnest Money Deposit will be retained as part of the Security Deposits for satisfactory completion of the work in accordance with clause 2.0 of the General Terms and Conditions of contract.	
A.1	The Earnest Money Deposit may be furnished in form of Pay order or Demand Draft drawn in favour of BHEL-Trichy. Note: EMD shall not carry any interest.	
A.2	Unless the Contractor, whose tender is accepted, signs the contract agreement, within seven days (7 days) of the date of the order directing him to do so, the amount of Earnest Money Deposit already deposited by him will be forfeited and acceptance of the tender withdrawn.	
A.3	If after opening of tenders, a tenderer revokes his tender or increases his earlier quoted rates or after acceptance of his tender does not commence the work in accordance with the instructions of the Engineer-In-Charge, the Earnest Money Deposited by him will be forfeited and acceptance of his tender withdrawn. If only, a part of the work included in the tender has been awarded to the tenderer and the tenderer refuses to take up the work the amount of Earnest Money to be forfeited will be based on the value of the contract so awarded.	
B	SECURITY DEPOSIT:	
	The contractor whose tender has been accepted shall, within seven days of receipt of the notification of acceptance of his tender, should deposit the prescribed sum as per Clause 2.1 towards Security Deposit.	
B.1	The rate of security deposit for the contract will be as follows:	
	a). For Contract Valued up to Rs 10.00 Lakh.	: 10% of the Contract value.
	b). For Contract Valued above Rs 10.00 Lakh upto Rs 50.00 Lakh	: Rs 1 lakh plus 7.5% on the balance of the contract value.
	c). For Contracts valued above Rs 50.00 Lakh	: Rs 4 lakhs + Plus 5% on the balance of the contract value.
B.2	The Security Deposit may be furnished in any of the following forms:	
	a). Pay order or Demand Draft drawn in favour of BHEL.	
	b). Local cheques of scheduled banks, subject to realization.	
	c). Securities available from Post offices such as National Savings Certificates, Kisan Vikas Patra etc. (Certificates should be held in the name of the contractor furnishing the security and duly pledged in favour of BHEL, Trichy and discharged on the back).	
	d). Bank Guarantee from scheduled Banks/Public Financial Institutions as defined in the Companies Act. The bank guarantee format should have the approval of BHEL.	
	e). Fixed Deposit Receipt issued by Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The FDR should be in the name of the contractor, A/C BHEL, duly discharged on the back.	
	f). Security deposit can also be recovered at the rate of 10% from the running bills. However in such cases at least 50% of the Security Deposit will be collected before start of the work and the balance 50% may be recovered from the running bills.	
	h). EMD of the successful tenderer shall be converted and adjusted against the security deposit. NO INTEREST SHALL BE ALLOWED ON SECURITY DEPOSITS. BHEL, shall not be responsible for any loss of securities due to liquidation or any other reason whatsoever or any depreciation in the value of the Securities while in their charge or for any loss of interest thereon.	
	NOTE: Acceptance of Security Deposit against Sl. No. (c) and (d) above will be subject to hypothecation or endorsement on the documents (Signature of the Branch Manager must be present) in favour of BHEL. However, BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith.	

GENERAL TERMS AND CONDITIONS

B.3	All compensation or other sums of money payable by the contractor to BHEL under the terms of this contract or under any other contract with BHEL, may be deducted from the Security Deposit or realized by the sale of the securities of from the interest arising there from or from any sums which may be due or may become due to the contractor payable by BHEL, on any account whatsoever against this contract of any other contract with BHEL and in the event of his Security Deposit being reduced by reason of such deductions or sale as aforesaid, the Contractor shall within seven days thereafter make good in cash or in securities endorsed as aforesaid, any sum or sums by which the security Deposit has been so reduced.
B.4	Security Deposit will be refunded on completion of the work and after the expiry of the maintenance period. In case no maintenance period is applicable, then 100% of security Deposit will be refunded after confirming the final bill payment.
C	INCOME TAX :
C.1	<p>a). Income tax shall be deducted at the applicable rate in respect of the service contract including supply of labour for any work as follows: # Up to Rs. 10 lakhs: 10% # Above Rs. 10 lakhs up to Rs.50 lakhs: Rs.1 lakh + 7.5% of the amount exceeding Rs. 10 lakhs. # Above Rs. 50 lakhs: Rs 4 lakhs + 5% of the amount exceeding Rs. 50 lakhs. The security Deposit should be collected before start of the work by the contractor.</p> <p>b). Xerox copy of PAN card shall be submitted to Account Dept along with original for verification.</p> <p>c). TDS Certificate will be issued to vendors for each quarter ending as on 30th June,30th Sept,31st Dec. and 31st March during the following quarter.</p>
D	SERVICE TAX
D.1	<p>a). Wherever service tax is liable to be paid by the contractor, the contractor shall register himself under the Service Tax Rules and a copy of Certificate of Registration shall be furnished to Accounts Dept</p> <p>b). After registration, the payment of Service Tax shall be effected by the contractor to the Central Government monthly/quarterly based on the invoices raised before the due date of payment The Service Tax Return also shall be submitted to the Government before the due date.</p> <p>c). The invoice/bill in original duly signed by the contractor claiming the payment for Service Tax shall clearly indicate the following: 1) Continuous Serial no & date of the bill 2) Cost of the service 3) Separately showing the Service Tax amount calculated at the applicable rate 4) Separately showing the Cess on Service Tax amount 5) PAN based Service Tax Registration No.</p> <p>d). The service tax claimed in the bill will be paid to the contractor based on the proof of payment of service tax to the Central Government for the previous month/quarter as the case may be.</p>
E	CENVAT
E.1	a). Wherever the contractor claims payment for the supply of materials used in the service, "Duplicate for Transporter" copy in original clearly depicting the Cenvat paid apart from the original invoice is required to be submitted to BHEL for the purpose of availing the Cenvat Credit
F	VALUE ADDED TAX(VAT)
F.1	a). Wherever the service includes the supply of materials and claim is made for the payment of VAT, the original invoice duly signed by the contractor clearly indicating the cost of materials,rate of VAT,VAT amount,TIN no.is to be submitted for payment and availing the VAT credit.
G	LIQUIDATED DAMAGE/PENALTY :
G.1	a).If the contractor fails to complete the service/work as per terms & conditions of the order within the delivery schedule, 0.5% of the order value will be deducted for each week of delay or a part thereof subject to a maximum of 15% of the total contract value.



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BHARAT HEAVY ELECTRICALS LIMITED
HIGH PRESSURE BOILER PLANT
TIRUCHIRAPALLI – 620 014
M & S CONTRACTS (ELECTRICAL)

SPECIAL TERMS AND CONDITIONS

A	SPLITTING OF CONTRACT:			
	<p>The work shall be divided amongst three (03) vendors agreeing to match their rate to that of L1 as per their merit for operational convenience. There is uncertainty regarding quantum of work at any particular instance of time. In the mutual interest of BHEL and Vendors, splitting of work shall be done so as to ensure timely completion of urgent works when required simultaneously at different places. Depending upon the work that arises from time to time supplementary orders will be issued against each requirement. The splitting of contract shall be done as follows:</p>			
Sl No:	No. of vendors agreed for matching their rate to L1 rate:	WO value that will be awarded to L1	WO value awarded to L2 agreeing to match to L1 rate.	WO value awarded to L3 agreeing to match to L1 rate.
Case 1:	2	50%	30%	20%
case 2:	1	60 %	40%	NA
case 3:	0	100 %	NA	NA
Note:	1.) BHEL doesnot assures any minimum WO value to be awarded to vendors.			
	2.)The distribution of work shall be done in fair,transparent and equitable manner as per proposed ratio and shall be reviewed quaterly.			
	3.)The proposed ratio of division of work is notional which may vary as per requirement. BHEL will apportion the work to balance the quantum of work as a percentage of value between the successful vendors.			
	3.) Normally all the items(sub works) related to a particular job shall be awarded to single vendor. In case of urgency , sub works related to particular work may be awarded to two or more vendors . vendors shall have to work in co-ordinated manner as per directive of BHEL- Engineer/ Supervisor.			
B	FINALIZATION OF CONTRACT BY ADOPTING "REVERSE AUCTION":			
	BHEL may finalize the Contract by adopting "REVERSE AUCTION" amongst technically and commercially accepted bidders.			
	The business rules for Reverse Auction (RA) are as follows:			
B.1	Technically and Commercially acceptable Bidders shall only be eligible to participate in the Reverse Auction.			
B.2	BHEL shall engage the services of a Service Provider, who shall extend all necessary training and assistance before commencement of ON-LINE-BIDDING through Internet,at NO extra-cost to the Bidders.			
B.3	Eligible Bidders shall be informed in writing, about the details of Service Provider, to enable Vendors to contact the Service Provider and get trained.			
B.4	Event Date, Time, Start Price, Bid Decrement, Time-Extensions, etc. shall also be communicated through the Service Provider for compliance by Bidders.			
B.5	Vendors have to FAX the Compliance Form, before start of RA. Without furnishing the above Compliance Form, Bidders shall not be eligible to participate in the RA.			
B.6	BHEL shall provide the calculation sheet through the Service Provider, which shall be helpful to arrive at "TOTAL COST to BHEL", like Packing and Forwarding Charges, Taxes and Duties, Freight Charges, Insurance, Service Tax and other loading factors (for non-compliance to BHEL Standard Commercial Terms and Conditions), for each of the Bidder, to enable them to fill in the price and keep it ready for inputting data during the RA.			
B.7	RA shall be conducted on a pre-determined Date and Time.			
B.8	At the end of RA, the lowest Bid Value will be known on the Network.			
B.9	Lowest Bidder has to FAX the Prescribed Format, duly filled in and signed in, as provided, on a case-to-case basis, to the Service Provider, within 24 Hours of RA without fail.			
B.10	Any variation between the ON-LINE Bid Value and the signed document will be considered as unethical the Tender process and will invite disqualification of Bidder, for further business dealings with BHEL as per the prevailing procedure.			
B.11	Rules for finalization of procurement, Terms and conditions for Reverse Auction ,Process compliance form ,Final price bid conformation shall be provided to technically and commercially accepted bidders.			

C	DEPLOYMENT OF WORKMEN & SUPERVISORS
	a). A list containing the name of persons who are working, their age, designations, pay, nature of work is to be furnished immediately on receipt of work order, in triplicate.
	b). The work should be carried out in the presence of contract supervisor and prior permission should be obtained from the concerned supervisor and the section before starting the work.
	c). The Contractor is required to cover their employee/labourers by suitable insurance scheme (like Janatha Insurance) against any risk. The policy taken by them should be produced to BHEL authorities concerned before commencing the work.
D	BIOMETRIC ENTRY/EXIT SYSTEM FOR CONTRACT WORKMEN
	a). The Entry/Exit of the contract workmen is to be regulated only through Biometric system.
	b). The Contractor initially will be issued with a temporary gang pass for his/her contract workmen for a period of ten days.
	c). The contractor should arrange photo coverage for all his/her workmen within the above stipulated time.
	d). The contractor has to submit Form I for all his/her contract workmen. All the particulars required in Form I are to be provided by the contractor without fail.
	e). The contractor should educate the contract workmen in registering the attendance through the system.
	f). Whenever a contract workman migrates or leaves service, the contractor has to surrender the biometric card of the particular contract workman to Contract Cell with immediate effect.
	g). If a contract workman having biometric card joins another contractor, the contractor who engages them, has to intimate contract cell along with the biometric card for switching over the contract workmen from the earlier contractor to the present contractor.
	h). On completion of the work, the contractor has to surrender all the biometric cards immediately to the contract cell. Otherwise, an amount of Rs.100/- per card will be deducted from the final bill/security deposit of the contractor.
	i). If any contract workmen lose his/her card, the contractor shall arrange a duplicate card for the workmen by paying an amount of Rs.100/-.
	j). The Contractor is totally responsible for the biometric cards issued to his/her contract workmen.
E	SAFETY :
	a). In case of cable laying ,work should be carried out after getting the prior permission from the concerned electrical supervisor and civil department for digging the road when it is required to ensure that proper precautions are taken.
	b). While digging the road, a good barricade and proper sign boards should be provided in the area.
	c). While erecting the poles, proper safety precautions such as supporting the poles, tying with ropes suitable lifting tackles etc. are to be adhered.
	d). While working at heights, proper platform ladder, safety belts, etc. should be used.
	e). The necessary safety equipments such as gloves, lineman's belts etc. should be used.
	f). Any other safety measure as necessitated by the nature of work should be strictly followed.
	g). If Contractor's workmen are found to violate the safety regulations punitive action will be taken by with-holding a sum of Rs. 100/- to Rs. 500/- for each such violation.
	h). These safety measures shall be deemed to form an integral part of the work order/agreement.
F	COMPLIANCE WITH VARIOUS LABOUR LAWS :
	The Contractor shall in respect of labour employed by him either directly or through sub contractors, comply with or cause to be complied with the following statutory provisions, rules & in regard to all matters provided therein.
	a). The Contract labour (Regulation & Abolition) Act 1970 and the related Tamilnadu Rules.
	b). The Minimum Wage Act 1948 and the related Tamilnadu Rules.
	c). The Payment of Wages Act 1936 and the related Tamilnadu Rules.
	d). The Factories Act 1948 and the related Tamilnadu Rules.
	e). Employee's Provident Fund & Miscellaneous Provision Act 1952.
	f). The Workmen Compensation Act 1923.
	g). The Industrial Dispute Act 1947.
	h). Additional Amount of Rs 2500/-,Rs 3500/-,Rs 4100/- Rs 4100/- to all Unskilled, Semiskilled, Skilled labourers and Supervisors respectively over and above the minimum wage as per BHEL Corporate guidelines.
	i). Bonus payment to be made for the Contract employees as per Bonus Act.
	TENDERERS ARE REQUESTED TO COVER THEIR EMPLOYEE (SUPERVISORS AND LABOURERS) UNDER PF/ESI/GROUP INSURANCE/CONTRACT LABOUR REGULATIONS ACT.

G	STANDARDS FOR MATERIALS & SERVICES/WORKS
G.1	<p>01). Small consumables like Screws, clamps, PVC L, T, Coupling, Bend, Elbow , Bolt,Nuts are the scope of the contractor.</p> <p>02). If any other materials required other than BHEL supply specified in the schedule is meant to contractor's scope of supply.</p> <p>03). Issue of materials from Stores is subject to the availability. The contractor shall not be entitled for any claim or compensation for non-supply or delay in supply from Stores under any circumstances.</p> <p>04). Entire work should be completed within the stipulated period.</p> <p>05). Cable glands, Electrical Power Boards, Switch Boxes are to be properly earthed.</p> <p>06). Safety precautions have to be ensured by the Contractor depending on the work nature. Necessary work permit system and personal protective equipments (PPE) such as electrical resistance rubber gloves, helmet, spectacle goggles, safety shoes, safety belt etc. as applicable to electrical works should be adhered while carrying out the work.</p>
G.2	All the materials supplied by the contractor should conform to the relevant IS/BS/ISO/EN Specifications and agreeable to the engineer-in-charge.
G.3	The wiring shall confirm IS: 732:1989/2005 or any other relevant Indian Standard Specifications and Indian Electricity Rules.
G.4	Incase of PVC / Steel conduit wiring, the switches, plug sockets,regulators and other controls should be mounted on metal boxes.These boxes as well as all metal boxes used for street light controls should be fabricated as per IS 5133: Part-1: 1969 / 1996.
G.5	Erection of equipments includes testing and commissioning of equipments.
G.6	Completion reports should be submitted in the pro forma as per appendix 'E' of IS 732: 1989/2005.
G.7	The contractor should be present at the time of inspection of the installation by the Electrical inspector. Any defects pointed out by the Electrical inspector should be rectified by the contractor free of cost.
G.8	Final lay-out as well as foundation drawings should be submitted in advance for executing the civil works.
G.9	Any covering letter and comments of the contractor should be submitted in duplicate along with the offer.
G.10	<p>If cables have to be laid in the ground, the following specification should be followed:</p> <p>FOR LT CABLE : For laying of single run of cable, trenches should be excavated up to a depth of 0.8 meter,width 0.3 metre (add 0.1 M width for additional run for excavation) and 0.075 meter deep layer of sand should be spread below as well as above the cable (0.15 M) and covered with one layer of brick with longitudinal direction. If two or more cables are run, the brick should be laid in a longitudinal direction for each cable separately and 0.075 meter deep layer of sand should be spread below as well as the above the cable for each run (0.15M).</p> <p>FOR HT CABLE : For laying of single run of cable, trenches should be excavated upto a depth of 1 meter,width 0.35 metre (add 0.35 M width for additional run for excavation) and 0.075 meter deep layer of sand should be spread below as well as above the cable (0.15M).The cable covered with bricks by box type formation. If two or more cables are run, the bricks should be laid in a box type formation for each cable and 0.75 meter deep layer of sand should be spread below as well as the above the cable (0.15M) for each run.</p>
G.11	In case of open trench/wall/column,cables have to be taken with proper clamping either in cable racks/wall/column.The clamps have to be supplied by the contractor.
G.12	End Termination for the cable include supply and using solerriess crimping type tinned copper lugs, glands and if necessary cable adaptor boxes etc. and earthing the glands and adaptor boxes with 8 SWG/7/20 GI wire.
G.13	The Cement will not be supplied by BHEL.
G.14	Cubicle/Industrial Type switch boards should be manufactured by any of the reputed manufacturer, (if the make of the switch board is not specifically mentioned in the detailed specification of the board),who have sufficient experience in manufacture of electrical switch boards. The switch board has to be approved by BHEL before dispatch to work spot.
G.15	For all sheet metal fabrication, pre-treatment of all metals with acid and rust preventing chemical has to be carried out and two coats of red oxide and one coat of stove enamelling paint has to be applied by spray painting.

QUALIFYING CRITERIA				
NAME OF WORK:ARC FOR ADDITIONS & ALTERATIONS ON ELECTRICAL INSTALLATIONS INSIDE BHEL-TRICHY PREMISES INCLUDING HPBP-TRICHY, CCDP, COAL RESEARCH, MHD AND UNIT-II.				
NAME OF THE COMPANY/FIRM:				
QUALIFYING PARAMETERS FOR TECHNICAL CUM COMMERCIAL OFFER				
1	SEPARATE REGISTRATION FOR EPF, ESI, SERVICE TAX and PAN.	EPF		
		ESI		
		ST		
		PAN		
2	VALID ES A/ ES B /EA/EB GRADE CONTRACTOR LICENSE ISSUED BY TAMILNADU ELECTRICAL LICENCING BOARD	LICENSE GRADE	LICENSE NO	VALIDITY
3	AVERAGE ANNUAL TURNOVER FOR LAST THREE FINANCIAL YEARS. (2011-12,2012-13,2013-14)	QUALIFYING VALUE (30 % OF ESTIMATE VALUE)	AVERAGE VALUE FOR LAST THREE YEARS	
		Rs.13.64 LAKHS		
4	HIGHEST VALUE OF WO EXECUTED RELATED TO ELECTRICAL INSTALLATION (LT/HT) DURING LAST THREE YEARS(2011-12,2012-13,2013-14)	QUALIFYING VALUE (05 % OF ESTIMATE VALUE)	HIGHEST VALUE DURING LAST THREE YEARS	
		Rs. 2.27 LAKHS		
5	SOLVENCY Certificate from any scheduled bank) (Attach	QUALIFYING VALUE	SOLVENCY AMOUNT	DETAILS FOR SOLVENCY
		05 LAKHS		
6	STATEMENT OF EQUIPMENT OWNED		DETAILS TO BE FILLED IN ATTACHED ANNEXURE-A.	
7	AVAILABILITY OF QUALIFIED STAFFS.		DETAILS TO BE FILLED IN ATTACHED ANNEXURE-B.	
NOTE: 1. SUPPORTING DOCUMENTS FOR DETAILS FURNISHED ABOVE SHOULD BE ATTACHED .				

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Accepting officer/BHEL

ANNEXURE-A			
DETAILS OF MACHINERY AND EQUIPMENTS			
S.No:	DETAILS OF TOOLS	QUALIFYING QTY	QTY AVAILABLE
1	Welding Machine	01 NO *	
2	Bench Drilling Machine	01 NO [#]	
3	Hand Drilling Machine	01 NO*	
4	Jack Hammering Machine	01 NO [#]	
5	Gas cutting Equipments	01 SET*	
6	Basic Electrical Tools (Cutting pliers,all sizes of Screw Driver,wire snippers etc.,)	01 SET*	
7	1000 Volts Megger	01 NO*	
8	Earth Resistance Measuring Instrument with Valid Calibration Certificate from NABL accredited Lab	01 NO*	
9	Digital Multimeter	01 NO*	
10	4 MM to 500 MM Hydraulic Lug crimping tool	01 SET*	

* -Essential and mandatory

-Desireable

Contractorsignature/seal

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ANNEXURE-B			
DETAILS OF MANPOWER EMPLOYED ON FULL TIME BASIS SOLELY FOR THE PURPOSE OF CONTRACT WORKS			
S.No:	DESIGNATION	QUALIFYING NO OF STAFFS	AVAILABLE
1	Engineer holding Diploma degree in Electrical Engineering	0	
2	Electrical Supervisor holding valid Supervisor Competency Certificate issued by TNLB,Chennai	1	
3	Wireman holding valid Wiremen Competency Certificate issued by TNLB,Chennai.	2	
4	Wireman Helper holding valid Wiremen Helper Competency Certificate issued by TNLB,Chennai.	2	

Contractorsignature/seal

Accepting officer/BHEL

JOB DESCRIPTION				
NAME OF WORK:ARC FOR ADDITIONS & ALTERATIONS ON ELECTRICAL INSTALLATIONS INSIDE BHEL-TRICHY PREMISES INCLUDING HPBP-TRICHY, CCDP, COAL RESEARCH, MHD AND UNIT-II.				
S.No:	WORK DESCRIPTION	UOM	APPROXIMATE QTY	RATE
10	Excavation of earth in the ORDINARY SOIL to form a trench upto a max. depth of 1 mtr and refilling the trench with already excavated earth material, to facilitate laying or removal of cable. After closing the trench the cable route marker to be erected on the cable route with regular intervals according to the instruction of the area Supervisor. Note: The cable route marker will be issued by BHEL at site. The Excavation area inside/out side the factory.	M3	1000	QUOTED
20	Excavation of earth in the ROCKY SOIL to form a trench upto a max. depth of 1 mtr and refilling the trench with already excavated earth material, to facilitate laying or removal of cable. After closing the trench the cable route marker to be erected on the cable route with regular intervals according to the instruction of the area Supervisor. Note: The cable route marker will be issued by BHEL at site. The Excavation area inside/out side the factory.	M3	350	QUOTED
30	Excavation of earth in the FORMED TAR ROAD to form a trench upto a max. depth of 1 mtr and refilling the trench with already excavated earth material, to facilitate laying or removal of cable. After closing the trench the cable route marker to be erected on the cable route with regular intervals according to the instruction of the area Supervisor. Note: The cable route marker will be issued by BHEL at site. The Excavation area inside/out side the factory.	M3	200	QUOTED
40	Excavation of earth in the CONCRETE ROAD/ CONCRETE FLOOR to form a trench upto a max. depth of 1 mtr and refilling the trench with already excavated earth material, to facilitate laying or removal of cable with given pipe/existing pipe. Note: The Excavation area inside/out side the factory. Pipe will be issued by BHEL at site for laying the cable inside it.	M3	50	QUOTED
50	Laying of 3/3.5/4 core Alu./Copper/XLPE/armoured / un armoured cables in the already excavated trench. Size: from 4 sq.mm to 25 sq.mm .(Range:4/ 6/10/16/25 sq.mm). Note: Cables laying inside the factory and it will be supplied by BHEL at stores.	M	3000	QUOTED
60	Laying of 3/3.5/4 core Alu./Copper/XLPE/armoured/ un armoured cables in the already excavated trench. Size: from 35 sq.mm to 95 sq.mm. (Range:35/50/70/95 sq.mm). Note: Cables laying inside the factory and it will be supplied by BHEL at stores.	M	2000	QUOTED
70	Laying of 3/3.5/4 core Alu./Copper/XLPE/armoured/ un armoured cables in the already excavated trench. Size: from 120 sq.mm to 185 sq.mm. (Range:120/150/185 sq.mm). Note: Cables laying inside the factory and it will be supplied by BHEL at stores.	M	5000	QUOTED

S.No:	WORK DESCRIPTION	UOM	APPROXIMATE QTY	RATE
80	Laying of 3/3.5/4 core Alu./Copper/XLPE/armoured/ un armoured cables in the already excavated trench. Size: from 240 sq.mm. to 400 sq.mm. (Range: 240/300/400 sq.mm). Note: Cables laying inside the factory and it will be supplied by BHEL at stores.	M	800	QUOTED
90	Laying of 3/3.5/4 core Alu./Copper/XLPE/armoured /un armoured cables in the already excavated trench. Size:from 4 sq.mm to 25 sq.mm. (Range:4/6/10/16/25 sq.mm). Note:Cables laying outside the factory and cable will be supplied by BHEL at stores.	M	10000	QUOTED
100	Laying of 3/3.5/4 core Alu./Copper/XLPE/armoured/ un armoured cables in the already excavated trench.Size:From 35 sq.mm to 95sq.mm. (Range:35/50/70/95 sq.mm). Note:Cables laying outside the factory and it will be supplied by BHEL at stores.	M	600	QUOTED
110	Laying of 3/3.5/4 core Alu./Copper/XLPE/armoured/ un armoured cables in the already excavated trench.Size: from 120 sq.mm to 185 sq.mm. (Range:120/150/185 sq.mm). Note:Cables laying outside the factory and it will be supplied by BHEL at stores.	M	4215	QUOTED
120	Laying of 3/3.5/4 core Alu./Copper/XLPE/armoured/ un armoured cables in the already excavated trench.Size:from 240 sq.mm.to 400 sq.mm.(Range: 240/300/400 sq.mm). Note:Cables laying outside the factory and it will be supplied by BHEL at stores.	M	50	QUOTED
130	Supply and spreading of river sand under and over the cables laid in the trench inside/outside factory.	M3	995	QUOTED
140	Removing and refilling of sand under and over the cable in the formed trench/excavated trench inside/outside factory.	M3	100	QUOTED
150	Supply and laying of standard size construction bricks over the cables laid in the trench for protection purpose inside/outside the factory. Note: 1 SET (HN)= 100 Bricks.	SET	1400	QUOTED

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S.No:	WORK DESCRIPTION	UOM	APPROXIMATE QTY	RATE
160	Opening the trench cover at required interval,laying /removing of 3/3.5/4 core PVC AA/Copper/XLPE/armoured/un armoured cables in the trench and closing the trench cover to make good. Size: from 4 sq.mm to 25 sq.mm(Range:4/6/10/16/25 sq.mm). Note: Cables laying inside the factory and it will be supplied by BHEL at stores./Removed cable to be rolled and tied well.It should be handed over to BHEL stores.	M	100	QUOTED
170	Opening the trench cover at required interval,laying /removing of 3/3.5/4 core PVC AA/Copper/XLPE/ armoured/un armoured cables in the trench and closing the trench cover to make good. Size:35 sq.mm to 95 sq.mm.(Range:35/50/70/95 sq.mm). Note: Cables laying inside the factory and it will be supplied by BHEL at stores./Removed cable to be rolled and tied well.It should be handed over to BHEL stores.	M	100	QUOTED
180	Opening the trench cover at required interval,laying /removing of 3/3.5/4 core PVC AA/Copper/XLPE/ armoured/un armoured cables in the trench and closing the trench cover to make good.Size: from 120 sq.mm to 185 sq.mm (Range: 120/150/185 sq.mm). Note:Cables laying inside the factory and it will be supplied by BHEL at stores./Removed cable to be rolled and tied well.It should be handed over to BHEL stores.	M	100	QUOTED
190	Opening the trench cover at required interval,laying /removing of 3/3.5/4 core PVC AA/Copper XLPE/ armoured/un armoured cables in the trench and closing the trench cover to make good.Size:240 sq.mm to 400 sq.mm(Range:240/300/400 sq.mm) Note:Cables laying inside the factory and it will be supplied by BHEL at stores./Removed cable to be rolled and tied well.It should be handed over to BHEL stores.	M	100	QUOTED
200	Opening the trench cover at required interval,laying /removing of 3/3.5/4 core PVC AA/Copper/XLPE/ armoured/unarmoured cables in the trench and closing the trench cover to make good. Size:from 4 sq.mm to 25 sq.mm (Range:4/6/10/16/25 sq.mm). Note:Cables laying outside the factory and it will be supplied by BHEL at stores./Removed cable to be rolled and tied well.It should be handed over to BHEL stores.	M	50	QUOTED
210	Opening the trench cover at required interval,laying /removing of 3/3.5/4 core PVC AA./Copper/XLPE /armoured/un armoured cables in the trench and closing the trench cover to make good. Size:35 sq.mm to 95 sq.mm (Range:35/50/ 70/95 sq.mm). Note:Cables laying outside the factory and it will be supplied by BHEL at stores./Removed cable to be rolled and tied well.It should be handed over to BHEL stores.	M	50	QUOTED
220	Opening the trench cover at required interval,laying /removing of 3/3.5/4 core PVC AA/Copper/XLPE/ armoured/un armoured cables in the trench and closing the trench cover to make good.Size:from 120 sq.mm to 185 sq.mm (Range:120/150/185 sq.mm). Note:Cables laying outside the factory and it will be supplied by BHEL at stores/Removed cable to be rolled and tied well.It should be handed over to BHEL stores.	M	50	QUOTED
230	Opening the trench cover at required interval,laying /removing of 3/3.5/4 core PVC AA/Copper/XLPE/ armoured/un armoured cables in the trench and closing the trench cover to make good.size:240 sq.mm to 400 sq.mm(Range:240/ 300/400 sq.mm) Note:Cables laying outside the factory and it will be supplied by BHEL at stores./Removed cable to be rolled and tied well.It should be handed over to BHEL stores.	M	50	QUOTED

S.No:	WORK DESCRIPTION	UOM	APPROXIMATE QTY	RATE
240	Laying of No.8/12 SWG GI wire(or)No.8/12 SWG bare copper wire in the trench/wall/column/truss and connect the both ends with earth points/body of the Electrical equipments/Accessories.(along with the single/2/3/3.5/4 core PVC AA/XLPE/Copper cables/ PVC wiring/Seperately.) Note:GI/Copper wires only will be supplied by BHEL at stores.	M	100	QUOTED
250	Laying of No.14/16 SWG copper (or)7/20 GI wire in the trench/wall/ column/truss and connect the both ends with earth points/body of the Electrical equipments/Accessories.(along with the single/ 2/3/3.5/4 core PVC AA/XLPE/Copper cables/PVC wiring/Seperately.) Note:14/16 SWG copper (or)7/20 GI wire only will be supplied by BHEL at stores.	M	97	QUOTED
260	Making end termination of the following 3/3.5/4 core,PVC AA/ XLPE/Copper,Armoured,medium voltage cables with supply of suitable copper lugs,glands and earthing clamp.Size:From 4 sq.mm to 16 sq.mm.(Range:4/6/10/16 sq.mm). Note:All materials including glands,lugs,earthing clamps etc., are under the scope of the contractor.	NO	100	QUOTED
270	Making end termination of the following 3/3.5/4 core,PVC AA/ XLPE/Copper,Armoured,medium voltage cables with supply of suitable copper lugs,glands and earthing clamp.Size:from 25 sq.mm to 70 sq.mm(Range:25/35/50/70 sq.mm). Note:All materials including glands,lugs,earthing clamps etc., are under the scope of the contractor.	NO	190	QUOTED
280	Making end termination of the following 3/3.5/4 core,PVC AA/XLPE/Copper,Armoured,medium voltage cables with supply of suitable copper lugs,glands and earthing clamp.Size:from 95 sq.mm to 185 sq.mm(Range:95/120/150/185 sq.mm). Note:All materials including glands,lugs,earthing clamps etc., are under the scope of the contractor.	NO	200	QUOTED
290	Making end termination of the following 3/3.5/4 core,PVC AA/ XLPE/Copper,Armoured,medium voltage cables with supply of suitable copper lugs,glands and earthing clamp.size:240 sq.mm to 400 sq.mm.(Range:240/300/400 sq.mm). Note:All materials including glands,lugs,earthing clamps etc., are under the scope of the contractor.	NO	100	QUOTED
300	Fixing of Three phase Fuse/MCB distribution board with TPN isolator as incomer on the column/Wall/ Floor with supply of suitable angle iron frame work,fasteners etc,making interconnections and, earthing.Type of DB:6/8 Way,15/16 Amps. Note:Fuse/MCB distribution board and TPN isolator only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	15	QUOTED
310	Fixing of Three phase Fuse/MCB distribution board with TPN isolator as incomer on the column/Wall/ Floor with supply of suitable angle iron frame work, fasteners etc,making inter connections and, earthing.Type of DB:12 Way,15/16 Amps. Note:Fuse/MCB distribution board and TPN isolator only will be supplied by BHEL at Stores.All other materials including angle iron frame work,fasteners etc are under contractor's scope.	NO	25	QUOTED

S.No:	WORK DESCRIPTION	UOM	APPROXIMATE QTY	RATE
320	Fixing of Three phase Fuse/MCB distribution board with TPN isolator as incomer on the column/Wall/ Floor with supply of suitable angle iron frame work, fasteners etc.,making inter connections and, earthing.Type of DB:8/12 Way,30/32 Amps. Note:Fuse/MCB distribution board and TPN isolator only will be supplied by BHEL at Stores.All other materials including angle iron frame work,fasteners etc., are under contractor's scope.	NO	15	QUOTED
330	Fixing of Three phase Fuse/MCB distribution board with TPN isolator as incomer on the column/Wall/ Floor with supply of suitable angle iron frame work, fasteners etc.,making inter connections and, earthing.Type of DB:6/8 Way,60/63 Amps. Note:Fuse/MCB distribution board and TPN isolator only will be supplied by BHEL at Stores.All other materials including angle iron frame work,fasteners etc., are under contractor's scope.	NO	2	QUOTED
340	Fixing of Three phase Fuse/MCB distribution board with TPN isolator as incomer on the column/Wall/ Floor with supply of suitable angle iron frame work, fasteners etc.,making inter connections and, earthing.Type of DB:12 Way,60/63 Amps. Note:Fuse/MCB distribution board and TPN isolator only will be supplied by BHEL at Stores.All other materials including angle iron frame work,fasteners etc.,are under contractor's scope.	NO	2	QUOTED
350	Fixing of Three phase Fuse/MCB distribution board with TPN isolator as incomer on the column/Wall/ Floor with supply of suitable angle iron frame work, fasteners etc.,making inter connections and, earthing.Type of DB:4 Way,100 Amps. Note:Fuse/MCB distribution board and TPN isolator only will be supplied by BHEL at Stores.All other materials including angle iron frame work,fasteners etc.,are under contractor's scope.	NO	2	QUOTED
360	Fixing of Single phase Fuse/MCB distribution board with DP isolator/switch/MCB as incomer on the Wall/column with supply of suitable angle iron frame work,fasteners etc.,making inter connections and,earthing.Type of DB:6 Way,15/16 Amps(or)12 Way, 15 Amps. Note:Fuse/MCB distribution board and DP isolator/ switch/MCB only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	2	QUOTED
370	Supply and fixing of adopter boxes(made up of 1.6 mm thick sheet steel)to facilitate end termination of cable and suitable for different makes,32A TP/TPN isolator/switch fuse units. Note:All materials(MS sheet,fasteners,paint etc.,)are under contractor's scope.The adaptor should be painted with one coat of red oxide paint and two coats of grey colour enamel paint.	NO	10	QUOTED
380	Supply and fixing of adopter boxes(made up of 1.6 mm thick sheet steel)to facilitate end termination of cable and suitable for different makes,63A TP/TPN isolator/switch fuse units. Note:All materials(MS sheet,fasteners,paint etc.,)are under contractor's scope.The adaptor should be painted with one coat of red oxide paint and two coats of grey colour enamel paint.	NO	2	QUOTED
390	Supply and fixing of adopter boxes(made up of 1.6 mm thick sheet steel)to facilitate end termination of cable and suitable for different makes,100 A TP/TPN isolator/switch fuse units. Note:All materials(MS sheet,fasteners,paint etc.,)are under contractor's scope.The adaptor should be painted with one coat of red oxide paint and two coats of grey colour enamel paint.	NO	2	QUOTED

S.No:	WORK DESCRIPTION	UOM	APPROXIMATE QTY	RATE
400	Supply and fixing of adopter boxes(made up of 1.6 mm thick sheet steel)to facilitate end termination of cable and suitable for different makes 200 A TP/TPN isolator/switch fuse units. Note:All materials(MS sheet,fasteners,paint etc.)are under contractor's scope.The adaptor should be painted with one coat of red oxide paint and two coats of grey colour enamel paint.	NO	10	QUOTED
410	Supply and fixing of adopter boxes(made up of 2.0 mm thick sheet steel)to facilitate end termination of cable and suitable for different makes,315 A TP/TPN isolator/switch fuse units. Note: All materials(MS sheet,fasteners,paint etc.,)are under contractor's scope.The adaptor should be painted with one coat of red oxide paint and two coats of grey colour enamel paint.	NO	5	QUOTED
420	Supply and fixing of adopter boxes(made up of 2.0 mm thick sheet steel)to facilitate end termination of cable and suitable for different makes,400 A TP/TPN isolator/switch fuse units. Note:All materials(MS sheet,fasteners,paint etc.,)are under contractor's scope.The adaptor should be painted with one coat of red oxide paint and two coats of grey colour enamel paint.	NO	5	QUOTED
430	Supply and fixing of adopter boxes(made up of 2.0 mm thick sheet steel)to facilitate end termination of cable and suitable for different makes 630 A,TP/TPN isolator/switch fuse units. Note:All materials(MS sheet,fasteners,paint etc.)are under contractor's scope.The adaptor should be painted with one coat of red oxide paint and two coats of grey colour enamel paint.	NO	2	QUOTED
440	Supply and fixing of adopter boxes(made up of 2.0 mm thick sheet steel)to facilitate end termination of cable and suitable for different makes,750A/800A TP/TPN isolator/switch fuse units. Note:All materials(MS sheet,fasteners,paint etc.,) are under contractor's scope.The adaptor should be painted with one coat of red oxide paint and two coats of grey colour enamel paint.	NO	5	QUOTED
450	Fixing of 3 Phase 415 Volts,15 A/32 A TP/TPN Isolator/Switch/ Switch Fuse Units on the existing angle iron frame works on the trench/floor/column/ wall with supply of required fasteners. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All materials including fasteners etc.,are under contractor's scope.	NO	10	QUOTED
460	Fixing of 3 Phase 415 Volts,63 A TP/TPN Isolator/ Switch/Switch Fuse Units on the existing angle iron frame works on the trench /floor/column/wall with supply of required fasteners. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All materials including fasteners etc.,are under contractor's scope.	NO	5	QUOTED
470	Fixing of 3 Phase 415 Volts,100 TP/TPN Isolator/ Switch/Switch Fuse Units on the existing angle iron frame works on the trench /floor/column/wall with supply of required fasteners. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All materials including fasteners etc.,are under contractor's scope.	NO	5	QUOTED

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S.No:	WORK DESCRIPTION	UOM	APPROXIMATE QTY	RATE
480	Fixing of 3 Phase 415 Volts,200 A TP/TPN Isolator/ Switch/Switch Fuse Units on the existing angle iron frame works on the trench/floor/column/wall with supply of required fasteners. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All materials including fasteners etc.,are under contractor's scope.	NO	5	QUOTED
490	Fixing of 3 Phase 415 Volts,300 A/315A TP/TPN Isolator/Switch/ Switch Fuse Units on the existing angle iron frame works on the trench/floor/column/wall with supply of required fasteners. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All materials including fasteners etc.,are under contractor's scope.	NO	5	QUOTED
500	Fixing of 3 Phase 415 Volts,400 A TP/TPN Isolator/Switch/Switch Fuse Units on the existing angle iron frame works on the trench /floor/column/wall with supply of required fasteners. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All materials including fasteners etc.,are under contractor's scope.	NO	5	QUOTED
510	Fixing of 3 Phase 415 Volts,600 A/630 A TP TPN Isolator/Switch/ Switch Fuse Units on the existing angle iron frame works on the trench/floor/column/ wall with supply of required fasteners. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All materials including fasteners etc.,are under contractor's scope.	NO	2	QUOTED
520	Fixing of 3 Phase 415 Volts,15 A/32 A TP/TPN Isolator/Switch/ Switch Fuse Units with supply of suitable angle iron frame works,fasteners etc.,on the trench/floor/column/wall. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.Angle iron frame works,fasteners, paint etc.,are under contractor's scope.The Angle iron frame works should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	35	QUOTED
530	Fixing of 3 Phase 415 Volts,63 A TP/TPN Isolator/ Switch/Switch Fuse Units with supply of suitable angle iron frame works, fasteners etc.,on the trench/floor/column/wall. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.Angle iron frame works, fasteners, paint etc. are under contractor's scope.The Angle iron frame works should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	35	QUOTED
540	Fixing of 3 Phase 415 Volts,100 A TP/TPN Isolator/ Switch/Switch Fuse Units with supply of suitable angle iron frame works, fasteners etc.,on the trench/floor/column/wall. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.Angle iron frame works,fasteners, paint etc.,are under contractor's scope.The Angle iron frame works should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	20	QUOTED
550	Fixing of 3 Phase 415 Volts,200 A TP/TPN Isolator/Switch/Switch Fuse Units with supply of suitable angle iron frame works, fasteners etc.,on the trench/floor/column/wall. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.Angle iron frame works,fasteners, paint etc.,are under contractor's scope.The Angle iron frame works should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	5	QUOTED

Contractor signature/seal

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S.No:	WORK DESCRIPTION	UOM	APPROXIMATE QTY	RATE
560	Fixing of 3 Phase 415 Volts,300 A/315 A TP/TPN Isolator/Switch/ Switch Fuse Units with supply of suitable angle iron frame works,fasteners etc.,on the trench/floor/column/wall. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.Angle iron frame works,fasteners, paint etc.,are under contractor's scope. The Angle iron frame works should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	2	QUOTED
570	Fixing of 3 Phase 415 Volts,400 A TP/TPN Isolator/Switch/Switch Fuse Units with supply of suitable angle iron frame works, fasteners etc.,on the trench/floor/column/wall. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.Angle iron frame works,fasteners, paint etc.,are under contractor's scope.The Angle iron frame works should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	2	QUOTED
580	Fixing of 3 Phase 415 Volts,600 A/630 A TP/TPN Isolator/Switch/ Switch Fuse Units with supply of suitable angle iron frame works, fasteners etc.,on the trench/floor/column/wall. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.Angle iron frame works,fasteners, paint etc., are under contractor's scope.The Angle iron frame works should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	2	QUOTED
590	Fixing of 3 Phase 415 volts 15 A/32 A TP/TPN Isolator/Switch/ Switch Fuse Units on the existing MP Board with supply of suitable size intermediate adapter box,angle iron frame works, fasteners,suitable rated copper conductor cable/copper bus/ Aluminium bus,bus sleeveings etc.,making necessary inter connections and earthing with main earth bus on MP Board. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All other materials Angle iron frame works,fasteners,paint etc.,are under contractor's scope.The Angle iron frame works and adapter boxes should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	2	QUOTED
600	Fixing of 3 Phase 415 volts 63 A TP/TPN Isolator/Switch/Switch Fuse Units on the existing MP Board with supply of suitable size intermediate adapter box,angle iron frame works,fasteners, suitable rated copper conductor cable/copper bus/Aluminium bus, bus sleeveings etc.,making necessary inter connections and earthing with main earth bus on MP Board. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All other materials Angle iron frame works,fasteners,paint etc.,are under contractor's scope.The Angle iron frame works and adapter boxes should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	2	QUOTED
610	Fixing of 3 Phase 415 volts 100 A TP/TPN Isolator/Switch/Switch Fuse Units on the existing MP Board with supply of suitable size intermediate adapter box,angle iron frame works,fasteners, suitable rated copper conductor cable/copper bus/Aluminium bus, bus sleeveings etc.,making necessary inter connections and earthing with main earth bus on MP Board. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All other materials Angle iron frame works,fasteners,paint etc. are under contractor's scope.The Angle iron frame works and adapter boxes should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	3	QUOTED

S.No:	WORK DESCRIPTION	UOM	APPROXIMATE QTY	RATE
620	Fixing of 3 Phase 415 volts 200 A TP/TPN Isolator/Switch/Switch Fuse Units on the existing MP Board with supply of suitable size intermediate adapter box,angle iron frame works,fasteners, suitable rated copper conductor cable/copper bus/Aluminium bus, bus sleeveings etc.,making necessary inter connections and earthing with main earth bus on MP Board. Note: TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All other materials Angle iron frame works,fasteners,paint etc.,are under contractor's scope.The Angle iron frame works and adapter boxes should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	2	QUOTED
630	Fixing of 3 Phase 415 volts 300 A/315 A TP/TPN Isolator/Switch/ Switch Fuse Units on the existing MP Board with supply of suitable size intermediate adapter box,angle iron frame works, fasteners, suitable rated copper conductor cable/copper bus/ Aluminium bus,bus sleeveings etc.,making necessary inter connections and earthing with main earth bus on MP Board. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All other materials Angle iron frame works,fasteners,paint etc.,are under contractor's scope.The Angle iron frame works and adapter boxes should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	5	QUOTED
640	Fixing of 3 Phase 415 volts 400 A TP/TPN Isolator/Switch/Switch Fuse Units on the existing MP Board with supply of suitable size intermediate adapter box,angle iron frame works,fasteners, suitable rated copper conductor cable/copper bus/Aluminium bus, bus sleeveings etc.,making necessary inter connections and earthing with main earth bus on MP Board. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All other materials Angle iron frame works,fasteners,paint etc.,are under contractor's scope.The Angle iron frame works and adapter boxes should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	5	QUOTED
650	Fixing of 3 Phase 415 volts 600 A/630 A TP/TPN Isolator/Switch/ Switch Fuse Units on the existing MP Board with supply of suitable size intermediate adapter box,angle iron frame works, fasteners,suitable rated copper conductor cable/copper bus/ Aluminium bus,bus sleeveings etc.,making necessary inter connections and earthing with main earth bus on MP Board. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All other materials Angle iron frame works,fasteners,paint etc.,are under contractor's scope.The Angle iron frame works and adapter boxes should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	3	QUOTED
660	Fixing of 3 Phase 415 volts 800 A TP/TPN Isolator / Switch/Switch Fuse Units on the existing MP Board with supply of suitable size intermediate adapter box,angle iron frame works,fasteners, suitable rated copper conductor cable/copper bus/Aluminium bus, bus sleeveings etc.,making necessary inter connections and earthing with main earth bus on MP Board. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores. All other materials Angle iron frame works,fasteners,paint etc., are under contractor's scope.The Angle iron frame works and adapter boxes should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	3	QUOTED
670	Opening the trench at required intervals,removing of 3/3.5/4 core XLPE/PVC AA/PVC Cu.conductor armoured/un armoured cable, relaying back the given cable and closing the trench properly. Size: From 4 sq.mm to 25 sq.mm(Range: 4/6/10/16/25 sq.mm). Note:Removed cable to be rolled and tied well.It should be handed over to BHEL stores.New cable will be issued by BHEL at stores.Removal and relaying of cable inside/outside the factory.	M	2000	QUOTED

S.No:	WORK DESCRIPTION	UOM	APPROXIMATE QTY	RATE
680	Opening the trench at required intervals,removing of 3/3.5/4 core XLPE/PVC AA/PVC Cu.conductor armoured/un armoured cable, relaying back the given cable and closing the trench properly. Size: From 35 sq.mm to 95 sq.mm.(Range: 35/50/70/95 sq.mm). Note:Removed cable to be rolled and tied well.It should be handed over to BHEL stores.New cable will be issued by BHEL at stores.Removal and relaying of cable inside/outside the factory.	M	500	QUOTED
690	Opening the trench at required intervals, removing of 3/3.5/4 core XLPE/PVC AA/PVC Cu.conductor armoured/un armoured cable, relaying back the given cable and closing the trench properly. Size:From 120 sq.mm to 185 sq.mm.(Range: 120/150/185 sq.mm) Note:Removed cable to be rolled and tied well.It should be handed over to BHEL stores.New cable will be issued by BHEL at stores.Removal and relaying of cable inside/outside the factory.	M	50	QUOTED
700	Opening the trench at required intervals,removing of 3/3.5/4 core XLPE/PVC AA/PVC Cu.conductor armoured/un armoured cable, relaying back the given cable and closing the trench properly. Size:From 240 sq.mm to 400 sq.mm.(Range:240/ 300/400 sq.mm). Note:Removed cable to be rolled and tied well.It should be handed over to BHEL stores.New cable will be issued by BHEL at stores.Removal and relaying of cable inside/outside the factory.	M	50	QUOTED
710	Removing of 3/3.5/4 core PVC AA/Copper/XLPE/ armoured/un armoured cables in the already excavated trench and relaying back the given cable with replacement of available sand and bricks.Size: From 4 sq.mm to 25 sq.mm.(Range:4/6/10/16/25 sq.mm). Note:Removed cable to be rolled and tied well.It should be handed over to BHEL stores.New cable will be issued by BHEL at stores.Removal and relaying of cable inside/outside the factory.	M	200	QUOTED
720	Removing of 3/3.5/4 core PVC AA/Copper/ XLPE/ armoured/un armoured cables in the already excavated trench and relaying back the given cable with replacement of available sand and bricks.Size: From 35 sq.mm to 95 sq.mm.(Range:35/50/70/95 sq.mm). Note:Removed cable to be rolled and tied well.It should be handed over to BHEL stores.New cable will be issued by BHEL at stores.Removal and relaying of cable inside/outside the factory.	M	250	QUOTED
730	Removing of 3/3.5/4 core PVC AA/Copper/XLPE/ armoured/un armoured cables in the already excavated trench and relaying back the given cable with replacement of available sand and bricks.Size: From 120 sq.mm to 185 sq.mm.(Range:120/ 150/ 185 sq.mm). Note:Removed cable to be rolled and tied well.It should be handed over to BHEL stores.New cable will be issued by BHEL at stores.Removal and relaying of cable inside/outside the factory.	M	500	QUOTED

S.No:	WORK DESCRIPTION	UOM	APPROXIMATE QTY	RATE
740	Removing of 3/3.5/4 core PVC AA/Copper/XLPE/ armoured/un armoured cables in the already excavated trench and relaying back the given cable with replacement of available sand and bricks.Size: From 240 sq.mm. to 400 sq.mm.(Range: 240/300/ 400 sq.mm). Note:Removed cable to be rolled and tied well.It should be handed over to BHEL stores.New cable will be issued by BHEL at stores.Removal and relaying of cable inside/outside the factory.	M	150	QUOTED
750	Making straight through joint using heat shrinkable/Epoxy joint kit for 3/3.5/4 core XLPE/PVC AA cable.size:From 70 sq.mm to 95 sq.mm.(Range:70/95 sq.mm) Note: Cable joint kit only will be issued by BHEL at site. Other all materials including consumables are under the scope of the contractor.Cable joint work inside/outside the factory.	NO	2	QUOTED
760	Making straight through joint using heat shrinkable/Epoxy joint kit for 3/3.5/4 core,XLPE/ PVC AA cable.size: From 120 sq.mm to 185 sq.mm.(Range:120/150/185 sq.mm) Note: Cable joint kit only will be issued by BHEL at site. Other all materials including consumables are under the scope of the contractor.Cable joint work inside/outside the factory.	NO	2	QUOTED
770	Making straight through joint using heat shrinkable/ Epoxy joint kit for 3/3.5/4 core,XLPE/PVC AA cable.size:300 sq.mm. Note: Cable joint kit only will be issued by BHEL at site. Other all materials including consumables are under the scope of the contractor.Cable joint work inside/outside the factory.	NO	2	QUOTED
780	Making straight through joint using heat shrinkable/Epoxy joint kit for 3/3.5/4 core,XLPE/ PVC AA cable.size:400 sq.mm. Note:Cable joint kit only will be issued by BHEL at site.Other all materials including consumables are under the scope of the contractor.Cable joint work inside/outside the factory.	NO	2	QUOTED
790	Making straight through joint with supply of heat shrinkable joint kit for 3/3.5/4 core,XLPE/PVC AA cable.size:From 1.5 sq.mm to 4 sq.mm.(Range: 1.5/2.5/4 sq.mm) Note:All materials including joint kit,consumables etc.,are under the scope of the contractor.Cable joint work inside/ outside the factory.	NO	2	QUOTED
800	Making straight through joint with supply of heat shrinkable joint kit on 3/3.5/4 core XLPE/PVC AA cable.size:From 6 sq.mm to 16 sq.mm. (Range:6/10/16 sq.mm) Note: All materials including joint kit,consumables etc.,are under the scope of the contractor.Cable joint work inside/ outside the factory.	NO	2	QUOTED
810	Making straight through joint with supply of heat shrinkable joint kit on 3/3.5/4 core XLPE/PVC AA cable.size:From 25 sq.mm to 50 sq.mm. (Range:25/35/50 sq.mm) Note:All materials including joint kit,consumables etc.,are under the scope of the contractor.Cable joint work inside/ outside the factory.	NO	2	QUOTED
820	Making straight through joint with supply of heat shrinkable joint kit on 3/3.5/4 core XLPE/PVC AA cable.size:From 70 sq.mm to 95 sq.mm.(Range: 70/95 sq.mm) Note:All materials including joint kit,consumables etc.,are under the scope of the contractor.Cable joint work inside/ outside the factory.	NO	2	QUOTED

S.No:	WORK DESCRIPTION	UOM	APPROXIMATE QTY	RATE
830	Making straight through joint with supply of heat shrinkable joint kit on 3/3.5/4 core XLPE/PVC AA cable.size:From 120 sq.mm to 185 sq.mm. (Range:120/150/185 sq.mm). Note:All materials including joint kit,consumables etc.,are under the scope of the contractor.Cable joint work inside/ outside the factory.	NO	2	QUOTED
840	Making straight through joint with supply of heat shrinkable joint kit on 3/3.5/4 core XLPE/PVC AA cable.size:300 sq.mm Note:All materials including joint kit,consumables etc.,are under the scope of the contractor.Cable joint work inside/ outside the factory.	NO	2	QUOTED
850	Making straight through joint with supply of heat shrinkable joint kit on 3/3.5/4 core XLPE/PVC AA cable.size:400 sq.mm. Note: All materials including joint kit,consumables etc.,are under the scope of the contractor.Cable joint work inside/ outside the factory.	NO	2	QUOTED
860	Wiring with 2 runs of 1.5/2.5 Sq.mm PVC insulated,unsheathed, multi strand, single core copper conductor cable in 19/20mm dia. PVC,medium quality rigid conduit pipe with continuous running of 14/16 SWG bare copper wire for earthing for light,fan and socket points and connecting both ends to the switches,equipments respectively. (1 Meter of wiring consists of PVC pipe,2 runs of wire,earth wire & required saddle clamps, PVC junction box,elbows,bends,Tees,rawl plugs,screws etc.) Note:PVC straight length pipe and PVC insulated,unsheathed, multistrand, single core copper conductor cable,14/16 SWG bare copper wire only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	M	5000	QUOTED
870	Wiring of additional single run of 1.5/2.5 sq.mm PVC insulated single core copper wire in the existing wiring. Note:1.5/2.5 sq.mm PVC insulated single core copper wires only will be issued by BHEL at stores.	M	100	QUOTED
880	Wiring of additional 2 runs of 1.5/2.5 sq.mm PVC insulated single core copper wire in the existing wiring. Note:1.5/2.5 sq.mm PVC insulated single core copper wires only will be issued by BHEL at stores.	M	100	QUOTED
890	Wiring with 2 runs of 4 Sq.mm PVC insulated, unsheathed, multi strand, single core copper conductor cable in 19/20 mm dia. PVC,medium quality rigid conduit pipe with continuous running of 14/16 SWG bare copper wire for earthing for light,fan and socket points and connecting both ends to the switches,equipments respectively.(1 Meter of wiring consists of PVC pipe,2 runs of wire,earth wire & required saddle clamps,PVC junction box,elbows,bends,Tees,rawl plugs,screws etc.) Note:PVC straight length pipe and PVC insulated, unsheathed,multistrand, single core copper conductor cable,14/16 SWG bare copper wire only will be supplied by BHEL at Stores. All other materials are under contractor's scope.	M	4000	QUOTED
900	Wiring of additional single run of 4 sq.mm PVC insulated single core copper wire in the existing wiring. Note:4 sq.mm PVC insulated single core copper wire only will be issued by BHEL at stores.	M	100	QUOTED
910	Wiring of additional 2 runs of 4 sq.mm PVC insulated single core copper wire in the existing wiring. Note:4 sq.mm PVC insulated single core copper wire only will be issued by BHEL at stores.	M	100	QUOTED

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S.No:	WORK DESCRIPTION	UOM	APPROXIMATE QTY	RATE
920	Wiring with 2 runs of 6 Sq.mm PVC insulated, unsheathed,multistrand,single core copper conductor cable in 19/20mm dia.PVC Grey/Black colour medium quality rigid conduit pipe with continuous running of 14/16 SWG bare copper wire for earthing for light,fan and socket points and connecting both ends to the switches,equipments respectively.(1 Meter of wiring consists of PVC pipe,2 runs of wire,earth wire & required saddle clamps,PVC junction box,elbows,bends,Tees,rawl plugs,screws etc.) Note:PVC straight length pipe and PVC insulated, unsheathed, multistrand,single core copper conductor cable,14/16 SWG bare copper wire only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	M	100	QUOTED
930	Wiring of additional single run of 6 sq.mm PVC insulated single core copper wire in the existing wiring. Note:6 sq.mm PVC insulated single core copper wire only will be issued by BHEL at stores.	M	50	QUOTED
940	Wiring of additional 2 runs of 6 sq.mm PVC insulated single core copper wire in the existing wiring. Note:6 sq.mm PVC insulated single core copper wire only will be issued by BHEL at stores.	M	50	QUOTED
950	Wiring with 2 runs of 1.5/2.5 Sq.mm PVC insulated, unsheathed, multi strand,single core copper conductor cable in the concealed 19/20 mm dia.PVC conduit pipe with continuous running of 14/16 SWG bare copper wire/single core pvc copper conductor cable for earthing for light,fan and socket points and connecting both ends to the switches,equipments respectively.(1 Meter of wiring consists of 2 runs of PVC wire and earth wire etc.). Note:PVC insulated,unsheathed,multistrand,single core copper conductor cable,14/16 SWG bare copper wire/1 core pvc copper conductor cable only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	M	100	QUOTED
960	Wiring with 2 runs of 4/6 Sq.mm PVC insulated, unsheathed, multi strand,single core copper conductor cable in the concealed 19/20 mm dia.PVC conduit pipe with continuous running of 14/16 SWG bare copper wire/single core pvc copper conductor cable for earthing for light,fan and socket points and connecting both ends to the switches,equipments respectively.(1 Meter of wiring consists of PVC pipe,2 runs of wire,earth wire etc.) Note:PVC insulated, unsheathed,multistrand,single core copper conductor cable,14/16 SWG bare copper wire/1 core pvc copper conductor cable only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	M	100	QUOTED
970	Wiring with 2 runs 1.5/2.5 Sq.mm PVC insulated, unsheathed,multistrand,single core copper conductor cable in 16/19/25/35/40 mm size PVC medium quality casing and capping with continuous running of 2.5 sq.mm insulated copper wire for earthing for lights,fans and socket points and connecting both ends to the switches,equipments respectively. Note:Casing and capping and 1.5/2.5 sq.mm PVC single core copper conductor cable,insulated copper wire for earthing only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	M	100	QUOTED
980	Wiring of additional single run of 1.5/2.5 sq.mm PVC insulated single core copper wire in the existing wiring. Note:1.5/2.5 sq.mm PVC insulated single core copper wires only will be issued by BHEL at stores.	M	50	QUOTED
990	Wiring of additional 2 runs of 1.5/2.5 sq.mm PVC insulated single core copper wire in the existing wiring. Note:1.5/2.5 sq.mm PVC insulated single core copper wires only will be issued by BHEL at stores.	M	50	QUOTED
1000	Wiring with 2 runs 4/6 Sq.mm PVC insulated, unsheathed, multistrand,single core copper conductor cable in 16/19/25/ 35/40 mm size PVC medium quality casing and capping with continuous running of 2.5 sq.mm insulated copper wire for earthing for lights,fans and socket points and connecting both ends to the switches,equipments respectively. Note:Casing and capping and 4/6 sq.mm PVC single core copper conductor cable,insulated copper wire for earthing only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	M	100	QUOTED

S.No:	WORK DESCRIPTION	UOM	APPROXIMATE QTY	RATE
1010	Wiring of additional single run of 4/6 sq.mm PVC insulated single core copper wire in the existing wiring. Note:4/6 sq.mm PVC insulated single core copper wires only will be issued by BHEL at stores.	M	100	QUOTED
1020	Wiring of additional 2 runs of 4/6 sq.mm PVC insulated single core copper wire in the existing wiring. Note:4/6 sq.mm PVC insulated single core copper wires only will be issued by BHEL at stores.	M	100	QUOTED
1030	Fixing of flush type switch 1 number on hylam top of teak wood box with necessary inter connections and including earth connection. Note:Teak wood box with hylam top & switch only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	200	QUOTED
1040	Fixing of the following flush type switches up to 2 numbers on hylam top of teak wood box with necessary inter connections and including earth connection. Note:Teak wood box with hylam top & switch only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	SET	20	QUOTED
1050	Fixing of the following flush type switches up to 4 numbers on hylam top of teak wood box with necessary nter connections and including earth connection. Note:Teak wood box with hylam top & switch only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	SET	20	QUOTED
1060	Fixing of the following flush type switches up to 6 numbers on hylam top of teak wood box with necessary inter connections and including earth connection. Note:Teak wood box with hylam top & switch only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	SET	20	QUOTED
1070	Fixing of additional flush type switch 1 number on existing switch box(on hylam top of teak wood box)with necessary interconnections and including earth connection. Note:switch only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	20	QUOTED
1080	Fixing of flush type fan regulator(electronic)1 no on hylam top of teak wood box with necessary interconnections and including earth connection. Note:Teak wood box with hylam top,fan regulator only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	125	QUOTED

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S.No:	WORK DESCRIPTION	UOM	APPROXIMATE QTY	RATE
1090	Fixing of additional flush type fan regulator 1 number on existing switch box(on hylam top of teak wood box)with necessary interconnections and including earth connection. Note:Fan regulator only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	10	QUOTED
1100	Fixing of flush type switch 1 number on sheet metal box with necessary interconnections and including earth connection. Note:Sheet metal box and switch only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	10	QUOTED
1110	Fixing of flush type switch 2 numbers on sheet metal box with necessary interconnections and including earth connection. Note:Sheet metal box and switches only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	SET	10	QUOTED
1120	Fixing of flush type switch 4 numbers on sheet metal box with necessary interconnections and including earth connection. Note:Sheet metal box and switches only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	SET	10	QUOTED
1130	Fixing of flush type switch 6 numbers on sheet metal box with necessary interconnections and including earth connection. Note:Sheet metal box and switches only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	SET	10	QUOTED
1140	Fixing of additional flush type switch 1 number on existing sheet metal box with necessary interconnections and including earth connection. Note:switch only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	10	QUOTED
1150	Fixing of flush type fan regulators(electronic)1 number on sheet metal box with necessary interconnections and including earth connection. Note:Sheet metal box and fan regulator only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	50	QUOTED
1160	Fixing of additional flush type fan regulators (electronic)on existing sheet metal box with necessary interconnections and including earth connection. Note:Fan regulators only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	20	QUOTED

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S.No:	WORK DESCRIPTION	UOM	APPROXIMATE QTY	RATE
1170	Fixing of 5 Amps 3 pin/5 pin flush type switched socket on hylam top of teak wood box with necessary interconnections and including earth connection. Note:Flush type switched socket and TW Box with Hylum top will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	50	QUOTED
1180	Fixing of 15 Amps/3 pin(or)5 A/15 Amps 6 pin flush type switched socket on hylam top of teak wood box with necessary inter connections and including earth connection. Note:Flush type switched socket and TW Box with hylum top will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	30	QUOTED
1190	Fixing of 15 Amps 3 pin flush type socket on the hylam top of teak wood box with necessary interconnections and including earth connection. Note:Flush type switched socket and TW box with hylum top will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	30	QUOTED
1200	Fixing of 15 Amps flush type single pole switch on the hylam top of teak wood box with necessary interconnections and including earth connection. Note:Flush type SP switch and TW box with hylum top will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	20	QUOTED
1210	Fixing of 5 Amps 3 pin/5 pin flush type switched socket on top of sheet metal box with necessary interconnections and including earth connection. Note:Flush type switched socket and sheet metal box will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	30	QUOTED
1220	Fixing of 15 Amps/5 A/15 Amps 3 pin/5 pin flush type switched socket on sheet metal box with necessary interconnections and including earth connection. Note:Flush type switched socket and sheet metal box will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	30	QUOTED
1230	Fixing of 15 Amps 3 pin flush type socket on the sheet metal box with necessary interconnections and including earth connection. Note:Flush type switched socket and sheet metal box will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	110	QUOTED
1240	Fixing of 15 Amps flush type single pole switch on the metal plate top of sheet metal box with necessary interconnections and including earth connection. Note:Flush type SP switch and sheet metal box will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	10	QUOTED

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Accepting Officer-BHEL

S.No:	WORK DESCRIPTION	UOM	APPROXIMATE QTY	RATE
1250	Breaking the wall to make pocket hole on the wall,concealing the Teak wood box with hylam top/sheet metal box of various sizes (4" X 4"/6" X 4"/8" X 4"/10" X 4"/12" X 4"/6" X6"/8" X 6"/10" X 8"/12" X 8") in the pocket hole and closing the outer sides with massonry materials to make good.Also make an entry for inserting the pvc pipe/casing capping on the TW/SM box. Note:TW box & Sheet metal box only will be supplied by BHEL at Stores.All required massonry materials are under contractor's scope.	NO	10	QUOTED
1260	Breaking the wall to make pocket hole for laying the pvc pipe and junction box (wherever required) suitable for concealed wiring and after laying the pipe,closing the pocket hole outer with massonry materials to make good after completing the wiring. Note:PVC pipe will be issued by BHEL at stores.All required massonry materials and PVC accessories are under contractor's scope.	M	10	QUOTED
1270	Fixing of Single/Double pole 16/32/63/100 amps MCB's in the Sheet metal box on the wall/column with supply of 20 x 3 mm MS flat. Note:MCB only will be issued by BHEL at stores.All other materials are to be supplied by the contractor.	NO	40	QUOTED
1280	Fixing of Three Four pole 16/32/63/100 amps MCB's in the Sheet metal box on the wall/column/ with supply of 20 x 3 mm MS flat. Note:MCB only will be issued by BHEL at stores.All other materials are to be supplied by the contractor.	NO	10	QUOTED
1290	Assembling,fixing and commissioning of 1200/1400 mm sweep ceiling fan with standard MS down rod/0.5 M long on the existing hook on the ceiling. Note:Ceiling fan with MS down rod only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	10	QUOTED
1300	Assembling, fixing and commissining of 1200/1400 mm sweep ceiling fan with supply of MS down rod(0.75 to 1.0 M long)on the existing hook on the ceiling. Note:Ceiling fan only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	10	QUOTED
1310	Assembling,fixing and commissioning of 1200/1400 mm sweep ceiling fan with supply of MS down rod(1.0 to 2.0 M long)on the existing hook on the ceiling. Note:Ceiling fan only will be supplied by BHEL at Stores.All other materials including MS down rods are under contractor's scope.	NO	10	QUOTED
1320	Supply and fixing of heavy duty"U" type ceiling hook on the ceiling with anchoring bolts and washers etc., Note:All materials are under contractor's scope.	NO	30	QUOTED

S.No:	WORK DESCRIPTION	UOM	APPROXIMATE QTY	RATE
1330	Fixing and commissioning of 300/350/380 mm sweep(light duty/ heavy duty)exhaust fan with supply of suitable wooden screws and rawl plugs on the wall including making necessary openings on the wall and finishing the wall opening with masonry materials to make it good. Note:Exhaust fans only will be supplied by BHEL at Stores.All other materials including iron frame work(duly painted), fasteners,masonry materials etc.,are under contractor's scope.	NO	20	QUOTED
1340	Fixing and commissioning of 300/350/380 mm sweep(light duty/ heavy duty)exhaust fan with supply of suitable grouting bolts and nuts on the existing opening in the wall. Note:Exhaust fans only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	5	QUOTED
1350	Fixing and commissioning of 300/350/380 mm sweep(light duty/ heavy duty)exhaust fan with supply of suitable size iron frame work,fasteners, masonry materials etc.,on the ventilator/Wall. Note:Exhaust fans only will be supplied by BHEL at Stores.All other materials including iron frame(duly painted) work, fasteners,masonry materials are under contractor's scope.	NO	5	QUOTED
1360	Fixing and commissioning of 400/450 mm sweep (light duty/heavy duty)exhaust fan with supply of suitable size angle iron frame, fasteners and masonry materials etc.,on the existing opening in the wall. Note:Exhaust fans only will be supplied by BHEL at Stores.All other materials including iron frame work,fasteners,masonry materials are under contractor's scope.	NO	5	QUOTED
1370	Fixing of 600 mm sweep,3-phase exhaust fan in the existing MS angle iron frame work and connecting to the available power supply. Note:Exhaust fan only will be supplied by BHEL at stores.All other materials are under contractor's scope.	NO	5	QUOTED
1380	Fixing of 600 mm sweep,3-phase exhaust fan on the wall with supply of suitable size of MS angle iron frame work. Note:Exhaust fan only will be supplied by BHEL at stores.All other materials are under contractor's scope.	NO	5	QUOTED
1390	Fixing and commissioning of 1x28/40 Watts(or) 2x28/40 Watts Box/Industrial/Decorative fluorescent light fitting with lamps on the Ceiling/ Wall using polished T.W round blocks by embedding 4 inch long, ¼ inch dia G.I bolts on the ceiling. Note:Light fittings with lamps only will be supplied by BHEL at Stores.All other materials (TW round blocks,G.I bolts & nuts, screws etc.,)are under contractor's scope.	NO	300	QUOTED
1400	Fixing and commissioning of 1x28/40 Watts(or) 2x28/40 Watts Box/Industrial/Decorative fluorescent light fitting on the Ceiling/Fall ceiling using polished T.W round blocks,0.5 to 1.0 m long down rods,ball and socket arrangements,by embedding 4 inch long,¼ inch dia G.I bolts on the ceiling for fixing the T.W round block. Note:Light fittings with lamps only will be supplied by BHEL at Stores.All other materials(Down rods,ball and sockets,TW round blocks,G.I bolts&nuts,screws etc.,)are under contractor's scope.	NO	50	QUOTED

S.No:	WORK DESCRIPTION	UOM	APPROXIMATE QTY	RATE
1410	Fixing and commissioning of 1x28/40 Watts(or) 2x28/40 Watts Box/Industrial/Decorative type fluorescent light fitting on the Ceiling/Fall ceiling using polished T.W round blocks,1.0 to 2.0 m long down rods,ball and socket arrangements,by embedding 4 inch long, $\frac{1}{4}$ inch dia G.I bolts on the ceiling for fixing the T.W round block. Note:Light fittings with lamps only will be supplied by BHEL at Stores.All other materials(Down rods,ball and sockets,TW round blocks,G.I bolts&nuts,screws etc.,)are under contractor's scope.	NO	10	QUOTED
1420	Fixing and commissioning of 1x14/18/28 Watts (or)2 x14/18/28 Watts Decorative type fluorescent light fitting on the Ceiling/Fall ceiling using polished T.W round blocks,0.5 to 1.0 m long G.I Chain by embedding G.I hooks on the ceiling for hanging and resting on the fall ceiling. Note:Light fittings with lamps only will be supplied by BHEL at Stores.All other materials(G.I chains,G.I hooks,G.I bolts& nuts,screws etc.,)are under contractor's scope.	NO	10	QUOTED
1430	Fixing and commissioning of 1x28/36/40 Watts(or) 2x28/36/40 Watts box/industrial/decorative type fluorescent light fitting on the Ceiling/Fall ceiling using polished T.W round blocks,1.0 to 2.0 m long G.I Chain by embedding G.I hooks on the ceiling for hanging and resting on the fall ceiling. Note:Light fittings with lamps only will be supplied by BHEL at Stores.All other materials(G.I chains,G.I hooks,G.I bolts& nuts, screws etc.,)are under contractor's scope.	NO	10	QUOTED
1440	Removing of existing faulty/old wiring(wired in the Reaper/PVC pipes/casing capping of sizes 16/19/20/25/32 mm) and handing over the same to disposal stores.	M	100	QUOTED
1450	Fixing of DOL starter on the wall with supply of suitable angle iron frame on the wall/column/metal frame and making necessary inter connections. Note:DOL starter only will be issued by BHEL at stores.All other materials are under contractor scope.	NO	5	QUOTED
1460	Assy & fixing of 3 pin 20/30/32 Amps metal clad plug & socket in the metal box along with 20/30/32 Amps circuit breaker on the wall and connecting the wiring points including earth wire. Note:20/30/32 Amps plug & socket,circuit breaker and metal box will be supplied by BHEL at stores.All other materials are contractor's scope.	SET	10	QUOTED
1470	Assy & fixing of 3 pin 20/30/32 Amps metal clad plug & socket in the metal box along with 20/30/32 Amps circuit breaker on the wall after making necessary pocket holes for concealed wiring and connecting the wiring points including earth wire. Note:20/30 Amps plug & socket,circuit breaker and metal box will be supplied by BHEL at stores.All other materials are contractor's scope.	SET	10	QUOTED
1480	Laying of 3/3.5/4 core PVC AA/Copper/XLPE/ armoured/un armoured cable on the wall/column/truss/cellar with supply of suitable MS heavy duty clamps for every 0.25 mtr interval including fastners.Size:From 4 sq.mm to 25 sq.mm.(Range:4/6/10/16/25 sq.mm). Note:Cables laying inside/outside the factory and it will be supplied by BHEL at stores.All other materials are under contractor's scope.	M	50	QUOTED

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Accepting Officer-BHEL

S.No:	WORK DESCRIPTION	UOM	APPROXIMATE QTY	RATE
1490	Laying of 3/3.5/4 core PVC AA/Copper/XLPE/ armoured/un armoured cable on the wall/column/truss/cellar with supply of suitable MS heavy duty clamps for every 0.25 mtr interval including fastners.Size: From 35 sq.mm to 95 sq.mm .(Range:35/50/70/95 sq.mm). Note:Cables laying inside/outside the factory and it will be supplied by BHEL at stores.All other materials are under contractor's scope.	M	50	QUOTED
1500	Laying of 3/3.5/4 core PVC AA/Copper/XLPE/ armoured/ un armoured cable on the wall/column/truss/cellar with supply of suitable MS heavy duty clamps for every 0.25 mtr interval including fastners.Size:From 120 sq.mm to 185 sq.mm. (Range:120/150/185 sq.mm). Note:Cables laying inside/outside the factory and it will be supplied by BHEL at stores.All other materials are under contractor's scope.	M	50	QUOTED
1510	Laying of 3/3.5/4 corePVC AA/Copper/ XLPE/ armoured/un armoured cable on the wall/column /truss/cellar with supply of suitable MS heavy duty clamps for every 0.25 mtr interval including fastners.Size: From 240 sq.mm to 400 sq.mm. (Range:240/300/400 sq.mm). Note:Cables laying inside/outside the factory and it will be supplied by BHEL at stores.All other materials are under contractor's scope.	M	50	QUOTED
1520	Removing of 3/3.5/4 core PVC AA/Copper/ XLPE /armoured/un armoured cable on the wall/column/ truss/cellar.Size:From 4 sq.mm to 25 sq.mm. (Range:4/6/10/16/25 sq.mm). Note:Removed cable to be rolled and tied well.It should be handed over to BHEL stores.	M	50	QUOTED
1530	Removing of 3/3.5/4 core PVC AA/Copper/ XLPE/ armoured/un armoured cable on the wall/column /truss/cellar.Size:From 35 sq.mm to 95 sq.mm. (Range:35/50/70/95 sq.mm). Note:Removed cable to be rolled and tied well.It should be handed over to BHEL stores.	M	50	QUOTED
1540	Removing of 3/3.5/4 core PVC AA/Copper/XLPE/ armoured/un armoured cable on the wall/column /truss/cellar.Size: From 120 sq.mm to 185 sq.mm. (Range:120/150/185 sq.mm). Note:Removed cable to be rolled and tied well.It should be handed over to BHEL stores.	M	50	QUOTED
1550	Removing of 3/3.5/4 corePVC AA/Copper/XLPE/ armoured/un armoured cable on the wall/column/ truss/cellar.Size: From 240 sq.mm to 400 sq.mm. (Range:240/300/400 sq.mm) Note:Removed cable to be rolled and tied well.It should be handed over to BHEL stores.	M	50	QUOTED
1560	Providing earth electrodes as per IS standards as follows: Excavation of earth,supply and installation of earth electrode generally conforming to IS:3043-1987.The electrode should be of 50 mm dia.G.I.pipe,class C having wall thickness of 5 mm and length 2500 mm.with supply and filling of alternate layers of Bentonite,river sand and charcoal around the electrode, construction of masonry chamber and cover etc.,with supply of massonry materials.Earth resistance value(to be measured using earth megger),earth electrode No.and date of inspection are to be painted inside the chamber wall and on the top of the cover.	NO	10	QUOTED

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Accepting Officer-BHEL

S.No:	WORK DESCRIPTION	UOM	APPROXIMATE QTY	RATE
	<p>SPECIAL INSTRUCTIONS for making earth pits :-</p> <p>a).Before commencement of work,contractor should discuss with Electrical in charge and finalise the location plan for the installation of earth pits.</p> <p>b).After excavation of earth & before closing the same it should be shown to Electrical in charge.</p> <p>C).Contractor should fill bentonite,river sand,charcoal around electrode with presence of Electrical in charge.</p> <p>d).Unique earth pit number should be allotted for every earth pit and same is to be painted with black colour paint on the inside wall of masonry chamber and cover.</p> <p>e).After erection of earth pit,the ohmic value to be measured in the presence of Electrical in charge and final report to be submitted.The value of the earth pit should be less than 2 ohms.</p>			QUOTED
1570	<p>Wiring in the steel cabin with 2 runs of 1.5/2.5 Sq.mm PVC insulated, unsheathed,multistrand,single core copper conductor cable in 19/20mm dia. PVC,medium quality rigid conduit pipe with continuous running of 14/16 SWG bare copper wire for earthing for light,fan and socket points and connecting both ends to the switches,equipments respectively.(1 Meter of wiring consists of PVC pipe,2 runs of wire,earth wire & required saddle clamps,PVC junction box,elbows,bends,Tees,MS clamps,saddle clamps,screws etc.)</p> <p>Note:PVC straight length pipe and PVC insulated, unsheathed, multistrand, single core copper conductor cable,14/16 SWG bare copper wire and welding electrodes only will be supplied by BHEL at Stores.All other materials and welding of pipe fixing clamps etc., are under contractor's scope.MS Clamp should be painted with one coat of red oxide paint.</p>	M	1000	QUOTED
1580	<p>Wiring In the steel cabin with 2 runs of 4 Sq.mm PVC insulated, unsheathed, multistrand,single core copper conductor cable in 19/20 mm dia. PVC,medium quality rigid conduit pipe with continuous running of 14/16 SWG bare copper wire for earthing for light,fan and socket points and connecting both ends to the switches,equipments respectively.(1 Meter of wiring consists of PVC pipe,2 runs of wire,earth wire & required saddle clamps,PVC junction box,elbows,bends ,Tees,MS clamps,saddle clamps,screws etc.)</p> <p>Note:PVC straight length pipe and PVC insulated, unsheathed, multi strand,single core copper conductor cable,14/16 SWG bare copper wire and welding electrodes only will be supplied by BHEL at Stores. All other materials and welding of pipe fixing clamps etc., are under contractor's scope.MS Clamp should be painted with one coat of red oxide paint.</p>	M	500	QUOTED
1590	<p>Wiring In the steel cabin with 2 runs of 6 Sq.mm PVC insulated, unsheathed,multistrand,single core copper conductor cable in 19/20mm dia.PVC Grey/Black colour medium quality rigid conduit pipe with continuous running of 14/16 SWG bare copper wire for earthing for light,fan and socket points and connecting both ends to the switches,equipments respectively.(1 Meter of wiring consists of PVC pipe,2 runs of wire,earth wire & required saddle clamps,PVC junction box,elbows,bends,Tees,MS clamps,saddle clamps,screws etc.)</p> <p>Note:PVC straight length pipe and PVC insulated, unsheathed, multistrand,single core copper conductor cable,14/16 SWG bare copper wire and welding electrodes only will be supplied by BHEL at Stores.All other materials and welding of pipe fixing clamps etc., are under contractor's scope.MS Clamp should be painted with one coat of red oxide paint.</p>	M	300	QUOTED
1600	<p>Laying of 50 mm x 6 mm GI Earth flat on the floor/ formed trench/ excavated trench/wall by fixing/ welding and to be connected the both ends to Main existing earth connection/Earth pit/Electrical Equipments/ MP(or) ML boards and other accessories.Only 50 mm x 6 mm GI flat and welding electrodes will be issued by BHEL at store/Electrical Section.All other items like screws and clamps etc., should be supplied by the contractor.</p>	M	300	QUOTED
1610	<p>Laying of 25 mm x 3 mm GI Earth flat on the floor/ formed trench/ excavated trench/wall by fixing/ welding and to be connected the both ends to Main existing earth connection/Earth pit/Electrical Equipments/MP(or) ML boards and other accessories.Only 25 mm x 3 mm GI flat and welding electrodes will be issued by BHEL at store/Electrical Section.All other items like screws and clamps etc., should be supplied by the contractor.</p>	M	250	QUOTED

S.No:	WORK DESCRIPTION	UOM	APPROXIMATE QTY	RATE
	<p>GENERAL NOTE:</p> <p>01).Where ever welding work required,the same to be carried out by the Contractor.</p> <p>02).Welding electrode will be issued by the Area supervisor/Executive at Electrical section.</p> <p>03).Necessary height of the ladder and all types of required tools must be brought by the Contractor.</p> <p>04).While fixing of the Electrical equipments all types of masanory work where ever required is to be done by the contractor.</p> <p>05).All types of debris and other wastage materials are to be disposed properly as per the instructions.</p> <p>06).Personal protective Safety Equipments to be supplied to the their workers by the Contractor.</p> <p>07).Safety precautions to be strictly adopted by the workers of the Contractor.</p> <p>08).Necessary Material "IN" gate pass to be kept safe and it to be produced when billing.</p> <p>09).Periodical running bill to be claimed compulsarily.</p> <p>10).Service tax Extra to be remitted for work orders according to the instruction.</p> <p>11).The quantity mentioned for this work is tentative. It may vary +/- 20 %.</p>			

Contractor signature/seal

Accepting Officer-BHEL

NAME OF WORK:ARC FOR ADDITIONS & ALTERATIONS ON ELECTRICAL INSTALLATIONS INSIDE BHEL-TRICHY PREMISES INCLUDING HPBP-TRICHY, CCDP, COAL RESEARCH, MHD AND UNIT-II.					
S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
10	Excavation of earth in the ORDINARY SOIL to form a trench upto a max. depth of 1 mtr and refilling the trench with already excavated earth material, to facilitate laying or removal of cable. After closing the trench the cable route marker to be erected on the cable route with regular intervals according to the instruction of the area Supervisor. Note: The cable route marker will be issued by BHEL at site. The Excavation area inside/out side the factory.	M3	1000		
20	Excavation of earth in the ROCKY SOIL to form a trench upto a max. depth of 1 mtr and refilling the trench with already excavated earth material, to facilitate laying or removal of cable. After closing the trench the cable route marker to be erected on the cable route with regular intervals according to the instruction of the area Supervisor. Note: The cable route marker will be issued by BHEL at site. The Excavation area inside/out side the factory.	M3	350		
30	Excavation of earth in the FORMED TAR ROAD to form a trench upto a max. depth of 1 mtr and refilling the trench with already excavated earth material, to facilitate laying or removal of cable. After closing the trench the cable route marker to be erected on the cable route with regular intervals according to the instruction of the area Supervisor. Note: The cable route marker will be issued by BHEL at site. The Excavation area inside/out side the factory.	M3	200		
40	Excavation of earth in the CONCRETE ROAD/ CONCRETE FLOOR to form a trench upto a max. depth of 1 mtr and refilling the trench with already excavated earth material,to facilitate laying or removal of cable with given pipe/existing pipe. Note: The Excavation area inside/out side the factory. Pipe will be issued by BHEL at site for laying the cable inside it.	M3	50		

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Accepting Officer-BHEL

S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
50	Laying of 3/3.5/4 core Alu./Copper/XLPE/armoured /un armoured cables in the already excavated trench. Size: from 4 sq.mm to 25 sq.mm .(Range:4/ 6/10/16/25 sq.mm). Note: Cables laying inside the factory and it will be supplied by BHEL at stores.	M	3000		
60	Laying of 3/3.5/4 core Alu./Copper/XLPE/armoured/ un armoured cables in the already excavated trench. Size: from 35 sq.mm to 95 sq.mm. (Range:35/50/70/95 sq.mm). Note: Cables laying inside the factory and it will be supplied by BHEL at stores.	M	2000		
70	Laying of 3/3.5/4 core Alu./Copper/XLPE/armoured/ un armoured cables in the already excavated trench. Size: from 120 sq.mm to 185 sq.mm. (Range:120/150/185 sq.mm). Note: Cables laying inside the factory and it will be supplied by BHEL at stores.	M	5000		
80	Laying of 3/3.5/4 core Alu./Copper/XLPE/armoured/ un armoured cables in the already excavated trench. Size: from 240 sq.mm. to 400 sq.mm. (Range: 240/300/400 sq.mm). Note: Cables laying inside the factory and it will be supplied by BHEL at stores.	M	800		
90	Laying of 3/3.5/4 core Alu./Copper/XLPE/armoured /un armoured cables in the already excavated trench. Size:from 4 sq.mm to 25 sq.mm. (Range:4/6/10/16/25 sq.mm). Note:Cables laying outside the factory and cable will be supplied by BHEL at stores.	M	10000		
100	Laying of 3/3.5/4 core Alu./Copper/XLPE/armoured/ un armoured cables in the already excavated trench.Size:From 35 sq.mm to 95sq.mm. (Range:35/50/70/95 sq.mm). Note:Cables laying outside the factory and it will be supplied by BHEL at stores.	M	600		
110	Laying of 3/3.5/4 core Alu./Copper/XLPE/armoured/ un armoured cables in the already excavated trench.Size: from 120 sq.mm to 185 sq.mm. (Range:120/150/185 sq.mm). Note:Cables laying outside the factory and it will be supplied by BHEL at stores.	M	4215		

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Accepting Officer-BHEL

S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
120	Laying of 3/3.5/4 core Alu./Copper/XLPE/armoured/ un armoured cables in the already excavated trench.Size:from 240 sq.mm.to 400 sq.mm.(Range: 240/300/400 sq.mm). Note:Cables laying outside the factory and it will be supplied by BHEL at stores.	M	50		
130	Supply and spreading of river sand under and over the cables laid in the trench inside/outside factory.	M3	995		
140	Removing and refilling of sand under and over the cable in the formed trench/excavated trench inside/outside factory.	M3	100		
150	Supply and laying of standard size construction bricks over the cables laid in the trench for protection purpose inside/outside the factory. Note: 1 SET (HN)= 100 Bricks.	SET	1400		
160	Opening the trench cover at required interval,laying /removing of 3/3.5/4 core PVC AA/Copper/ XLPE/armoured/un armoured cables in the trench and closing the trench cover to make good. Size: from 4 sq.mm to 25 sq.mm(Range:4/6/10/16/25 sq.mm). Note: Cables laying inside the factory and it will be supplied by BHEL at stores./Removed cable to be rolled and tied well.It should be handed over to BHEL stores.	M	100		
170	Opening the trench cover at required interval,laying /removing of 3/3.5/4 core PVC AA/Copper /XLPE/ armoured/un armoured cables in the trench and closing the trench cover to make good. Size:35 sq.mm to 95 sq.mm.(Range:35/50/70/95 sq.mm). Note: Cables laying inside the factory and it will be supplied by BHEL at stores./Removed cable to be rolled and tied well.It should be handed over to BHEL stores.	M	100		

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Accepting Officer-BHEL

S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
180	Opening the trench cover at required interval,laying /removing of 3/3.5/4 core PVC AA/Copper/ XLPE/ armoured/un armoured cables in the trench and closing the trench cover to make good.Size: from 120 sq.mm to 185 sq.mm (Range: 120/150/ 185 sq.mm). Note:Cables laying inside the factory and it will be supplied by BHEL at stores./Removed cable to be rolled and tied well.It should be handed over to BHEL stores.	M	100		
190	Opening the trench cover at required interval,laying /removing of 3/3.5/4 core PVC AA/Copper XLPE/ armoured/un armoured cables in the trench and closing the trench cover to make good.Size:240 sq.mm to 400 sq.mm(Range:240/300/400 sq.mm) Note:Cables laying inside the factory and it will be supplied by BHEL at stores./Removed cable to be rolled and tied well.It should be handed over to BHEL stores.	M	100		
200	Opening the trench cover at required interval,laying /removing of 3/3.5/4 core PVC AA/Copper/XLPE/ armoured/unarmoured cables in the trench and closing the trench cover to make good. Size:from 4 sq.mm to 25 sq.mm (Range:4/6/ 10/16/25 sq.mm). Note:Cables laying outside the factory and it will be supplied by BHEL at stores./Removed cable to be rolled and tied well.It should be handed over to BHEL stores.	M	50		
210	Opening the trench cover at required interval,laying /removing of 3/3.5/4 core PVC AA./Copper/XLPE /armoured/un armoured cables in the trench and closing the trench cover to make good. Size:35 sq.mm to 95 sq.mm (Range:35/50/ 70/95 sq.mm). Note:Cables laying outside the factory and it will be supplied by BHEL at stores./Removed cable to be rolled and tied well.It should be handed over to BHEL stores.	M	50		

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Accepting Officer-BHEL

S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
220	Opening the trench cover at required interval,laying /removing of 3/3.5/4 core PVC AA/Copper/XLPE/ armoured/un armoured cables in the trench and closing the trench cover to make good.Size:from 120 sq.mm to 185 sq.mm (Range:120/150/185 sq.mm). Note:Cables laying outside the factory and it will be supplied by BHEL at stores/Removed cable to be rolled and tied well.It should be handed over to BHEL stores.	M	50		
230	Opening the trench cover at required interval,laying /removing of 3/3.5/4 core PVC AA/Copper/XLPE/ armoured/un armoured cables in the trench and closing the trench cover to make good.size:240 sq.mm to 400 sq.mm(Range:240/ 300/400 sq.mm) Note:Cables laying outside the factory and it will be supplied by BHEL at stores./Removed cable to be rolled and tied well.It should be handed over to BHEL stores.	M	50		
240	Laying of No.8/12 SWG GI wire(or)No.8/12 SWG bare copper wire in the trench/wall/column/truss and connect the both ends with earth points/body of the Electrical equipments/Accessories.(along with the single/2/3/3.5/4 core PVC AA/XLPE/Copper cables/ PVC wiring/Seperately.) Note:GI/Copper wires only will be supplied by BHEL at stores.	M	100		
250	Laying of No.14/16 SWG copper (or)7/20 GI wire in the trench/wall/ column/truss and connect the both ends with earth points/body of the Electrical equipments/Accessories.(along with the single/ 2/3/3.5/4 core PVC AA/XLPE/Copper cables/PVC wiring/Seperately.) Note:14/16 SWG copper (or)7/20 GI wire only will be supplied by BHEL at stores.	M	97		

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Accepting Officer-BHEL

S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
260	Making end termination of the following 3/3.5/4 core,PVC AA/ XLPE/Copper,Armoured,medium voltage cables with supply of suitable copper lugs,glands and earthing clamp.Size:From 4 sq.mm to 16 sq.mm.(Range:4/6/10/16 sq.mm). Note:All materials including glands,lugs,earthing clamps etc., are under the scope of the contractor.	NO	100		
270	Making end termination of the following 3/3.5/4 core,PVC AA/ XLPE/Copper,Armoured,medium voltage cables with supply of suitable copper lugs,glands and earthing clamp.Size:from 25 sq.mm to 70 sq.mm(Range:25/35/50/70 sq.mm). Note:All materials including glands,lugs,earthing clamps etc., are under the scope of the contractor.	NO	190		
280	Making end termination of the following 3/3.5/4 core,PVC AA/XLPE/Copper,Armoured,medium voltage cables with supply of suitable copper lugs,glands and earthing clamp.Size:from 95 sq.mm to 185 sq.mm(Range:95/120/150/185 sq.mm). Note:All materials including glands,lugs,earthing clamps etc., are under the scope of the contractor.	NO	200		
290	Making end termination of the following 3/3.5/4 core,PVC AA/ XLPE/Copper,Armoured,medium voltage cables with supply of suitable copper lugs,glands and earthing clamp.size:240 sq.mm to 400 sq.mm.(Range:240/300/400 sq.mm). Note:All materials including glands,lugs,earthing clamps etc., are under the scope of the contractor.	NO	100		

Contractor signature/seal

Accepting Officer-BHEL

S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
300	Fixing of Three phase Fuse/MCB distribution board with TPN isolator as incomer on the column/Wall/ Floor with supply of suitable angle iron frame work,fasteners etc,making interconnections and, earthing.Type of DB:6/8 Way,15/16 Amps. Note:Fuse/MCB distribution board and TPN isolator only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	15		
310	Fixing of Three phase Fuse/MCB distribution board with TPN isolator as incomer on the column/Wall/ Floor with supply of suitable angle iron frame work, fasteners etc,making inter connections and, earthing.Type of DB:12 Way,15/16 Amps. Note:Fuse/MCB distribution board and TPN isolator only will be supplied by BHEL at Stores.All other materials including angle iron frame work,fasteners etc are under contractor's scope.	NO	25		
320	Fixing of Three phase Fuse/MCB distribution board with TPN isolator as incomer on the column/Wall/ Floor with supply of suitable angle iron frame work, fasteners etc.,making inter connections and, earthing.Type of DB:8/12 Way,30/32 Amps. Note:Fuse/MCB distribution board and TPN isolator only will be supplied by BHEL at Stores.All other materials including angle iron frame work,fasteners etc., are under contractor's scope.	NO	15		
330	Fixing of Three phase Fuse/MCB distribution board with TPN isolator as incomer on the column/Wall/ Floor with supply of suitable angle iron frame work, fasteners etc.,making inter connections and, earthing.Type of DB:6/8 Way,60/63 Amps. Note:Fuse/MCB distribution board and TPN isolator only will be supplied by BHEL at Stores.All other materials including angle iron frame work,fasteners etc., are under contractor's scope.	NO	2		

Contractor signature/seal

Accepting Officer-BHEL

S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
340	Fixing of Three phase Fuse/MCB distribution board with TPN isolator as incomer on the column/Wall/ Floor with supply of suitable angle iron frame work, fasteners etc.,making inter connections and, earthing.Type of DB:12 Way,60/63 Amps. Note:Fuse/MCB distribution board and TPN isolator only will be supplied by BHEL at Stores.All other materials including angle iron frame work,fasteners etc.,are under contractor's scope.	NO	2		
350	Fixing of Three phase Fuse/MCB distribution board with TPN isolator as incomer on the column/Wall/ Floor with supply of suitable angle iron frame work, fasteners etc.,making inter connections and, earthing.Type of DB:4 Way,100 Amps. Note:Fuse/MCB distribution board and TPN isolator only will be supplied by BHEL at Stores.All other materials including angle iron frame work,fasteners etc.,are under contractor's scope.	NO	2		
360	Fixing of Single phase Fuse/MCB distribution board with DP isolator/switch/MCB as incomer on the Wall/column with supply of suitable angle iron frame work,fasteners etc.,making inter connections and,earthing.Type of DB:6 Way,15/16 Amps(or)12 Way, 15 Amps. Note:Fuse/MCB distribution board and DP isolator/ switch/MCB only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	2		
370	Supply and fixing of adopter boxes(made up of 1.6 mm thick sheet steel)to facilitate end termination of cable and suitable for different makes,32A TP/TPN isolator/switch fuse units. Note:All materials(MS sheet,fasteners,paint etc.,)are under contractor's scope.The adaptor should be painted with one coat of red oxide paint and two coats of grey colour enamel paint.	NO	10		

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Accepting Officer-BHEL

S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
380	Supply and fixing of adopter boxes(made up of 1.6 mm thick sheet steel)to facilitate end termination of cable and suitable for different makes,63A TP/TPN isolator/switch fuse units. Note:All materials(MS sheet,fasteners,paint etc.,)are under contractor's scope.The adaptor should be painted with one coat of red oxide paint and two coats of grey colour enamel paint.	NO	2		
390	Supply and fixing of adopter boxes(made up of 1.6 mm thick sheet steel)to facilitate end termination of cable and suitable for different makes,100 A TP/TPN isolator/switch fuse units. Note:All materials(MS sheet,fasteners,paint etc.,)are under contractor's scope.The adaptor should be painted with one coat of red oxide paint and two coats of grey colour enamel paint.	NO	2		
400	Supply and fixing of adopter boxes(made up of 1.6 mm thick sheet steel)to facilitate end termination of cable and suitable for different makes 200 A TP/TPN isolator/switch fuse units. Note:All materials(MS sheet,fasteners,paint etc.,)are under contractor's scope.The adaptor should be painted with one coat of red oxide paint and two coats of grey colour enamel paint.	NO	10		
410	Supply and fixing of adopter boxes(made up of 2.0 mm thick sheet steel)to facilitate end termination of cable and suitable for different makes,315 A TP/TPN isolator/switch fuse units. Note: All materials(MS sheet,fasteners,paint etc.,)are under contractor's scope.The adaptor should be painted with one coat of red oxide paint and two coats of grey colour enamel paint.	NO	5		
420	Supply and fixing of adopter boxes(made up of 2.0 mm thick sheet steel)to facilitate end termination of cable and suitable for different makes,400 A TP/TPN isolator/switch fuse units. Note:All materials(MS sheet,fasteners,paint etc.,)are under contractor's scope.The adaptor should be painted with one coat of red oxide paint and two coats of grey colour enamel paint.	NO	5		

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S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
430	Supply and fixing of adopter boxes(made up of 2.0 mm thick sheet steel)to facilitate end termination of cable and suitable for different makes 630 A,TP/TPN isolator/switch fuse units. Note:All materials(MS sheet,fasteners,paint etc.)are under contractor's scope.The adaptor should be painted with one coat of red oxide paint and two coats of grey colour enamel paint.	NO	2		
440	Supply and fixing of adopter boxes(made up of 2.0 mm thick sheet steel)to facilitate end termination of cable and suitable for different makes,750A/800A TP/TPN isolator/switch fuse units. Note:All materials(MS sheet,fasteners,paint etc.,) are under contractor's scope.The adaptor should be painted with one coat of red oxide paint and two coats of grey colour enamel paint.	NO	5		
450	Fixing of 3 Phase 415 Volts,15 A/32 A TP/TPN Isolator/Switch/ Switch Fuse Units on the existing angle iron frame works on the trench/floor/column/ wall with supply of required fasteners. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All materials including fasteners etc.,are under contractor's scope.	NO	10		
460	Fixing of 3 Phase 415 Volts,63 A TP/TPN Isolator/ Switch/Switch Fuse Units on the existing angle iron frame works on the trench /floor/column/wall with supply of required fasteners. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All materials including fasteners etc.,are under contractor's scope.	NO	5		
470	Fixing of 3 Phase 415 Volts,100 TP/TPN Isolator/ Switch/Switch Fuse Units on the existing angle iron frame works on the trench /floor/column/wall with supply of required fasteners. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All materials including fasteners etc.,are under contractor's scope.	NO	5		

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S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
480	Fixing of 3 Phase 415 Volts,200 A TP/TPN Isolator/ Switch/Switch Fuse Units on the existing angle iron frame works on the trench/floor/column/wall with supply of required fasteners. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All materials including fasteners etc.,are under contractor's scope.	NO	5		
490	Fixing of 3 Phase 415 Volts,300 A/315A TP/TPN Isolator/Switch/ Switch Fuse Units on the existing angle iron frame works on the trench/floor/column/wall with supply of required fasteners. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All materials including fasteners etc.,are under contractor's scope.	NO	5		
500	Fixing of 3 Phase 415 Volts,400 A TP/TPN Isolator/Switch/Switch Fuse Units on the existing angle iron frame works on the trench /floor/column/wall with supply of required fasteners. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All materials including fasteners etc.,are under contractor's scope.	NO	5		
510	Fixing of 3 Phase 415 Volts,600 A/630 A TP TPN Isolator/Switch/ Switch Fuse Units on the existing angle iron frame works on the trench/floor/column/ wall with supply of required fasteners. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All materials including fasteners etc.,are under contractor's scope.	NO	2		
520	Fixing of 3 Phase 415 Volts,15 A/32 A TP/TPN Isolator/Switch/ Switch Fuse Units with supply of suitable angle iron frame works,fasteners etc.,on the trench/floor/column/wall. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.Angle iron frame works,fasteners, paint etc.,are under contractor's scope.The Angle iron frame works should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	35		

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S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
530	Fixing of 3 Phase 415 Volts,63 A TP/TPN Isolator/ Switch/Switch Fuse Units with supply of suitable angle iron frame works, fasteners etc.,on the trench/floor/column/wall. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.Angle iron frame works, fasteners, paint etc. are under contractor's scope.The Angle iron frame works should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	35		
540	Fixing of 3 Phase 415 Volts,100 A TP/TPN Isolator/ Switch/Switch Fuse Units with supply of suitable angle iron frame works, fasteners etc.,on the trench/floor/column/wall. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.Angle iron frame works,fasteners, paint etc.,are under contractor's scope.The Angle iron frame works should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	20		
550	Fixing of 3 Phase 415 Volts,200 A TP/TPN Isolator/Switch/Switch Fuse Units with supply of suitable angle iron frame works, fasteners etc.,on the trench/floor/column/wall. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.Angle iron frame works,fasteners, paint etc.,are under contractor's scope.The Angle iron frame works should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	5		
560	Fixing of 3 Phase 415 Volts,300 A/315 A TP/TPN Isolator/Switch/ Switch Fuse Units with supply of suitable angle iron frame works,fasteners etc.,on the trench/floor/column/wall. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.Angle iron frame works, fasteners, paint etc.,are under contractor's scope. The Angle iron frame works should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	2		

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S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
570	Fixing of 3 Phase 415 Volts,400 A TP/TPN Isolator/Switch/Switch Fuse Units with supply of suitable angle iron frame works, fasteners etc.,on the trench/floor/column/wall. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.Angle iron frame works,fasteners, paint etc.,are under contractor's scope.The Angle iron frame works should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	2		
580	Fixing of 3 Phase 415 Volts,600 A/630 A TP/TPN Isolator/Switch/ Switch Fuse Units with supply of suitable angle iron frame works, fasteners etc.,on the trench/floor/column/wall. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.Angle iron frame works, fasteners, paint etc., are under contractor's scope.The Angle iron frame works should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	2		
590	Fixing of 3 Phase 415 volts 15 A/32 A TP/TPN Isolator/Switch/ Switch Fuse Units on the existing MP Board with supply of suitable size intermediate adapter box,angle iron frame works, fasteners,suitable rated copper conductor cable/copper bus/ Aluminium bus,bus sleeveings etc.,making necessary inter connections and earthing with main earth bus on MP Board. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All other materials Angle iron frame works,fasteners,paint etc.,are under contractor's scope.The Angle iron frame works and adapter boxes should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	2		
600	Fixing of 3 Phase 415 volts 63 A TP/TPN Isolator/Switch/Switch Fuse Units on the existing MP Board with supply of suitable size intermediate adapter box,angle iron frame works,fasteners, suitable rated copper conductor cable/copper bus/Aluminium bus, bus sleeveings etc.,making necessary inter connections and earthing with main earth bus on MP Board. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All other materials Angle iron frame works,fasteners,paint etc.,are under contractor's scope.The Angle iron frame works and adapter boxes should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	2		

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S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
610	Fixing of 3 Phase 415 volts 100 A TP/TPN Isolator/Switch/Switch Fuse Units on the existing MP Board with supply of suitable size intermediate adapter box,angle iron frame works,fasteners, suitable rated copper conductor cable/copper bus/Aluminium bus, bus sleeveings etc.,making necessary inter connections and earthing with main earth bus on MP Board. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All other materials Angle iron frame works,fasteners,paint etc. are under contractor's scope.The Angle iron frame works and adapter boxes should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	3		
620	Fixing of 3 Phase 415 volts 200 A TP/TPN Isolator/Switch/Switch Fuse Units on the existing MP Board with supply of suitable size intermediate adapter box,angle iron frame works,fasteners, suitable rated copper conductor cable/copper bus/Aluminium bus, bus sleeveings etc.,making necessary inter connections and earthing with main earth bus on MP Board. Note: TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All other materials Angle iron frame works,fasteners,paint etc.,are under contractor's scope.The Angle iron frame works and adapter boxes should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	2		
630	Fixing of 3 Phase 415 volts 300 A/315 A TP/TPN Isolator/Switch/ Switch Fuse Units on the existing MP Board with supply of suitable size intermediate adapter box,angle iron frame works, fasteners, suitable rated copper conductor cable/copper bus/ Aluminium bus,bus sleeveings etc.,making necessary inter connections and earthing with main earth bus on MP Board. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All other materials Angle iron frame works,fasteners,paint etc.,are under contractor's scope.The Angle iron frame works and adapter boxes should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	5		
640	Fixing of 3 Phase 415 volts 400 A TP/TPN Isolator/Switch/Switch Fuse Units on the existing MP Board with supply of suitable size intermediate adapter box,angle iron frame works,fasteners, suitable rated copper conductor cable/copper bus/Aluminium bus, bus sleeveings etc.,making necessary inter connections and earthing with main earth bus on MP Board. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All other materials Angle iron frame works,fasteners,paint etc.,are under contractor's scope.The Angle iron frame works and adapter boxes should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	5		

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S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
650	Fixing of 3 Phase 415 volts 600 A/630 A TP/TPN Isolator/Switch/ Switch Fuse Units on the existing MP Board with supply of suitable size intermediate adapter box,angle iron frame works, fasteners,suitable rated copper conductor cable/copper bus/ Aluminium bus,bus sleeveings etc.,making necessary inter connections and earthing with main earth bus on MP Board. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores.All other materials Angle iron frame works,fasteners,paint etc.,are under contractor's scope.The Angle iron frame works and adapter boxes should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	3		
660	Fixing of 3 Phase 415 volts 800 A TP/TPN Isolator / Switch/Switch Fuse Units on the existing MP Board with supply of suitable size intermediate adapter box,angle iron frame works,fasteners, suitable rated copper conductor cable/copper bus/Aluminium bus, bus sleeveings etc.,making necessary inter connections and earthing with main earth bus on MP Board. Note:TP/TPN Isolator/Switch/Switch Fuse Units only will be supplied by BHEL at Stores. All other materials Angle iron frame works,fasteners,paint etc., are under contractor's scope.The Angle iron frame works and adapter boxes should be painted with one coat of red oxide paint and two coats of grey colour paint.	NO	3		
670	Opening the trench at required intervals,removing of 3/3.5/4 core XLPE/PVC AA/PVC Cu.conductor armoured/un armoured cable, relaying back the given cable and closing the trench properly. Size: From 4 sq.mm to 25 sq.mm(Range: 4/6/10/16/25 sq.mm). Note:Removed cable to be rolled and tied well.It should be handed over to BHEL stores.New cable will be issued by BHEL at stores.Removal and relaying of cable inside/outside the factory.	M	2000		
680	Opening the trench at required intervals,removing of 3/3.5/4 core XLPE/PVC AA/PVC Cu.conductor armoured/un armoured cable, relaying back the given cable and closing the trench properly. Size: From 35 sq.mm to 95 sq.mm.(Range: 35/50/70/95 sq.mm). Note:Removed cable to be rolled and tied well.It should be handed over to BHEL stores.New cable will be issued by BHEL at stores.Removal and relaying of cable inside/outside the factory.	M	500		

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S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
690	Opening the trench at required intervals, removing of 3/3.5/4 core XLPE/PVC AA/PVC Cu.conductor armoured/un armoured cable, relaying back the given cable and closing the trench properly. Size:From 120 sq.mm to 185 sq.mm.(Range: 120/150/185 sq.mm) Note:Removed cable to be rolled and tied well.It should be handed over to BHEL stores.New cable will be issued by BHEL at stores.Removal and relaying of cable inside/outside the factory.	M	50		
700	Opening the trench at required intervals,removing of 3/3.5/4 core XLPE/PVC AA/PVC Cu.conductor armoured/un armoured cable, relaying back the given cable and closing the trench properly. Size:From 240 sq.mm to 400 sq.mm.(Range:240/ 300/400 sq.mm). Note:Removed cable to be rolled and tied well.It should be handed over to BHEL stores.New cable will be issued by BHEL at stores.Removal and relaying of cable inside/outside the factory.	M	50		

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S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
710	Removing of 3/3.5/4 core PVC AA/Copper/XLPE/ armoured/un armoured cables in the already excavated trench and relaying back the given cable with replacement of available sand and bricks.Size: From 4 sq.mm to 25 sq.mm.(Range:4/6/10/16/25 sq.mm). Note:Removed cable to be rolled and tied well.It should be handed over to BHEL stores.New cable will be issued by BHEL at stores.Removal and relaying of cable inside/outside the factory.	M	200		
720	Removing of 3/3.5/4 core PVC AA/Copper/ XLPE/ armoured/un armoured cables in the already excavated trench and relaying back the given cable with replacement of available sand and bricks.Size: From 35 sq.mm to 95 sq.mm.(Range:35/50/70/95 sq.mm). Note:Removed cable to be rolled and tied well.It should be handed over to BHEL stores.New cable will be issued by BHEL at stores.Removal and relaying of cable inside/outside the factory.	M	250		
730	Removing of 3/3.5/4 core PVC AA/Copper/XLPE/ armoured/un armoured cables in the already excavated trench and relaying back the given cable with replacement of available sand and bricks.Size: From 120 sq.mm to 185 sq.mm.(Range:120/ 150/ 185 sq.mm). Note:Removed cable to be rolled and tied well.It should be handed over to BHEL stores.New cable will be issued by BHEL at stores.Removal and relaying of cable inside/outside the factory.	M	500		
740	Removing of 3/3.5/4 core PVC AA/Copper/XLPE/ armoured/un armoured cables in the already excavated trench and relaying back the given cable with replacement of available sand and bricks.Size: From 240 sq.mm. to 400 sq.mm(Range: 240/300/ 400 sq.mm). Note:Removed cable to be rolled and tied well.It should be handed over to BHEL stores.New cable will be issued by BHEL at stores.Removal and relaying of cable inside/outside the factory.	M	150		
750	Making straight through joint using heat shrinkable/Epoxy joint kit for 3/3.5/4 core XLPE/PVC AA cable.size:From 70 sq.mm to 95 sq.mm.(Range:70/95 sq.mm) Note: Cable joint kit only will be issued by BHEL at site. Other all materials including consumables are under the scope of the contractor.Cable joint work inside/outside the factory.	NO	2		

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Accepting Officer-BHEL

S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
760	Making straight through joint using heat shrinkable/Epoxy joint kit for 3/3.5/4 core,XLPE/ PVC AA cable.size: From 120 sq.mm to 185 sq.mm.(Range:120/150/185 sq.mm) Note: Cable joint kit only will be issued by BHEL at site. Other all materials including consumables are under the scope of the contractor.Cable joint work inside/outside the factory.	NO	2		
770	Making straight through joint using heat shrinkable/ Epoxy joint kit for 3/3.5/4 core,XLPE/PVC AA cable.size:300 sq.mm. Note: Cable joint kit only will be issued by BHEL at site. Other all materials including consumables are under the scope of the contractor.Cable joint work inside/outside the factory.	NO	2		
780	Making straight through joint using heat shrinkable/Epoxy joint kit for 3/3.5/4 core,XLPE/ PVC AA cable.size:400 sq.mm. Note:Cable joint kit only will be issued by BHEL at site.Other all materials including consumables are under the scope of the contractor.Cable joint work inside/outside the factory.	NO	2		
790	Making straight through joint with supply of heat shrinkable joint kit for 3/3.5/4 core,XLPE/PVC AA cable.size:From 1.5 sq.mm to 4 sq.mm.(Range: 1.5/2.5/4 sq.mm) Note:All materials including joint kit,consumables etc.,are under the scope of the contractor.Cable joint work inside/ outside the factory.	NO	2		
800	Making straight through joint with supply of heat shrinkable joint kit on 3/3.5/4 core XLPE/PVC AA cable.size:From 6 sq.mm to 16 sq.mm. (Range:6/10/16 sq.mm) Note: All materials including joint kit,consumables etc.,are under the scope of the contractor.Cable joint work inside/ outside the factory.	NO	2		

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S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
810	Making straight through joint with supply of heat shrinkable joint kit on 3/3.5/4 core XLPE/PVC AA cable.size:From 25 sq.mm to 50 sq.mm. (Range:25/35/50 sq.mm) Note:All materials including joint kit,consumables etc.,are under the scope of the contractor.Cable joint work inside/ outside the factory.	NO	2		
820	Making straight through joint with supply of heat shrinkable joint kit on 3/3.5/4 core XLPE/PVC AA cable.size:From 70 sq.mm to 95 sq.mm.(Range: 70/95 sq.mm) Note:All materials including joint kit,consumables etc.,are under the scope of the contractor.Cable joint work inside/ outside the factory.	NO	2		
830	Making straight through joint with supply of heat shrinkable joint kit on 3/3.5/4 core XLPE/PVC AA cable.size:From 120 sq.mm to 185 sq.mm. (Range:120/150/185 sq.mm). Note:All materials including joint kit,consumables etc.,are under the scope of the contractor.Cable joint work inside/ outside the factory.	NO	2		
840	Making straight through joint with supply of heat shrinkable joint kit on 3/3.5/4 core XLPE/PVC AA cable.size:300 sq.mm Note:All materials including joint kit,consumables etc.,are under the scope of the contractor.Cable joint work inside/ outside the factory.	NO	2		
850	Making straight through joint with supply of heat shrinkable joint kit on 3/3.5/4 core XLPE/PVC AA cable.size:400 sq.mm. Note: All materials including joint kit,consumables etc.,are under the scope of the contractor.Cable joint work inside/ outside the factory.	NO	2		
860	Wiring with 2 runs of 1.5/2.5 Sq.mm PVC insulated,unsheathed, multi strand, single core copper conductor cable in 19/20mm dia. PVC,medium quality rigid conduit pipe with continuous running of 14/16 SWG bare copper wire for earthing for light,fan and socket points and connecting both ends to the switches,equipments respectively. (1 Meter of wiring consists of PVC pipe,2 runs of wire,earth wire & required saddle clamps, PVC junction box,elbows,bends,Tees,rawl plugs,screws etc.) Note:PVC straight length pipe and PVC insulated,unsheathed, multistrand, single core copper conductor cable,14/16 SWG bare copper wire only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	M	5000		

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S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
870	Wiring of additional single run of 1.5/2.5 sq.mm PVC insulated single core copper wire in the existing wiring. Note:1.5/2.5 sq.mm PVC insulated single core copper wires only will be issued by BHEL at stores.	M	100		
880	Wiring of additional 2 runs of 1.5/2.5 sq.mm PVC insulated single core copper wire in the existing wiring. Note:1.5/2.5 sq.mm PVC insulated single core copper wires only will be issued by BHEL at stores.	M	100		
890	Wiring with 2 runs of 4 Sq.mm PVC insulated, unsheathed, multi strand, single core copper conductor cable in 19/20 mm dia. PVC,medium quality rigid conduit pipe with continuous running of 14/16 SWG bare copper wire for earthing for light,fan and socket points and connecting both ends to the switches,equipments respectively.(1 Meter of wiring consists of PVC pipe,2 runs of wire,earth wire & required saddle clamps,PVC junction box,elbows,bends,Tees,rawl plugs,screws etc.) Note:PVC straight length pipe and PVC insulated, unsheathed,multistrand, single core copper conductor cable,14/16 SWG bare copper wire only will be supplied by BHEL at Stores. All other materials are under contractor's scope.	M	4000		
900	Wiring of additional single run of 4 sq.mm PVC insulated single core copper wire in the existing wiring. Note:4 sq.mm PVC insulated single core copper wire only will be issued by BHEL at stores.	M	100		
910	Wiring of additional 2 runs of 4 sq.mm PVC insulated single core copper wire in the existing wiring. Note:4 sq.mm PVC insulated single core copper wire only will be issued by BHEL at stores.	M	100		

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S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
920	Wiring with 2 runs of 6 Sq.mm PVC insulated, unsheathed,multistrand,single core copper conductor cable in 19/20mm dia.PVC Grey/Black colour medium quality rigid conduit pipe with continuous running of 14/16 SWG bare copper wire for earthing for light,fan and socket points and connecting both ends to the switches,equipments respectively.(1 Meter of wiring consists of PVC pipe,2 runs of wire,earth wire & required saddle clamps,PVC junction box,elbows,bends,Tees,rawl plugs,screws etc.) Note:PVC straight length pipe and PVC insulated, unsheathed, multistrand,single core copper conductor cable,14/16 SWG bare copper wire only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	M	100		
930	Wiring of additional single run of 6 sq.mm PVC insulated single core copper wire in the existing wiring. Note:6 sq.mm PVC insulated single core copper wire only will be issued by BHEL at stores.	M	50		
940	Wiring of additional 2 runs of 6 sq.mm PVC insulated single core copper wire in the existing wiring. Note:6 sq.mm PVC insulated single core copper wire only will be issued by BHEL at stores.	M	50		
950	Wiring with 2 runs of 1.5/2.5 Sq.mm PVC insulated, unsheathed, multi strand,single core copper conductor cable in the concealed 19/20 mm dia.PVC conduit pipe with continuous running of 14/16 SWG bare copper wire/single core pvc copper conductor cable for earthing for light,fan and socket points and connecting both ends to the switches,equipments respectively.(1 Meter of wiring consists of 2 runs of PVC wire and earth wire etc.,). Note:PVC insulated,unsheathed,multistrand,single core copper conductor cable,14/16 SWG bare copper wire/1 core pvc copper conductor cable only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	M	100		
960	Wiring with 2 runs of 4/6 Sq.mm PVC insulated, unsheathed, multi strand,single core copper conductor cable in the concealed 19/20 mm dia.PVC conduit pipe with continuous running of 14/16 SWG bare copper wire/single core pvc copper conductor cable for earthing for light,fan and socket points and connecting both ends to the switches,equipments respectively.(1 Meter of wiring consists of PVC pipe,2 runs of wire,earth wire etc.) Note:PVC insulated, unsheathed,multistrand,single core copper conductor cable,14/16 SWG bare copper wire/1 core pvc copper conductor cable only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	M	100		

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S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
970	Wiring with 2 runs 1.5/2.5 Sq.mm PVC insulated, unsheathed, multistrand, single core copper conductor cable in 16/19/25/35/40 mm size PVC medium quality casing and capping with continuous running of 2.5 sq.mm insulated copper wire for earthing for lights, fans and socket points and connecting both ends to the switches, equipments respectively. Note: Casing and capping and 1.5/2.5 sq.mm PVC single core copper conductor cable, insulated copper wire for earthing only will be supplied by BHEL at Stores. All other materials are under contractor's scope.	M	100		
980	Wiring of additional single run of 1.5/2.5 sq.mm PVC insulated single core copper wire in the existing wiring. Note: 1.5/2.5 sq.mm PVC insulated single core copper wires only will be issued by BHEL at stores.	M	50		
990	Wiring of additional 2 runs of 1.5/2.5 sq.mm PVC insulated single core copper wire in the existing wiring. Note: 1.5/2.5 sq.mm PVC insulated single core copper wires only will be issued by BHEL at stores.	M	50		
1000	Wiring with 2 runs 4/6 Sq.mm PVC insulated, unsheathed, multistrand, single core copper conductor cable in 16/19/25/ 35/40 mm size PVC medium quality casing and capping with continuous running of 2.5 sq.mm insulated copper wire for earthing for lights, fans and socket points and connecting both ends to the switches, equipments respectively. Note: Casing and capping and 4/6 sq.mm PVC single core copper conductor cable, insulated copper wire for earthing only will be supplied by BHEL at Stores. All other materials are under contractor's scope.	M	100		
1010	Wiring of additional single run of 4/6 sq.mm PVC insulated single core copper wire in the existing wiring. Note: 4/6 sq.mm PVC insulated single core copper wires only will be issued by BHEL at stores.	M	100		
1020	Wiring of additional 2 runs of 4/6 sq.mm PVC insulated single core copper wire in the existing wiring. Note: 4/6 sq.mm PVC insulated single core copper wires only will be issued by BHEL at stores.	M	100		
1030	Fixing of flush type switch 1 number on hylam top of teak wood box with necessary inter connections and including earth connection. Note: Teak wood box with hylam top & switch only will be supplied by BHEL at Stores. All other materials are under contractor's scope.	NO	200		
1040	Fixing of the following flush type switches up to 2 numbers on hylam top of teak wood box with necessary inter connections and including earth connection. Note: Teak wood box with hylam top & switch only will be supplied by BHEL at Stores. All other materials are under contractor's scope.	SET	20		

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S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
1050	Fixing of the following flush type switches up to 4 numbers on hylam top of teak wood box with necessary nter connections and including earth connection. Note:Teak wood box with hylam top & switch only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	SET	20		
1060	Fixing of the following flush type switches up to 6 numbers on hylam top of teak wood box with necessary inter connections and including earth connection. Note:Teak wood box with hylam top & switch only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	SET	20		
1070	Fixing of additional flush type switch 1 number on existing switch box(on hylam top of teak wood box)with necessary interconnections and including earth connection. Note:switch only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	20		

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S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
1080	Fixing of flush type fan regulator(electronic)1 no on hylam top of teak wood box with necessary interconnections and including earth connection. Note:Teak wood box with hylam top,fan regulator only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	125		
1090	Fixing of additional flush type fan regulator 1 number on existing switch box(on hylam top of teak wood box)with necessary interconnections and including earth connection. Note:Fan regulator only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	10		
1100	Fixing of flush type switch 1 number on sheet metal box with necessary interconnections and including earth connection. Note:Sheet metal box and switch only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	10		
1110	Fixing of flush type switch 2 numbers on sheet metal box with necessary interconnections and including earth connection. Note:Sheet metal box and switches only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	SET	10		
1120	Fixing of flush type switch 4 numbers on sheet metal box with necessary interconnections and including earth connection. Note:Sheet metal box and switches only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	SET	10		
1130	Fixing of flush type switch 6 numbers on sheet metal box with necessary interconnections and including earth connection. Note:Sheet metal box and switches only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	SET	10		

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S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
1140	Fixing of additional flush type switch 1 number on existing sheet metal box with necessary interconnections and including earth connection. Note:switch only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	10		
1150	Fixing of flush type fan regulators(electronic)1 number on sheet metal box with necessary interconnections and including earth connection. Note:Sheet metal box and fan regulator only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	50		
1160	Fixing of additional flush type fan regulators (electronic)on existing sheet metal box with necessary interconnections and including earth connection. Note:Fan regulators only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	20		
1170	Fixing of 5 Amps 3 pin/5 pin flush type switched socket on hylam top of teak wood box with necessary interconnections and including earth connection. Note:Flush type switched socket and TW Box with Hylum top will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	50		
1180	Fixing of 15 Amps/3 pin(or)5 A/15 Amps 6 pin flush type switched socket on hylam top of teak wood box with necessary inter connections and including earth connection. Note:Flush type switched socket and TW Box with hylum top will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	30		
1190	Fixing of 15 Amps 3 pin flush type socket on the hylam top of teak wood box with necessary interconnections and including earth connection. Note:Flush type switched socket and TW box with hylum top will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	30		

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S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
1200	Fixing of 15 Amps flush type single pole switch on the hylam top of teak wood box with necessary interconnections and including earth connection. Note:Flush type SP switch and TW box with hylam top will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	20		
1210	Fixing of 5 Amps 3 pin/5 pin flush type switched socket on top of sheet metal box with necessary interconnections and including earth connection. Note:Flush type switched socket and sheet metal box will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	30		
1220	Fixing of 15 Amps/5 A/15 Amps 3 pin/5 pin flush type switched socket on sheet metal box with necessary interconnections and including earth connection. Note:Flush type switched socket and sheet metal box will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	30		
1230	Fixing of 15 Amps 3 pin flush type socket on the sheet metal box with necessary interconnections and including earth connection. Note:Flush type switched socket and sheet metal box will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	110		
1240	Fixing of 15 Amps flush type single pole switch on the metal plate top of sheet metal box with necessary interconnections and including earth connection. Note:Flush type SP switch and sheet metal box will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	10		
1250	Breaking the wall to make pocket hole on the wall,concealing the Teak wood box with hylam top/sheet metal box of various sizes (4" X 4"/6" X 4"/8" X 4"/10" X 4"/12" X 4"/6" X 6"/8" X 6"/10" X 8"/12" X 8") in the pocket hole and closing the outer sides with massonry materials to make good.Also make an entry for inserting the pvc pipe/casing capping on the TW/SM box. Note:TW box & Sheet metal box only will be supplied by BHEL at Stores.All required massonry materials are under contractor's scope.	NO	10		
1260	Breaking the wall to make pocket hole for laying the pvc pipe and junction box (wherever required) suitable for concealed wiring and after laying the pipe,closing the pocket hole outer with massonry materials to make good after completing the wiring. Note:PVC pipe will be issued by BHEL at stores.All required massonry materials and PVC accessories are under contractor's scope.	M	10		

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Accepting Officer-BHEL

S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
1270	Fixing of Single/Double pole 16/32/63/100 amps MCB's in the Sheet metal box on the wall/column with supply of 20 x 3 mm MS flat. Note:MCB only will be issued by BHEL at stores.All other materials are to be supplied by the contractor.	NO	40		
1280	Fixing of Three Four pole 16/32/63/100 amps MCB's in the Sheet metal box on the wall/column/ with supply of 20 x 3 mm MS flat. Note:MCB only will be issued by BHEL at stores.All other materials are to be supplied by the contractor.	NO	10		
1290	Assembling,fixing and commissioning of 1200/1400 mm sweep ceiling fan with standard MS down rod/0.5 M long on the existing hook on the ceiling. Note:Ceiling fan with MS down rod only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	10		
1300	Assembling, fixing and commissining of 1200/1400 mm sweep ceiling fan with supply of MS down rod(0.75 to 1.0 M long)on the existing hook on the ceiling. Note:Ceiling fan only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	10		
1310	Assembling,fixing and commissioning of 1200/1400 mm sweep ceiling fan with supply of MS down rod(1.0 to 2.0 M long)on the existing hook on the ceiling. Note:Ceiling fan only will be supplied by BHEL at Stores.All other materials including MS down rods are under contractor's scope.	NO	10		

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S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
1320	Supply and fixing of heavy duty"U" type ceiling hook on the ceiling with anchoring bolts and washers etc., Note:All materials are under contractor's scope.	NO	30		
1330	Fixing and commissioning of 300/350/380 mm sweep(light duty/ heavy duty)exhaust fan with supply of suitable wooden screws and rawl plugs on the wall including making necessary openings on the wall and finishing the wall opening with masonry materials to make it good. Note:Exhaust fans only will be supplied by BHEL at Stores.All other materials including iron frame work(duly painted), fasteners,masonry materials etc.,are under contractor's scope.	NO	20		
1340	Fixing and commissioning of 300/350/380 mm sweep(light duty/ heavy duty)exhaust fan with supply of suitable grouting bolts and nuts on the existing opening in the wall. Note:Exhaust fans only will be supplied by BHEL at Stores.All other materials are under contractor's scope.	NO	5		
1350	Fixing and commissioning of 300/350/380 mm sweep(light duty/ heavy duty)exhaust fan with supply of suitable size iron frame work,fasteners, masonry materials etc.,on the ventilator/Wall. Note:Exhaust fans only will be supplied by BHEL at Stores.All other materials including iron frame(duly painted) work, fasteners,masonry materials are under contractor's scope.	NO	5		
1360	Fixing and commissioning of 400/450 mm sweep (light duty/heavy duty)exhaust fan with supply of suitable size angle iron frame, fasteners and masonry materials etc.,on the existing opening in the wall. Note:Exhaust fans only will be supplied by BHEL at Stores.All other materials including iron frame work,fasteners,masonry materials are under contractor's scope.	NO	5		
1370	Fixing of 600 mm sweep,3-phase exhaust fan in the existing MS angle iron frame work and connecting to the available power supply. Note:Exhaust fan only will be supplied by BHEL at stores.All other materials are under contractor's scope.	NO	5		

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Accepting Officer-BHEL

S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
1380	Fixing of 600 mm sweep,3-phase exhaust fan on the wall with supply of suitable size of MS angle iron frame work. Note:Exhaust fan only will be supplied by BHEL at stores.All other materials are under contractor's scope.	NO	5		
1390	Fixing and commissioning of 1x28/40 Watts(or) 2x28/40 Watts Box/Industrial/Decorative fluorescent light fitting with lamps on the Ceiling/ Wall using polished T.W round blocks by embedding 4 inch long, ¼ inch dia G.I bolts on the ceiling. Note:Light fittings with lamps only will be supplied by BHEL at Stores.All other materials (TW round blocks,G.I bolts & nuts, screws etc.,)are under contractor's scope.	NO	300		
1400	Fixing and commissioning of 1x28/40 Watts(or) 2x28/40 Watts Box/Industrial/Decorative fluorescent light fitting on the Ceiling/Fall ceiling using polished T.W round blocks,0.5 to 1.0 m long down rods,ball and socket arrangements,by embedding 4 inch long,¼ inch dia G.I bolts on the ceiling for fixing the T.W round block. Note:Light fittings with lamps only will be supplied by BHEL at Stores.All other materials(Down rods,ball and sockets,TW round blocks,G.I bolts&nuts,screws etc.,)are under contractor's scope.	NO	50		
1410	Fixing and commissioning of 1x28/40 Watts(or) 2x28/40 Watts Box/Industrial/Decorative type fluorescent light fitting on the Ceiling/Fall ceiling using polished T.W round blocks,1.0 to 2.0 m long down rods,ball and socket arrangements,by embedding 4 inch long,¼ inch dia G.I bolts on the ceiling for fixing the T.W round block. Note:Light fittings with lamps only will be supplied by BHEL at Stores.All other materials(Down rods,ball and sockets,TW round blocks,G.I bolts&nuts,screws etc.,)are under contractor's scope.	NO	10		
1420	Fixing and commissioning of 1x14/18/28 Watts (or)2 x14/18/28 Watts Decorative type fluorescent light fitting on the Ceiling/Fall ceiling using polished T.W round blocks,0.5 to 1.0 m long G.I Chain by embedding G.I hooks on the ceiling for hanging and resting on the fall ceiling. Note:Light fittings with lamps only will be supplied by BHEL at Stores.All other materials(G.I chains, G.I hooks,G.I bolts& nuts,screws etc.,)are under contractor's scope.	NO	10		
1430	Fixing and commissioning of 1x28/36/40 Watts(or) 2x28/36/40 Watts box/industrial/decorative type fluorescent light fitting on the Ceiling/Fall ceiling using polished T.W round blocks,1.0 to 2.0 m long G.I Chain by embedding G.I hooks on the ceiling for hanging and resting on the fall ceiling. Note:Light fittings with lamps only will be supplied by BHEL at Stores.All other materials(G.I chains,G.I hooks,G.I bolts& nuts, screws etc.,)are under contractor's scope.	NO	10		

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S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
1440	Removing of existing faulty/old wiring(wired in the Reaper/PVC pipes/casing capping of sizes 16/19/20/25/32 mm) and handing over the same to disposal stores.	M	100		
1450	Fixing of DOL starter on the wall with supply of suitable angle iron frame on the wall/column/metal frame and making necessary inter connections. Note:DOL starter only will be issued by BHEL at stores.All other materials are under contractor scope.	NO	5		
1460	Assy & fixing of 3 pin 20/30/32 Amps metal clad plug & socket in the metal box along with 20/30/32 Amps circuit breaker on the wall and connecting the wiring points including earth wire. Note:20/30/32 Amps plug & socket,circuit breaker and metal box will be supplied by BHEL at stores.All other materials are contractor's scope.	SET	10		
1470	Assy & fixing of 3 pin 20/30/32 Amps metal clad plug & socket in the metal box along with 20/30/32 Amps circuit breaker on the wall after making necessary pocket holes for concealed wiring and connecting the wiring points including earth wire. Note:20/30 Amps plug & socket,circuit breaker and metal box will be supplied by BHEL at stores.All other materials are contractor's scope.	SET	10		
1480	Laying of 3/3.5/4 core PVC AA/Copper/XLPE/ armoured/un armoured cable on the wall/column/truss/cellar with supply of suitable MS heavy duty clamps for every 0.25 mtr interval including fastners.Size:From 4 sq.mm to 25 sq.mm.(Range:4/6/10/16/25 sq.mm). Note:Cables laying inside/outside the factory and it will be supplied by BHEL at stores.All other materials are under contractor's scope.	M	50		
1490	Laying of 3/3.5/4 core PVC AA/Copper/XLPE/ armoured/un armoured cable on the wall/column/truss/cellar with supply of suitable MS heavy duty clamps for every 0.25 mtr interval including fastners.Size: From 35 sq.mm to 95 sq.mm .(Range:35/50/70/95 sq.mm). Note:Cables laying inside/outside the factory and it will be supplied by BHEL at stores.All other materials are under contractor's scope.	M	50		
1500	Laying of 3/3.5/4 core PVC AA/Copper/XLPE/ armoured/ un armoured cable on the wall/column/truss/cellar with supply of suitable MS heavy duty clamps for every 0.25 mtr interval including fastners.Size:From 120 sq.mm to 185 sq.mm. (Range:120/150/185 sq.mm). Note:Cables laying inside/outside the factory and it will be supplied by BHEL at stores.All other materials are under contractor's scope.	M	50		
1510	Laying of 3/3.5/4 corePVC AA/Copper/ XLPE/ armoured/un armoured cable on the wall/column /truss/cellar with supply of suitable MS heavy duty clamps for every 0.25 mtr interval including fastners.Size: From 240 sq.mm to 400 sq.mm. (Range:240/300/400 sq.mm). Note:Cables laying inside/outside the factory and it will be supplied by BHEL at stores.All other materials are under contractor's scope.	M	50		

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Accepting Officer-BHEL

S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
1520	Removing of 3/3.5/4 core PVC AA/Copper/ XLPE /armoured/un armoured cable on the wall/column/ truss/cellar.Size:From 4 sq.mm to 25 sq.mm. (Range:4/6/10/16/25 sq.mm). Note:Removed cable to be rolled and tied well.It should be handed over to BHEL stores.	M	50		
1530	Removing of 3/3.5/4 core PVC AA/Copper/ XLPE/ armoured/un armoured cable on the wall/column /truss/cellar.Size:From 35 sq.mm to 95 sq.mm. (Range:35/50/70/95 sq.mm). Note:Removed cable to be rolled and tied well.It should be handed over to BHEL stores.	M	50		
1540	Removing of 3/3.5/4 core PVC AA/Copper/XLPE/ armoured/un armoured cable on the wall/column /truss/cellar.Size: From 120 sq.mm to 185 sq.mm. (Range:120/150/185 sq.mm). Note:Removed cable to be rolled and tied well.It should be handed over to BHEL stores.	M	50		
1550	Removing of 3/3.5/4 corePVC AA/Copper/XLPE/ armoured/un armoured cable on the wall/column/ truss/cellar.Size: From 240 sq.mm to 400 sq.mm. (Range:240/300/400 sq.mm) Note:Removed cable to be rolled and tied well.It should be handed over to BHEL stores.	M	50		
1560	Providing earth electrodes as per IS standards as follows: Excavation of earth,supply and installation of earth electrode generally conforming to IS:3043-1987.The electrode should be of 50 mm dia.G.I.pipe,class C having wall thickness of 5 mm and length 2500 mm.with supply and filling of alternate layers of Bentonite,river sand and charcoal around the electrode, construction of masonry chamber and cover etc.,with supply of massonry materials.Earth resistance value(to be measured using earth megger),earth electrode No.and date of inspection are to be painted inside the chamber wall and on the top of the cover.	NO	10		
	SPECIAL INSTRUCTIONS for making earth pits :- a).Before commencement of work,contractor should discuss with Electrical in charge and finalise the location plan for the installation of earth pits. b).After excavation of earth & before closing the same it should be shown to Electrical in charge. C).Contractor should fill bentonite,river sand,charcoal around electrode with presence of Electrical in charge. d).Unique earth pit number should be allotted for every earth pit and same is to be painted with black colour paint on the inside wall of masonry chamber and cover. e).After erection of earth pit,the ohmic value to be measured in the presence of Electrical in charge and final report to be submitted.The value of the earth pit should be less than 2 ohms.				

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S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
1570	<p>Wiring in the steel cabin with 2 runs of 1.5/2.5 Sq.mm PVC insulated, unsheathed,multistrand,single core copper conductor cable in 19/20mm dia. PVC,medium quality rigid conduit pipe with continuous running of 14/16 SWG bare copper wire for earthing for light,fan and socket points and connecting both ends to the switches,equipments respectively.(1 Meter of wiring consists of PVC pipe,2 runs of wire,earth wire & required saddle clamps,PVC junction box,elbows,bends,Tees,MS clamps,saddle clamps,screws etc.,)</p> <p>Note:PVC straight length pipe and PVC insulated, unsheathed, multistrand, single core copper conductor cable,14/16 SWG bare copper wire and welding electrodes only will be supplied by BHEL at Stores.All other materials and welding of pipe fixing clamps etc., are under contractor's scope.MS Clamp should be painted with one coat of red oxide paint.</p>	M	1000		
1580	<p>Wiring In the steel cabin with 2 runs of 4 Sq.mm PVC insulated, unsheathed, multistrand,single core copper conductor cable in 19/20 mm dia. PVC,medium quality rigid conduit pipe with continuous running of 14/16 SWG bare copper wire for earthing for light,fan and socket points and connecting both ends to the switches,equipments respectively.(1 Meter of wiring consists of PVC pipe,2 runs of wire,earth wire & required saddle clamps,PVC junction box,elbows,bends ,Tees,MS clamps,saddle clamps,screws etc.,)</p> <p>Note:PVC straight length pipe and PVC insulated, unsheathed, multi strand,single core copper conductor cable,14/16 SWG bare copper wire and welding electrodes only will be supplied by BHEL at Stores. All other materials and welding of pipe fixing clamps etc., are under contractor's scope.MS Clamp should be painted with one coat of red oxide paint.</p>	M	500		
1590	<p>Wiring In the steel cabin with 2 runs of 6 Sq.mm PVC insulated, unsheathed,multistrand,single core copper conductor cable in 19/20mm dia.PVC Grey/Black colour medium quality rigid conduit pipe with continuous running of 14/16 SWG bare copper wire for earthing for light,fan and socket points and connecting both ends to the switches,equipments respectively.(1 Meter of wiring consists of PVC pipe,2 runs of wire,earth wire & required saddle clamps,PVC junction box,elbows,bends,Tees,MS clamps,saddle clamps,screws etc.,)</p> <p>Note:PVC straight length pipe and PVC insulated, unsheathed, multistrand,single core copper conductor cable,14/16 SWG bare copper wire and welding electrodes only will be supplied by BHEL at Stores.All other materials and welding of pipe fixing clamps etc., are under contractor's scope.MS Clamp should be painted with one coat of red oxide paint.</p>	M	300		

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S.No:	WORK DISCRIPTIONS	UOM	APPROXIMATE QTY	RATE IN FIGURES	RATE IN WORDS
1600	Laying of 50 mm x 6 mm GI Earth flat on the floor/ formed trench/ excavated trench/wall by fixing/ welding and to be connected the both ends to Main existing earth connection/Earth pit/Electrical Equipments/ MP(or) ML boards and other accessories.Only 50 mm x 6 mm GI flat and welding electrodes will be issued by BHEL at store/Electrical Section.All other items like screws and clamps etc., should be supplied by the contractor.	M	300		
1610	Laying of 25 mm x 3 mm GI Earth flat on the floor/ formed trench/ excavated trench/wall by fixing/ welding and to be connected the both ends to Main existing earth connection/Earth pit/Electrical Equipments/MP(or) ML boards and other accessories.Only 25 mm x 3 mm GI flat and welding electrodes will be issued by BHEL at store/Electrical Section.All other items like screws and clamps etc., should be supplied by the contractor.	M	250		
	<p>GENERAL NOTE:</p> <p>01).Where ever welding work required,the same to be carried out by the Contractor.</p> <p>02).Welding electrode will be issued by the Area supervisor/Executive at Electrical section.</p> <p>03).Necessary height of the ladder and all types of required tools must be brought by the Contractor.</p> <p>04).While fixing of the Electrical equipments all types of masanory work where ever required is to be done by the contractor.</p> <p>05).All types of debris and other wastage materials are to be disposed properly as per the instructions.</p> <p>06).Personal protective Safety Equipments to be supplied to the their workers by the Contractor.</p> <p>07).Safety precautions to be strictly adopted by the workers of the Contractor.</p> <p>08).Necessary Material "IN" gate pass to be kept safe and it to be produced when billing.</p> <p>09).Periodical running bill to be claimed compulsarily.</p> <p>10).Service tax Extra to be remitted for work orders according to the instruction.</p> <p>11).The quantity mentioned for this work is tentative. It may vary +/- 20 %.</p>				

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