

**BHARAT COKING COAL LIMITED**  
( A Subsidiary of Coal India Limited )  
Office of the Chief General Manager(MM)  
Materials Management Department  
Commercial Block L-III , Koyla Bhawan : Koyla Nagar  
Dhanbad : 826005(Fax No- 0326-2230183)  
CIN:U10101JH1972GOUI000918

SUPPLY ORDER NO.BCCL/ PUR/ 313283/POWER TRANSFORMER 10MVA/13-14/127/155

DATE-05.11.2014

To,

M/S PETE - HAMMOND POWER SOLUTIONS PRIVATE LIMITED,  
D/NO.8-3-166/6&7,G9-11,BHAVYA'S SREE ARCADE,  
ERRAGADA, HYDERABAD -500018(AP)

BY REGD POST

(VENDOR CODE(NEW): 1/23/M/S/017)

(VENDOR CODE( OLD):202055)

**SUB: SUPPLY OF POWER TRANSFORMERS 7.5/10MVA**

REF:i)Your offer against Our e tender no.\_BCCL/PUR/313283/POWER TRANSFORMER/13-14/127 Dtd. 22.02.2014, cover-I opened on 18.04.2014 and Price bid(on line) opened on 22.09.14,TENDER ID:2014-bccl-818-1

ii)Our letter no. BCCL/PUR/313283/POWER TRANSFORMER/13-14/127/2201 dated 19.07.14

iii)Your letter no.MKT/TQ-14/14/01 Dated 02.08.14

iv)Your letter no. MKT/TQ-14/14 Dated 01.11.14

Dear Sirs,

With reference to the above, we are pleased to place an order on you for **Supply of POWER TRANSFORMERS** at the rates and scope of supply as indicated under as per the technical specification and Technical Data sheet ,Technical particulars (General & Special) specified in the Annexure-A enclosed and as per the General terms and conditions of NIT.

SL.NO.	MATERIAL CODE	ITEM DESCRIPTION	QTY (SET)	UNIT LANDED COST (RS)	TOTAL VALUE(RS)
1	95013001447	POWER TRANSFORMERS OF RATING 7.5/10MVA 33/11-6.6KV (MANUFACTURED AT FACTORY ADDRESS:6A,D5,D13,14,23,24,PASHAMYLARAM(V),PATANCHERU(M).MEDAK DIST,AP,PIN-502307)	01	65,04,587.56	65,04,587.56
		Pre dispatch inspection charges@1%			65,045.87
		Service tax on Pre dispatch inspection charges @12.36%			8,039.67
					65,77,673.10

(TOTAL ORDER VALUE:RUPEES SIXTY FIVE LAKHS SEVENTY SEVEN THOUSAND SIX HUNDRED SEVENTY THREE AND PAISE TEN ONLY).

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SUPPLY ORDER NO.BCCL/ PUR/ 313283/POWER TRANSFORMER 10MVA/13-14/127/155

DATE- 05.11.201

**TERMS AND CONDITIONS:**

**1.DETAILED TECHNICAL SPECIFICATIONS:** as per Annexure-A enclosed

**2. BREAK UP OF THE UNIT LANDED COST:** as indicated in the Annexure-1 enclosed

**3.PRICES:**The above prices are Firm and FOR, Destination, inclusive of Packing / Forwarding, and insurance. However, Freight charges shall be payable extra per unit for FOR destination supply at actual against documentary evidence to the maximum ceiling of 1,75,000/- (Rupees One lakh Seventy five thousand only), the effect of which has been considered in the unit landed cost above.

**4.EXCISE DUTY** ED including cess shall be payable extra at actuals against documentary evidence as legally leviable within the stipulated delivery period and You shall submit cenvatable invoice enabling BCCL to avail Cenvat credit as per provisions of CENVAT. The offered rate of ED including cess is @10.3%, the impact of which has been incorporated in the unit landed cost as above and break up at Annexure-1.

**5.SALES TAX:** CST shall be payable extra against form "C", as applicable at the time of delivery within the stipulated delivery period. The present/offered rate is @2% against form "C", the impact of which has been incorporated in the unit landed cost as above and break up at Annexure-1.

**6.DELIVERY PERIOD:** shall be supplied within Six months reckoning from the 10th day from the date of order and the date of receipt of materials at our stores shall be treated as the date of delivery. However, you may improve upon the delivery.

**7.PAYMENT TERMS:** 100% Payment shall be made within 21 days of receipt and acceptance of the materials or from the date of submission of the bill, whichever is later, against submission of Performance Bank Guaranty. Scanned copy of Your bank details/EFT mandate submitted by you along with your offer is enclosed for payment through EFT.

**8.CONSIGNEE:** Depot officer, Regional Stores, BCCL Block-II Area, Dist: Dhanbad, Jharkhand.

**9.PAYING AUTHORITY:** GM(F)MM, BCCL, Koyla Bhawan, Koyla Nagar, Dhanbad-826005 (Jharkhand).

**10.GURANTEE /WARRANTY:** The supply shall be covered by the maker's standard guarantee as follows:  
The supplier shall warrant that the equipment supplied under the contract / supply order  
(a) is new, unused and of current design not likely to be discontinued or become obsolete till the life of the offered equipment.  
(b) Is in accordance with the contract specifications.  
(c) Shall have no defects arising out of design, materials or workmanship.

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The supplier shall guarantee for the satisfactory performance of the complete equipment/ stores for a period of 12 months from the date of commissioning or 18 months from the date of receipt and acceptance of the materials, whichever is earlier. In the event of any defects in materials, design and workmanship during the aforesaid period is found due to faulty design or poor workmanship, the defective part or parts will be replaced by the supplier at site free of cost within 30 days of settlement of warranty claims. The supplier will be required to stock spare parts to take care of warranty failures. Spares should be available within 2 weeks of the breakdown being intimated to them.

The guarantee/composite warranty shall be submitted along with the bill. The warranty shall cover for the total equipment so that the necessity of having to approach different manufacturers of various components/assemblies does not arise and all services under warranty clause shall be the responsibility of the ultimate supplier of the composite equipment. You will also replace the defective parts, if any, during the warranty period free of cost. The responsibility to collect the defective / rejected material will lie with the supplier and the cost for such collection will have to be borne by the supplier.

**11. SECURITY DEPOSIT:** Exempted being NSIC registered vide no.NSIC/HYD/GP/RS/17(P-192)/2013/795 DTD.26.07.13.

**12. PERFORMANCE BANK GUARANTEE (PBG)-** PBG on schedule/Nationalized Bank in India valid for three months beyond the expiry of Guarantee/Warranty period of the contract (ie valid for 21 months from the date of receipt and acceptance of materials at destination site) for 10% value of the contract ie for Rs 6,57,768/- (Rupees Six Lakhs Fifty seven Thousand seven hundred and sixty eight only) shall have to be submitted to MM Division, BCCL, Koyla Bhawan on or before commencement of supply/ installation/commissioning. The format for PBG shall be as was provided along with the NIT and enclosed.

The original Bank Guarantee should be sent to the beneficiary directly by the issuing bank under registered post with A.D

### **13. Inspection and Tests:**

- i) The purchaser or its authorised representative shall have the right to inspect and/or to test the goods to confirm their conformity to the contract. The purchaser shall notify the supplier in writing of the identity of any representative retained for these purposes.
- ii) The inspections and tests may be conducted on the premises of the supplier or its sub-contractors), at point of delivery and/or at the goods final destination when conducted on the premises of the supplier or its subcontractor(s), all reasonable facilities and assistance, including access to drawings and production date, shall be furnished to the inspectors at no charge to the purchaser.
- iii) Should any inspected or tested Goods fail to conform to the specifications, the purchaser may reject them and the supplier shall either replace the rejected goods or make all alternatives necessary to meet specification requirements free of cost to the Purchaser.
- iv) The Purchaser's right to inspect, test and, where necessary, reject the goods after the Goods arrival in the Purchaser's country shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the Purchaser or its representatives prior to the Goods shipment from the country of origin.

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SUPPLY ORDER NO.BCCL/ PUR/ 313283/POWER TRANSFORMER 10MVA/13-14/127/155

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v)Materials are subject to inspection by the purchaser before dispatch.The materials may also be subject to stage inspection by a third party nominated by BCCL for the purpose. Final inspection shall, however, be carried out at the consignee's end.

v)Materials are subject to inspection by the purchaser before dispatch.The materials may also be subject to stage inspection by a third party nominated by BCCL for the purpose. Final inspection shall, however, be carried out at the consignee's end.

vi)Nothing in these documents shall in any way release the supplier from any warranty or other obligations under this contract.

vii)The purchaser shall, at its discretion, have the right to test the ordered material in a Government Test House or in a test house nominated by the purchaser. In case of failure of the material after testing, the cost of tests as well as of the material shall have to be borne by the supplier.

Final Inspection at destination site shall be arranged by the consignee within one week from the date of receipt of the material.Supplier's technical representative must be available at the time of inspection.

**13A.PRE-DISPATCH INSPECTION:**Pre-dispatch inspection of each consignment shall be carried out by M/s. Central Mine Planning & Design Institute Ltd(CMPDIL), Ranchi/their Regional Office as per the terms and conditions indicated hereunder:

Pre-dispatch inspection shall be carried out by M/s.CMPDIL(the above firm) as per their methodology. The third Party Inspection shall include examination of raw material, test certificate verification, continuous monitoring of quality assurance by manufacturer which will include regular and surprise visits. In brief, the scope and condition of inspection by M/s.CMPDIL will be as follows :

Checking and approval of test procedures/quality assurance plans.

Verification of records and documents of your works.

Verification of documents and test certificate of bought out items and cross checks.

You shall provide facilities for carrying out all necessary tests as required in the specification at your works else these will be carried out at an independent test house at your cost.

Final testing and checking of materials as per specifications.

M/s.CMPDIL will have full and free access to the premises of manufacturer during the process of manufacturing and during inspection activities.

Inspection fee @ 1% of total consignment billing (plus statutory levis like service tax @12.36% etc,as legally applicable on inspection fee) is to be paid to M/s.CMPDIL along with inspection call letter payable by DD which will be reimbursed subsequently by BCCL together with consignment billing.

Minimum 7 calendar days notice shall be given by the manufacturer to M/s.CMPDIL for arranging inspection within valid delivery period as per contract.

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The ultimate responsibility for supply of correct materials as per requirement of relevant specification lies solely with the manufacturer inspite of clearance/acceptance by inspection authority i.e. M/s.CMPDIL. The manufacturer will be required to replace the material free of cost if found defective/unserviceable/not according to relevant specifications.

The charges for third party inspection and the cost of materials that would be required for destructive tests, if any, shall be reimbursed by BCCL together with the consignment billing. Such cost shall be reimbursed only if it is duly certified by M/s.CMPDIL.

Inspection call to M/s.CMPDIL, Ranchi/ their Regional. Office must be given.

Final inspection shall be arranged by the consignee after receipt of the material at our destination.

The purchaser shall, at its discretion, have the right to test the ordered material in a Government Test House or in a test house nominated by the purchaser. In case of failure of the material after testing the cost of tests as well as of the material shall have to be borne by the supplier.

**14.TRANSIT INSURANCE:** Shall be arranged and covered by you for safe arrival of the materials to the consignee end at your cost and risk.

**15.PENALTY FOR FAILURE TO SUPPLY IN TIME: Liquidated Damage(LD) Clause/Risk Purchase clause:** The delivery of stores stipulated in Purchase order shall be deemed to be of the essence of the contract and delivery of the stores must be completed by the date specified. No materials should be supplied beyond the specified delivery period, unless specific approval has been obtained from the purchaser.

In the event of failure to deliver the stores within the stipulated date/ period in accordance with the samples and/or specification mentioned in the supply order, and in the event of breach of any terms and conditions mentioned in the supply order. Bharat Coking Coal Limited reserves the right:

- a) To recover from successful tenderer, as agreed liquidated damages, a sum not less than 0.5% (half percentage) of the price of the stores which successful tenderer has not been able to supply (for this purpose part of a unit supplied will not be considered) as aforesaid for each week or part of a week during which the delivery of such stores may be in arrears limited to 10%. Where felt necessary the limit of 10% can be increased to 15% at the discretion of Head of the Materials Management Division .
- b) To purchase elsewhere, after due notice to the successful tenderer on the account and at the risk of the defaulting supplier the stores not supplied or others of a similar description without cancelling the supply order in respect of consignment not yet due for supply or
- c) To cancel the supply order or a portion thereof, and if so desired to purchase the store at the risk and cost of the defaulting supplier and also
- d) To extend the period of delivery with or without penalty as may be considered fit and proper. The

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penalty, if imposed shall not be more than the agreed liquidated damages referred to in clause (a) above.

e) To encash any Bank guarantee which is available for recovery of the penalty or

f) To forfeit the security deposit full or in part.

g) Whenever under the contract a sum of money is recoverable from and payable by the supplier, BCCL shall be entitled to recover such sum by appropriating, in part or whole by deducting any sum or which at any time thereafter may be due to the successful tenderer in this or any other contract with Bharat Coking Coal Ltd. or any subsidiary of Coal India Ltd. Should this sum be not sufficient to cover the full amount recoverable, the successful tenderer shall pay BCCL on demand the remaining amount. The supplier shall not be entitled to any gain under this clause.

#### 16. PRICE FALL CLAUSE:

i) The prices charged for the stores supplied under the contract by the supplier shall in no event exceed the lowest price at which the supplier offer to sell the stores of identical description to any other organization from date of offer till completion of supply under the contract.

ii) If at any time during the said period the supplier offers lower sale price of such stores to any other organization at a price lower than the price chargeable under this contract, the supplier shall forthwith notify such reduction or sale to the consignee concerned under intimation to GM(MM), Bharat Coking Coal Limited, Commercial Block, Level -III, Koyla Bhawan, Koyla Nagar, Dhanbad and the price payable under the contract for the stores supplied after the date of coming into force of such reduction or sale, shall stand correspondingly reduced. The above stipulated will not, however apply to exports by the supplier.

A certificate to this effect shall be submitted by you along with the supply bill.

17. SUBMISSION OF BILL: Pre-receipted stamped original bill for 100% value in four copies along with delivery

challan in original, Guarantee/ Warranty certificate, and other relevant documents as indicated elsewhere in the order should be submitted to the Paying Authority through Consignee only.

18. PACKING: Consignment shall be supplied in suitable standard proper packing.

19. FORCE MAJEURE CLAUSE: If the execution of the supply order is delayed beyond the period stipulated in the supply order as a result of out-break of hostilities, declaration of an embargo / curfew or blockade or fire, flood, acts of nature or any other contingency beyond the supplier's control due to act of God then BCCL may allow such additional time by extending the delivery period, as it considers to be justified by the circumstances of the case and its decision shall be final.

20. ISSUE OF ROAD PERMIT: Road Permit if required may be obtained directly from the Consignee under intimation to this office.

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SUPPLY ORDER NO.BCCL/ PUR/ 313283/POWER TRANSFORMER 10MVA/13-14/127/155

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**21.PENALTY FOR INCREASE IN LOSS FIGURE:** The Capitalised cost has been arrived out of the above landed cost of Transformer for evaluation of the price status as per NIT (as per Formulae stipulated in Annexure 5 of Annexure-A of NIT) and penalty for increase in loss figure,if any,shall be imposed as per Formulae stipulated in Annexure 5 of Annexure-A .

**22.DOCUMENTS:**Following Documents shall be submitted at the time of supply :

- 1)The manufacturer shall submit all routine standard tests in accordance with IS-2026 on each transformer.
- 2)Operation & maintenance manual
- 3)Manufacturer test certificate

This contract is concluded with the issuance of this order.Two copies of the order are being sent to you.You are advised to acknowledge the receipt and acceptance of the order by returning one copy duly signed and stamped to this office within 10days,failing which this order shall be deemed to have been accepted by you for execution.

**Enclosure:**

1. Annexure-I- Break up of the unit landed
- 2.Annexure-A(containing Annexure-1 to Annexure-5):Detailed technical specifications and Technical Data sheet ,Technical particulars (General & Special)
- 3.Scanned copy of Your bank details/EFT mandate
- 4.PBG Format

*Nadeem*  
(Nadeem Khan)  
AM(MM)

Yours faithfully,  
*(C R Samant)*  
(C R Samant)  
Chief Manager(MM)  
For & on behalf of Bharat Coking Coal Ltd.

**INDENT AND BUDGET REFERENCE:**

Indent reference	Budget Certification no. & dt., & FC No.& dt.
No.BCCL/CGM(E&M)/F-Central Indent(Elect)/13-14/11 dated 28.05.13 under covering Notesheet vide no. E-269/N dated 23.12.2013,received in MM Dept on 08/01/14 registered vide MMD IR no. 313283 dtd 10.01.14,approved by D(T)OP,BCCL	Against BC NO. BCCL/C&B/CAP/Reg PN.19/SN-162/ebc no.323/CAP 14-15 Dtd. 29.10.14,certified for Rs 65,77,673.10 by Dy GM(F)C&B,BCCL .  FC given by Chief Manager(F)OP,BCCL vide No. no.223 dated 05.11.14 for Rs Rs 65,77,673.10

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SUPPLY ORDER NO.BCCL/ PUR/ 313283/POWER TRANSFORMER 10MVA/13-14/127/155

DATE-05.11.20

COPY:

- 1.GM(E&M)I/C, Koyla Bhawan
2. GM(F)MM/HOD(F),MM , Koyla Bhawan.
3. Dy GM(F)C&B /CM(F)P&P,BCCL HQ, Dhanbad.
- 4.GM/Depot Officer, Regional Stores, BCCL, Block-II Area
5. CGM(E&M),CMPDIL,Gondwana Place,Kanke Road,Ranchi
6. AM(Tech Cell), MM Div, Koyla Bhawan.
- 7.IEM: Shri Prakash,B402,RPF Officer's Flats,RPF Officers Cooperative Group Housing Society,Plot16,19 and 20,Sector 9A, Gurgaon - 122001
- 8.GM(MM)CIL/CCL/SECL/ECL/NCL/WCL/MCL/NECL
- 9.MF/Office Copy

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AM(MM)

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Chief Manager(MM)



## Annexure-I

## BREAK UP OF THE UNIT LANDED COST

BASIC PRICE PER UNIT	56,26,000.00
ED INCLUDING CESS@10.3% as per offer,however same shall be payable extra at actuals against documentary evidence as legally leviable with in the stipulated delivery period.	5,79,478.00
	62,05,478.00
CST@2% AGAINST FORM "C"	1,24,109.56
	63,29,587.56
FREIGHT CHARGES PER UNIT	1,75,000.00
UNIT LANDED COST	65,04,587.56

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Chief Manager(MM)

**ANNEXURE-A (CONTAINING ANNEXURE-A1 TO A5)**

<b>TECHNICAL SPECIFICATIONS POWER TRANSFORMER OF RATING 7.5/10 MVA 33/11-6.6 KV TO CATER THE LOAD AT MADHUBAND DG S/S.</b>	
<b>NIT No: BCCL/PUR/313283/POWER TRANSFORMER/13-14/127</b>	
<b>Bidder Name: PETE Hammond Power Solutions Pvt. Ltd., Hyderabad</b>	<b>Bidder's value</b>
<b>SPECIFICATION PARAMETER</b>	
Oil immersed power transformer for outdoor duty , copper wound , core type with provision for oil natural & fan cooling , having following technical specification , to be supplied with first filling of oil .	AGREE
1. Rated Capacity : 7.5/10 MVA -1 No.	AGREE
2. Rated Voltage : HV side -33 KV +/-10% LV side -11-6.6 KV +/- 10%	AGREE
3. No. of Phases - Three	AGREE
4. Frequency : 50 Hz +3% , -5%	AGREE
5. Vector Group : Dyn11	AGREE
6. Percentage impedance with respect to rated current and frequency at 75 degree celsius . : Percentage Impedance shall be 8% with variation of (+)5% and (-)0% at 7.5 MVA base and 11 KV secondary Voltage.	AGREE
7. Tapping Range : +/- 10% in 14 steps of 1.43% each	AGREE
8. Maximum guaranteed Temp rise over the ambient temp of 50 degree celsius : In Oil -45 degree celsius In winding 55 degree celsius , at full load	AGREE
9. Bushing : HV side - Outdoor Type LV side : Outdoor Type .	AGREE
10. Auxiliary Control Cubicles suitable for : 3 phase , 4 wire 415 V system .	AGREE
11. Details of OLTC : As per Annexure 1	AGREE
12. Details of mounting & fixing : As per Annexure 2.	AGREE
13. Construction Detail : As per Annexure 3 .	AGREE
14. The Transformer shall conform to IS 2026 (latest amended if any ) .	AGREE
15. The provision of local as well as remote control cubicles for cooling fans including appropriate marshalling box shall exist .	AGREE
16. Control Panel for cooling fans : Outdoor type 415 V , 3 Phase.	AGREE
17. Automatic/manual control switch to be provided in the Control panel for cooling fans. Necessary arrangements should be provided for auto made.	AGREE
<b>Mechanical Features :</b>  The transformer shall withstand the electro-dynamic stress due to thermal short circuit of the LV side assuming the HV side fed from an infinite bus . All leads and windings in cores shall be properly supported , clamped and tightened after vacuum drying to ensure the short circuit withstand ratings . The short circuit withstand duration shall be minimum 2 sec. The Transformer shall be so designed as to minimize any undue noise and vibration.	AGREE

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**ANNEXURE 1****DETAIL OF OLTC:**

On Load Tap Changer : Suitable for outdoor installation , oil immersed , high speed snap switches combining both selector and diverter duties , housed in a self contained single compartment chamber and suitable for mounting externally on a part flange provided on the transformer tank . The tap changer shall be suitable for connection to adjacent tapping as brought out from 33 KV winding (from +10% to -10% in steps of 1.43% each) covering a range of fourteen steps making a total of fifteen positions .The tap changer shall have the following equipments / components in the cubicles , mounted externally on the transformer tank . The driving mechanism also shall be housed in the said cubicle .

1. High Torque Electric Motor for operation on 50 cycles ac supply .

2. Driving mechanism and energy accumulator.

3. Contactors with Overload release.

4. Contactors for forward and reverse operation of the motor.

5. Raise / Lower push buttons.

6. Local /remote control selector switches.

7. Limit Switch

8. retainer Switch.

9. Set of fuses.

10. Handle for manual operation .

11. Interlock between manual & electrical operation

12. Insulated terminal board & connectors for connection with transformer leads.

13. Mechanical tap position indicator.

14. Tap changer operation counter.

15. Anti condensation heater with switch.

16. Drain Plug.

17. Auxiliary Transformer .

18. Step By step relay.

19. Mechanical stopper to prevent over cranking of the mechanism beyond extreme tap position.

20. Buchholz relay.

**ANNEXURE 2****DETAILS OF MOUNTINGS AND FITTINGS**

The Transformer shall be provided with the following accessories :

Explosion vent with suitable diagram and equalizer pipe connection with drain cum air release valve .

4 Nos. roller flanged wheel , bi-directional suitable for 1435 mm rail gauge . Wheel bracket should have holes in square formation to facilitate the movement of transformer in lateral direction also.

Dial thermometer 150 mm size with maximum temp indicator , resetting device and two set of contacts one for alarm and other for trip .

Buchholz relay 2" double float type two set of contacts (alarm & trip) and one no. of shut off valve .

4 nos. jacking lugs /lifting lugs at an appropriate and convenient height .

Marshalling box with suitable control cable outlets and

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inspection cover with suitable size of aperture with glass and rubber gasket	
150 mm dia temp indicator for winding temperature with capillary tube and two sets of contacts (alarm & tripping)	AGREE
Fans for cooling (to be fixed below the radiator tubes ) with control panel -440 V , 3 phase .	AGREE
OLTC as per Annexure 1 .	AGREE
Rating and diagram plate .	AGREE
Earthing terminals two nos .	AGREE
150 mm dia magnetic type oil level gauge with low oil level alarm contacts .	AGREE
Thermometer pocket .	AGREE
Spare thermometer pocket .	AGREE
Air release plug .	AGREE
Oil filling hole with plug .	AGREE
150 mm dia temp indicator for oil temperature .	AGREE
Dehydrating silica gel breather of suitable size with oil seal .	AGREE
Drain valve with plug .	AGREE
Oil conservator with filling hole cover , oil drain valve and plug .	AGREE
Two nos. of filter valve of 2" dia with adapter for PLUG .	AGREE
Three nos . of 3/4 " BSP sampling valves ( Top , middle & bottom) with plugs for sampling of top, middle & bottom oil.	AGREE
HV terminals-3 nos 36 KV clean outdoor type porcelain bushings fitted with single gap arcing horn .	AGREE
LV terminals -4 nos. 12 KV suitable for heavily polluted area .	AGREE
Lock with key in duplicate externally operated for tap switch .	AGREE
Suitable links for change over from 6.6 KV to 11KV , easily accessible through inspection cover .	AGREE
Inspection cover for terminals inside the tank .	AGREE
Breather of suitable size .	AGREE
<b>ANNEXURE 3</b>	
<b>Constructional Details</b>	
a) The transformer core shall be made of high grade non- ageing grain oriented cold rolled silicon steel sheets of low hysteresis loss and high permeability . The core structure shall be securely grounded to prevent electrostatic potential . Lifting eyes and lugs shall be provided on the limbs and coils assembly . Preferably no bolt shall be used in the cores . Clamping shall be done externally to the limb.	AGREE
The design of the magnetic circuit shall be such as to avoid static discharges , development of short circuit paths within itself or to the earthed clamping structure and the production of flux component at right angles to plane of lamination which may cause local heating .	AGREE
Core and windings shall be capable of withstanding shocks during transport , installation & service and adequate provision shall be made to prevent movement of core & winding relative to tank during these conditions.	AGREE
All steel sections used for supporting the core shall be thoroughly sand blasted after cutting , drilling and welding .	AGREE
<b>Tanks :</b>	
Tanks shall be of welded construction and fabricated from boiler steel plates of adequate thickness . The weld procedure and performance shall be in line with ASME BPV -IX. All seams and joints those are not required to be opened at site	AGREE

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shall be factory welded and wherever possible shall be double welded.	
Tanks stiffeners shall be provided for general rigidity and these shall be designed to prevent retention of water.	AGREE
The tanks shall be designed to withstand – Mechanical shocks during transportation , Vacuum filling of oil & short circuit force .	AGREE
Adequate space shall be provided at the bottom of the tank for settlement of sediments .	AGREE
Suitable guides shall be provided in the tank for positioning the core & coil assembly.	AGREE
The tanks shall be suitable for movement in both direction during shipment & each tanks shall be provided with Lifting lugs suitable for lifting the complete transformer and a minimum of four jacking pads.	AGREE
<b>Tank Cover</b> The tank cover shall be sloped to prevent retention of rain water and shall not distort when lifted .	AGREE
At least two adequately sized inspection covers one at each end of the tank shall be provided for easy access to bushing and earth connection . The inspection covers shall have suitable lifting arrangement .	AGREE
The tank covers shall be fitted with thermometer pockets . The thermometer pocket shall be fitted with a captive screwed top to prevent ingress of water .	AGREE
<b>Mounting arrangement :</b> The transformers shall be provided with two nos. bi-directional skids and pulling eyes integral with tank body for fixing the transformer tank on foundation.	AGREE
<b>Conservator Tank</b> The conservator tank shall have adequate capacity to accommodate oil preservation system and volumetric expansion of the total cold oil volumetric expansion of the total cold oil volume in transformer and radiators for a change in temperature from minimum ambient air temperature of 5°C to 110°C.	AGREE
The conservator shall be bolted into position so that it can be removed for cleaning purpose.	AGREE
The conservator tank , shall be fitted with a silica gel filter breather. The conservator of transformer shall be fitted with magnetic oil level gauge with two independent low level electrically insulated alarm and trip contacts . The oil level at 30 degree celsius shall be marked on the gauge.	AGREE
<b>Explosion vent</b> The transformers shall be provided with the single diaphragm type of explosion vent with air release device .	AGREE
An equalizer pipe shall be connected to explosion vent from the conservator .	AGREE
<b>BUCHHOLZ RELAY :</b> A double float type buchholz relay confirming to IS 3637 shall be provided . All gas evolved in the transformer shall be collected in this relay . The relay shall be provided with a test cock suitable for a flexible pipe connection for checking its operation . A copper tube shall be connected from the gas collector to a valve located about 1200 mm above ground level to facilitate sampling with the transformer in the service . The device shall be provided with two potential free contacts , one for alarm on gas accumulation and the other for tripping on rise of pressure.	AGREE
<b>Temperature Indicator – As per Annexure-2</b>	AGREE

<b>WINDING</b> <ul style="list-style-type: none"> <li>• The conductors shall be of electrolytic grade copper free from scales &amp; burns .</li> <li>• All winding shall be fully insulated .</li> <li>• Coil assembly and insulation spacers shall be so arranged as to ensure free circulation of oil and to reduce the hot spot of winding .</li> <li>• All bus bars and leads shall be adequately supported in insulation cleats or frames shall be effectively locked .</li> </ul>	AGREE
<b>INSULATION MATERIALS</b> Class "A" insulating materials specified in IS 1271 or latest version shall be used . Wood insulation , where used shall be well seasoned and treated . Insulating oil : The new insulating oil shall confirm to IS 335 . No inhibitors shall be used in the oil . The manufacturer shall dispatch the transformer filled with oil . Ten percent extra oil shall be supplied for topping up , in non returnable sealed containers suitable for outdoor storage .	AGREE
<b>EARTHING TERMINALS</b> Two earthing terminals suitable for connecting mild steel flat shall be provided at position close to the two diagonally opposite bottom corners of tank . These grounding terminals suitable for bolted connection . Two earthing terminals shall also be provided on marshalling box and any other equipment mounted separately.	AGREE
<b>RADIATORS</b> The radiators shall be detachable type , mounted on the tank . Each radiator shall be provided with the following : a) A drain valve at the bottom b) An air release plug at the top c) Shut off valve .	AGREE
<b>MARSHALLING BOX</b> A sheet steel weather, vermin and dust proof marshalling box shall be provided with each transformer to accommodate • Temperature indicators • Terminal blocks for incoming & outgoing cables The marshalling box shall be supplied with space heater and cubical lighting with ON/OFF switches and associated fuses .	AGREE
<b>ANNEXURE : 4</b> <b>TECHNICAL PARTICULARS</b>	AGREE
General 1) Name of manufacturer	PETE HAMMOND POWER SOLUTIONS PVT LTD
2) Service	OUTDOOR
3) Rated KVA :KVA	7500 KVA (ONAN) / 10000 KVA (ONAF)
4) Rated Voltage of HV :KV	33 KV
5) Rated Voltage of LV :KV	11-6.6 KV
6) Temperature rise in Oil :Degree Celsius	45 DEG C
7) Temperature rise in Winding :Degree Celsius	55 DEG C
8) Rated Frequency : Hz	50 HZ

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9) Number of Phase	3 PHASE
10) Connection HV LV Vector Group	DYN 11 (HV - DELTA, LV - STAR)
11) Tappings High Voltage : %	OLTC (+10% TO -10% IN STEPS OF 1.43 % - 14 STEPS, 15 POSITIONS)
12) No Load Loss at rated Voltage & Frequency :KW	5.6 KW +/- IS Tolerance
13) Load Loss at rated current & Frequency at 75 degree celsius :KW	64.5 KW +/- IS Tolerance
14) Impedance at rated current and frequency at 75 degree celsius :%	8 % + 5 % tolerance at 7.5 MVA
15) Reactance at rated current and frequency :%	9.97% @ 10 MVA
16) Efficiency at 75 degree celsius at Unity Power Factor a) At Full load :%	99.30%
Efficiency at 75 degree celsius at Unity Power Factor b) At 3/4 Full load :%	99.44%
Efficiency at 75 degree celsius at Unity Power Factor c) At 1/2 full load :%	99.57%
17. Regulation at full load at 75 degree celsius a) At Unity Power Factor :%	1.14%
Regulation at full load at 75 degree celsius b) At 0.8 power factor lagging :%	6.78%
18. No Load current at rated voltage and frequency: %	Less than 1 % of full load current
19. Approximate weights: a) Core & winding : Kg	11740 KG
b) Tank & fitting :Kg	5300 KG
c) Oil :Kg	4180 KG
d) Total weight :kg	22500 KG
20. Approx. quantity of Oil :litres	4920 Ltrs
21. Approx overall dimensions a) Length :mm	4250 mm
b) Breadth :mm	3750 mm
c) Height :mm	4100 mm
22. Terminal arrangement : HV LV	HV - Bare Bushing LV - Bare Bushing
23. Reference standard	IS: 2026, IS: 335 & IS: 6600
<b>Special:</b> 1. Approximate flux density at rated voltage and frequency :Cgs Line/Sq cm	17000 Lines / Sq. mm
2. Efficiency at 75 deg celsius at 0.8 pf lagging . At full load :%	99.13%

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b) At 3/4 Full Load: %	99.31%
c) At 1/2 Full load: %	99.46%
3. Load at which max efficiency occurs: % Full Load	29.47%
4. Maximum Efficiency : %	99.62%
5. Impulse Level	170
a) HV : KV	
b) LV : KV	75
6. No Load Loss at 110% rated voltage and frequency : KW	7.28 KW
7. No load current at 110% rated voltage and frequency: %	Less than 3 % of Full load Current
8. Type of winding :	Disc
a) HV	
b) LV	Disc / Spiral
9. Insulating materials :	
a) Turn Insulation HV	TPC
b) Turn Insulation LV	DPC
c) Insulation core to LV	Solid insulation + Oil Duct
d) Insulation HV to LV	Oil Duct + Solid Insulation + Oil Duct
10. Clearances :	
Minimum clearance between phases	90 mm
a) In oil : mm	
b) Out of oil : mm	330 mm
c) Minimum Clearance HV to earth in oil : mm	60 mm
d) Minimum Clearance -HV to Tank in Oil : mm	100 mm
11. Details of Tank	
a) Approx thickness of sides : mm	8 mm
b) Approx thickness of bottom : mm	10 mm
c) Approx thickness of cover : mm	10 mm
d) Approx thickness of tube radiators: mm	1.2 mm
12. Minimum clearance height for lifting core and windings from tank. : mm	7000 mm apprx.
13. Shipping details :	Rollers, Bushings, Breather, Conservator and Radiators
Parts detached for transport	
a) Approx weight of heaviest package : Kg	
b) Approx dimension of largest package (LxBxH) : mm	4250 X 3750 X 4100
<b>ON LOAD TAP CHANGING GEAR</b>	Provided
Make	OLG
Type	LINEAR
Rated voltage : KV	33000 V
Rated current	200 A

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No. of steps	16
Control	Remote /Manual
Auxiliary supply details	415 V
Voltage control	RTCC
Line drop compensation	provided
Parallel Operation	provided
Protective device	Surge Relay
Approx. over all weight : kg	1060 Kg (Approx)
Approx. over all dimensions : mm	1868 x 815 x 1220
Approx. overall quantity of oil : ltrs.	660 liters (Approx)
Position indication	Provided
Any other item left out should be as per Annexure 1.	provided
<b>Remote control panel for cooling fan operation</b>	AGREE
a) Remote selector switch	AGREE
b) Line isolator switch	AGREE
c) Cubicle light	AGREE
d) Door interlock and limit switch.	AGREE
e) Push button for start / stop.	AGREE
f) Indicating lamps.	AGREE
g) ON/OFF Position indication of individual fans .	AGREE
<b>ANNEXURE 5 : PENALTY FOR INCREASE IN LOSS FIGURE:</b>	
FORMULA $A = B + 75000 \times C (D + 0.4 \times E)$	
A = Capitalised cost	
B = Landed cost	
C = Power Cost (Rs ./ KWH )	
D = No load loss at rated voltage and frequency	
E = Full load loss at rated voltage and frequency at 75° C	
Penalty for increase in loss figure :	
Penalty for increase of every 0.1 KW of no load loss= $75000 \times C \times 0.1 = 7500 \times C$	
Penalty for increase of every 0.1 KW of full load loss= $75000 \times C \times 0.1 \times 0.4 = 3000 \times C$	
Power cost ( C ) = Rs. 4.09 / KWH	
Following Documents have to be submitted at the time of supply :	
1. The manufacturer shall submit all routine standard tests in accordance with IS :2026 on each transformer .	AGREE
2. Operation and maintenace manual	AGREE
3. Manufacturer Test Certificate	AGREE

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AM(MM) 05/11/14

*D. D. D. D.*  
Chief Manager(MM)

KA - Anirudh

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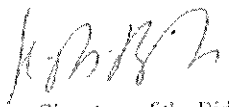


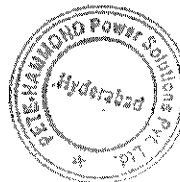
**PETE - Hammond**  
Transformative Synergy

BANK ACCOUNT DETAILS FOR RTGS

1.	Name of the Bank	:	JP Morgan Chase Bank N.A
2.	Name of the Branch	:	Mumbai branch
3.	City	:	Mumbai
4.	Account Number	:	5385175335
5.	MICR No	:	400 500 002
6.	IFSC No	:	CHAS0INBX01 (Co. denotes 2013)
7.	SWIFT Code	:	CHASINBX
8.	Income Tax PAN Number	:	AABCP2097C
9.	VAT Registration Number	:	28030185722
10.	Date of VAT Registration	:	29/03/2005
11.	Place of VAT Registration	:	Hyderabad

For PETE-HAMMOND POWER SOLUTIONS PVT.LTD.  
(Formerly known as PAN ELECTRO TECHNIC ENTERPRISES PVT.LTD.)


  
Signature of the Bidder



FORM: 11: BANKER'S CERTIFICATE  
TO WHOM SO EVER IT MAY CONCERN

This is to certify that M/s. PETE-HAMMOND POWER SOLUTIONS PVT.LTD. G-9 to H, Bhayva's Sree Arcade, Erragadda, Hyderabad - 500 018 having their plant at G-9, IDA, Pashamylaram Medak Dist - 502 307 is our customer and have satisfactory record of transactions. They are having the over all credit limits of Rs.24.00 crores in our Bank.

Place: MUMBAI

Signature of the Manager 

Date: 02 - APR - 2013

Name: Prakash Gunde



Bank address and seal

JP Morgan Chase Bank, N.A.  
1.P. Morgan Tower,  
24 C.S.T. Road, Behind Rajaji Cinema, Paldi,  
Mumbai - 400 098.

PETE - Hammond Power Solutions Pvt. Ltd

Corporate Office: D/110: B-3 - 105/16 & 7, G-9-H, Bhayva's Sree Arcade, Erragadda, Hyderabad - 500018, A.P. India  
Tel: +91 - 40 - 23812291 / 23812590 / M: +91 - 9700044717, Fax: +91 - 40 - 23206741

Works: Plot No - 6A, I.D.A. Phase - 1, Pashamylaram, Patancheru (M), Medak - 502307, A.P. India  
Tel: +91 - 0455 - 234123, Fax: +91 - 0455 - 224125

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marketing@petetransformers.com

  
25/11/14

