

Ref. Enquiry No.: PE/PG/UDN/E-6733/2021 dated 13.08.2021

DUE DATE
23 Aug 2021
BY 02:00 PM

Dear Sir/ Ma'am

Subject: Open tender Enquiry for "Oil filled Service Transformer" for 2 X 660 MW Udangudi super critical STPP project as per Technical Specification No. PE-TS-435-302-E001, R01.

BHEL invites your offers for design, manufacture, inspection and testing at manufacturer's works, proper packing and delivery to site of Oil filled Service Transformer as described in the various sections of the specification for 2 X 660 MW Udangudi super critical STPP Project.

Your offer shall be submitted in two parts strictly as per Clause-2.0 of the "Instructions to Bidders" of GCC Rev. 07, in sealed cover for the below mentioned equipment/system.

Item Description – Oil filled Service Transformer			
Sl. No.	Project	TECHNICAL SPECIFICATIONS	Delivery schedule completion
1	2 X 660 MW Udangudi super critical STPP project.	PE-TS-435-302-E001, R01	As per annexure –A to NIT

Your best quotation/offer for the above requirement, in line with tender terms and conditions, should be submitted **online via e-procurement system (NIC portal)**. It shall be the responsibility of the bidder to ensure that the tender is submitted **on or before the due date by 02:00 PM**. Part-I (techno-commercial) bids shall be opened **at 05:00 PM on due date**.

Note: 1. Detailed tender documents have been uploaded on following websites: -

<https://eprocurebhel.co.in>, <https://www.bhel.com/tenders>; <https://pem.bhel.com/Home.aspx>

Bidders are requested to upload their best offer on <https://eprocurebhel.co.in> only.

2. In case bidders are not interested to quote, please send us the regret by e-mail or letter.

ENQUIRY TERMS AND CONDITIONS:

- Offers should be submitted/uploaded separately in two parts **online through e-procurement system** as follows:

Part-I: TECHNO-COMMERCIAL BID

Part-II: PRICE BID

For detailed instructions, please refer GCC Rev 07- Instructions to Bidders.

- Bidders shall submit their offers meeting the requirements of the following tender documents indicated in BHEL PEM GCC Rev- 07 and other Terms and Conditions included in this Enquiry Letter. Web link of GCC Rev 07 shall be as below, **bidders may download the GCC Rev 07 from the given web link and go through the same before quoting: -**

<https://pem.bhel.com/Documents/GCC/GCCRev07.pdf>

- Bidders to note that following form the part of tender documents:
 - General Conditions of Contract (GCC) Rev 07 comprising of: Instructions to Bidders and General Commercial Terms & Conditions
 - Technical Specifications

Netrapal Singh /Mgr/PG I
PS-Project Engineering Management,
Power Project Engineering Institute,
Plot no. 25, Sector – 16A, Noida (UP) 201301, INDIA
Phone: +91-120-4368900#

Regd. Office
BHEL House Siri Fort
New Delhi-110049

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- c. Technical PQR
- d. Special Conditions of Contract (SCC Rev. 01) of Project.
- e. Enquiry terms & conditions (NIT) with Annexure-A
4. Any hidden conditions/deviations mentioned elsewhere in offer and standard pre-printed terms & conditions of the tenderers shall not be considered valid.
5. Tenders shall be submitted strictly in accordance with the requirements of the above-mentioned tender documents. Deviations (Technical as well as Commercial), if any, shall be listed out separately in Annexure-II of GCC Rev-07 along with reasons for taking such deviations in the bidding format in E-Procurement portal (NIC portal). Any deviations (Technical as well as Commercial) not mentioned in the Annexure-II shall not be considered. Bidders to note all the points mentioned in "Notes" of Annexure-II of GCC Rev.07.
6. Bidder has to submit "NO DEVIATION CERTIFICATE FOR COMMERCIAL TERMS AND CONDITIONS as per General Conditions of Contracts (GCC, Rev.07), Special Conditions of Contract and Notice Inviting Tender (NIT)" **in case of no deviations.**
7. Unsolicited fresh/revised bids shall not be entertained.
8. If any bidder has mentioned the term "Not Applicable" / "not required" / "not quoted" in BHEL price format, the same to be substantiated by the bidder. If such item is required to be supplied for system completion in future, same will be supplied free of cost by the successful bidder.
9. Purchaser shall be under no obligation to accept the lowest or any other tender and shall be entitled to accept or reject any/all tender(s) in part or full without assigning any reason whatsoever.
10. Tenderers must enclose the Quality Plan in the prescribed format, for approval. Equipment will be dispatched only after Purchaser's/Owner's inspection of the hold points specified in the approved Quality Plan and issue of Material Dispatch Clearance Certificate (MDCC).
11. Offers should be submitted separately in two parts online through e-procurement system only (NIC portal), however, all correspondence thereof, shall be addressed to the following persons and sent at the following address:

Mr. Nertrapal Singh MGR, PG-I E-mail: netrapalsingh@bhel.in Ph. +91-120-4238900 Mob: 09990302207	Mr. Ajay Kumar Dy. Engineer, PG-I E-Mail: ajaykaushik@bhel.in Ph. No. +91-120- 4368879; Mob: 9899891358
M/s. Bharat Heavy Electricals Ltd., Project Engineering Management, PPEI Building, Plot No 25, Sector-16A, Noida-201301, U.P., INDIA	
12. Evaluation shall be done on Total Cost to BHEL basis (excluding GST) as per Cl. No. 19.2 of Instruction to Bidders of GCC, Rev. 07.
13. **Govt. of India's Public Procurement Policy – Preference to Make in India Clause: -**
For subject tender only Class I local suppliers are eligible to bid (in line with clause no. 3 (a) of MII circular no P-45021/2/2017-PP (BE-II) Dtd-16-09-2020, as there is sufficient Local Capacity & Local Competition. In case of subsequent orders issued by nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part-II bids against this NIT".

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The local supplier at the time of tender, bidding, solicitation, shall be required to provide self-certification that as per the offered item, they meet the requirements of Class I local supplier as per the provisions of PPP-MII Order of Govt. of India and relevant circulars issued by nodal ministry w.r.t. above mentioned orders and shall give details of location(s) at which the local value addition is made in annexure B.

Subject package is not divisible in nature.

14. For this procurement, Public Procurement (Preference to Make in India), Order 2017 dt. 15/06/2017, 28/05/2018, 29/05/2019 & 04/06/2020 and subsequent Orders issued by the respective Nodal Ministry shall be applicable even if issued after issue of this NIT but before finalization of contract / PO / WO against this NIT. In the event of any Nodal Ministry prescribing higher or lower percentage of purchase preference and / or local content in respect of this procurement, same shall be applicable.
15. Bidder to note that this is a conditional Open Tender enquiry subject to following condition: -
 - A) Meeting of Technical PQR
 - B) Techno-commercial qualification/recommendation of bidder by the BHEL-PEM.
 - C) Approval of vendor from end Customer (TANGEDCO) shall be taken up by BHEL-PEM with customer. Bidders who are not approved from end customer should furnish the credentials (brief company profile, latest PO list, 3-4 latest similar POs with performance certificates) along with their bid.
16. Bidders to ensure that Third party/Customer issued certificates being submitted as proof of PQR qualification should have verifiable details of document/certificate issuing authority such as name & designation of Issuing Authority and its organization contact number and E-mail Id etc. In case the same is found not available, BHEL has the right to reject such document from evaluation.
17. Compliance of model clauses as provided in Annexure-III of Ministry of Finance Order (Public Procurement No. issued on 23.07.2020 (Restrictions under Rule 144 (xi) of the GFR,2017) shall be applicable for subject tender. Model Certificates provided in same Annexure-III shall also be complied. Further, relevant clause of order no. 25-11/6/2018-PG dated 02.07.20 issued by MoP shall also be complied. An undertaking regarding Model Clauses (as applicable from Annexure-III) shall be furnished by bidders along with bid documents.
18. CIF is not available for this package.
19. PVC is not applicable.
20. The Evaluation Currency for this tender shall be INR.
21. Integrity pact is applicable as per clause no 12.0 of GCC Rev 07.
22. Overall (%) variation in contract values (due to changes in the scope) shall be Cl. No. 6.0 of GCC, Rev. 07
23. For bidders (who are not registered with BHEL-PEM) -Online Registration Portal is operational in BHEL. Registration in BHEL-PEM is not mandatory for this tender. However, Non-registered Vendors, who wish to apply for registration with BHEL-PEM, can apply through Online Registration Portal available at www.bhelpem.com → vendor section → Online Supplier Registration. All credentials and/or documents duly signed and stamped related to registration may be uploaded on the website and submit the application for registration.

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24. All corrigenda, addenda, amendments, time extensions, clarifications etc. to the tender will be hosted on BHEL websites only (www.pem.bhel.com, www.bhel.com & <https://eprocurebhel.co.in>) under subject tender reference. Bidders are requested to visit our websites from time to time to keep themselves updated. Bidders may go through the Sellers' manual & Help documents provided on E-Procurement Portal website & obtain required Digital Signature Certificate for participating in the subject Tender. For Bidders' convenience, the Helpdesk Nos. of E-Procurement (NIC) Portal is available at website i.e. <https://eprocurebhel.co.in>.
25. If any bidder uploads price bid in the unpriced section (techno-commercial attachment page) of the tender in e-Procurement (NIC portal), in that case bidder(s) shall only be responsible for such mistake and any consequences thereof. Hence all bidders are requested to be more careful at the time of uploading the Unpriced and Price Bid for Part-I and Part-II respectively to avoid mismatch.
26. Bidders to note that "This item /package/system falls under the list of items defined in para 3 of ministry of finance guideline dated 20.09.16 (procurement of items related to public safety, health, critical security operations and Equipments etc.) & hence criteria of prior experience /turnover shall be same for all bidders including start-up /MSME".
27. Due to COVID-19 pandemic condition prevailing in the country, BHEL/PEM may go for Remote Inspection of Offered items, if required. Vendors are requested to be equipped with the facilities/gadgets as indicated in the guidelines available at <https://pem.bhel.com/Documents/VendorSection/Vendor/Guidelines.pdf> to take up the inspection REMOTELY.
28. The Bidder declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process. In case, the Bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/ guidelines.
29. In the course of evaluation, if more than one bidder happens to occupy L-1 status, effective L-1 will be decided by soliciting discounts from the respective L-1 bidders. In case more than one bidder happens to occupy the L-1 status even after soliciting discounts, the L-1 bidder shall be decided by a toss / draw of lots, in the presence of the respective L-1 bidder(s) or their representative(s). Ranking will be done accordingly. BHEL's decision in such situations shall be final and binding.
30. **Performance Bank Guarantee:** Performance Security amount shall be @5% of the contract value (excluding taxes duties & freight) as per GCC Rev 07.

"Bidder agrees to submit performance security required for execution of the contract within the time period mentioned. In case of delay in submission of performance security, enhanced performance security which would include interest (SBI rate + 6%) for the delayed period, shall be submitted by the bidder. Further, if performance security is not submitted till such time the first bill becomes due, the amount of performance security due shall be recovered as per terms defined in NIT / contract, from the bills along with due interest "

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31. All other terms and conditions of SCC (Rev 01) of project, NIT & GCC (Rev 07) shall be applicable for the subject package.
32. Bidders who are participating in this tender please note that GeM seller ID is mandatory before placement of order.
33. **Evaluation Conditions: (Reverse Auction)** -BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com) for this tender. RA shall be conducted among the techno-commercially qualified bidders. Price bids of all techno-commercially qualified bidders shall be opened and same shall be considered for RA. In case any bidder(s) do(es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking.
“Vendors to note that above RA clause will supersede clause no 13 of “Instruction to Bidders” of GCC Rev 07”.
34. Detailed offers are to be uploaded including the following along with the Price schedule as per BHEL format enclosed with NIT: -
- Acceptance of BHEL-PEM GCC (Rev.-07)
 - Acceptance of Special Conditions of Contract (SCC Rev. 01) for the project.
 - Technical & Commercial Deviations, if any along with Cost of withdrawal in Annexure-II of GCC Rev 07.
 - Technical Pre-Qualifying Requirement (PQR) .
 - Along with your offer, please submit a copy of this letter duly signed & stamped on each page as token of acceptance of terms & instructions conveyed.
 - Un-Priced price format duly filled in ‘Quoted’ or ‘Q’ in each column/row.
 - Filled Format of Certification reg. Local content (annexure –B).

All the above Tender Documents shall automatically become a part of the Order/Contract after its finalisation.

Thanking You

❖ **Please note all correspondence from BHEL-PEM before part – I opening, shall also be part of NIT.**

Yours faithfully,
For and on behalf of BHEL-PEM

Netrapal Singh
(DY MANAGER/PG-I/BHEL-PEM)

Enclosures:

1. Technical Specification No. **PE-TS-435-302-E001, R01**
2. Technical PQR
3. Delivery completion cum Drawings/documents submission Schedule (Annexure –A)
4. Unpriced format
5. Format of Certification Reg. Local content (Annexure –B)
6. SCC Rev01

Annexure-A to NIT (PE/PG/UDN/E-6733/2021 dated 13.08.2021)						
Sl. No.	Package name	BHEL Drawing No	Drawing Title	Primary/ Secondary	Drg Sch for Vendors	Standard Delivery Terms for Supply Portion
25	OIL FILLED TRANSFORMERS	PE-V0-435-302-E149	L.V. BUSHING, LVN BUSHING , H.V. BUSHING	Primary	R-0 within 14 days from PO & subsequent revisions within 10 days of comments received from BHEL. BHEL shall furnish comments / approval on each submission within 18 days from receipt.	Within Six (06) months from date of CAT-1 approval of Primary drawing/documents or BHEL manufacturing clearance whichever is later, subjected to drawing/document submission/re-submission schedule as stipulated, in case of any delay in submission/re-submission of Primary drawing/documents, then same shall be reduced from the given delivery period. Delay in BHEL's comments/approval beyond 18 days shall also be considered for delay analysis.
		PE-V0-435-302-E142	OUTLINE GENERAL ARRANGEMENT DRAWING [OGA] , LV BUS DUCT TRUNKING, GENERAL ARRANGEMENT OF MARSHALLING BOX , HV CABLE BOX ARRANGEMENT DRAWING	Primary		
		PE-V0-435-302-E151	VALVE SCHEDULE PLATE , RATING & DIAGRAM PLATE	Primary		
		PE-V0-435-302-E152	WIRING DIAGRAM FOR MARSHALLING BOX	Primary		
		PE-V0-435-302-E141	TECHNICAL DATA SHEET	Primary		
		PE-V0-435-302-E803	SERVICE TRANSFORMER PAINTING PROCEDURE	Primary	R0 within 03 months of approval of other primary drawing/documents & subsequent revisions within 10 days of comments received from BHEL. BHEL shall furnish comments / approval on each submission within 18 days from receipt.	
		PE-V0-435-302-E901	QUALITY PLAN FOR SERVICE TRANSFORMERS	Primary		
		PE-V0-435-302-E805	SERVICE TRANSFORMER TYPE TEST REPORT	Primary	R-0 within 14 days from PO & subsequent revisions within 10 days of comments received from BHEL. BHEL shall furnish comments / approval on each submission within 18 days from receipt.	
		PE-V0-435-302-E144	FOUNDATION PLAN	SECONDARY		
		PE-V0-435-302-E155	DESIGN CALCULATIONS FOR SHORT CIRCUIT CAPABILITY (as applicable)	SECONDARY	Along with Type Test Report of Transformer	
		PE-V0-435-302-E153	TRANSPORTATION DETAILS	SECONDARY	R-0 within 14 days from PO & subsequent revisions within 10 days of comments received from BHEL. BHEL shall furnish comments / approval on each submission within 18 days from receipt.	
		PE-V0-435-302-E802	SERVICE TRANSFORMER O & M MANUAL	SECONDARY	within 30 days of issuance of MDCC	

Mandatory spares: Within Four (4) months from BHEL clearance.

Notes

- The end period specified is for completion of the deliveries. Deliveries to start progressively so as to meet the completion schedule.
- The delivery conditions specified are for contractual LD purposes, however BHEL may ask for early deliveries without any compensation thereof.
- Non-applicable drawings shall be decided during execution of the package.
- Wherever schedule of drawings/documents submission / re-submission is stipulated in the Technical Specifications, same shall be superseded by delivery specified in NIT.
- Vendor to start manufacturing activities only after obtaining specific manufacturing clearance from BHEL Purchase group.

Annexure-B
2x660 MW Udangudi STPP Stage-I
Oil Filled Service Transformer
Tender Enquiry No. PE/PG/UDN/E-6733/2021 dated 13.08.2021

Letter head of Company

Ref.....

Date.....

To,
Bharat Heavy Electricals Limited
PEM, PPEI Building, Plot No 25,
Sector -16A, Noida (U.P)-201301

Subject: - Certification regarding local content

Reference: PE/PG/UDN/E-6733/2021 dated 13.08.2021

Name of Package: Oil Filled Service Transformer

Dear Sir,

We hereby certify that items offered by us of Oil Filled Service Transformer for 2x660 MW Udangudi STPP Stage-I Project meets the requirement of minimum local content in line with clause no. 13 of NIT and the Public Procurement (Preference to Make in India), Order 2017 dated-15.06.2017, 28.05.2018 & 29.05.2019, 04.06.20 & 16.09.20.

We further confirm that details of location at which the local value addition is made will be our registered works at
(complete address of the works)

Yours very truly

..... (authorized signatory of company)

..... (firm name)

authorized signatory
of company

Validate Print Help

Item Rate BoQ

Tender Inviting Authority: DGM/PG I

Name of Work: 2 X 660 MW UDANGUDI STPP- OIL FILLED SERVICE TRANSFORMER as per Technical Specification.

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BOQ Notes for supply:

1. BIDDER TO NOTE THAT THE COST OF TRANSFORMER SHALL INCLUDE THE COST OF ALL ROUTINE TESTS WHICH SHALL BE CARRIED OUT ON ALL TRANSFORMERS WITHOUT ANY ADDITIONAL COST. BIDDER SHALL QUOTE ACCORDINGLY.

2. BIDDER TO NOTE THAT THE COST OF TRANSFORMER SHALL INCLUDE THE COST OF ALL SPECIAL TESTS (EXCEPT SHORT CIRCUIT TEST DETAILS OF WHICH ARE MENTIONED IN SL.NO. 4 BELOW) WHICH SHALL BE CARRIED OUT ON ONE TRANSFORMER OF EACH TYPE AND RATING WITHOUT ANY ADDITIONAL COST. BIDDER SHALL QUOTE ACCORDINGLY.

3. BIDDER SHALL SUPPLY 10% EXTRA OIL AS PER THE QUOTED PRICE. QUANTITY OF EXTRA OIL SHALL BE SUBJECT TO APPROVAL DURING DETAIL ENGINEERING.

4. *CHARGES FOR CARRYING OUT SHORT CIRCUIT TEST SHALL BE PAYABLE BASED ON ACTUAL INVOICE FROM DESIGNATED LABORATORIES (CPRI, BHOPAL/ CPRI, BANGLORE / ERDA, VADODARA) WITH AN ADDITIONAL LUMP SUM AMOUNT OF 5% OF EX-WORKS PRICE OF TRANSFORMER BEING TESTED TO COVER HANDLING COSTS (TRANSPORTATION, INSURANCE ETC.).

5. IN CASE TYPE TESTS ARE WAIVED, THE TYPE TEST CHARGES SHALL NOT BE PAYABLE TO THE BIDDER.

6. CHARGES FOR ALL TYPE TESTS EXCEPT SHORT CIRCUIT TEST SHALL BE CONSIDERED FOR PRICE COMPARISONS PURPOSE.

7. IN CASE ANY OF THE TYPE AND SPECIAL TESTS ARE REQUIRED TO BE REPEATED THE SAME SHALL BE CARRIED OUT BY THE VENDOR WITHOUT ANY COMMERCIAL / DELIVERY IMPLICATION TO BHEL.

BOQ Notes for spares:

1. One set corresponds to actual quantity of components and devices as installed for the equipment at Site.

BOQ Notes for extra oil:

1. BIDDER SHALL SUPPLY 10% EXTRA OIL AS PER THE QUOTED PRICE. QUANTITY OF EXTRA OIL SHALL BE SUBJECT TO APPROVAL DURING DETAIL ENGINEERING.

BOQ Notes for type test:

1. *CHARGES FOR CARRYING OUT SHORT CIRCUIT TEST SHALL BE PAYABLE BASED ON ACTUAL INVOICE FROM DESIGNATED LABORATORIES (CPRI, BHOPAL/ CPRI, BANGLORE / ERDA, VADODARA) WITH AN ADDITIONAL LUMP SUM AMOUNT OF 5% OF EX-WORKS PRICE OF TRANSFORMER BEING TESTED TO COVER HANDLING COSTS (TRANSPORTATION, INSURANCE ETC.).

2. IN CASE ANY OF THE TYPE AND SPECIAL TESTS ARE REQUIRED TO BE REPEATED THE SAME SHALL BE CARRIED OUT BY THE VENDOR WITHOUT ANY COMMERCIAL / DELIVERY IMPLICATION TO BHEL.

3. VENDOR TO QUOTE FOR EACH TEST.

[illegible]

(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)															
PRICE SCHEDULE															
NUMBER #	TEXT #	TEXT #	NUMBER #	TEXT #	NUMBER	NUMBER #	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	TEXT	NUMBER #	NUMBER #	TEXT #
Sl. No.	Item Description	Item Code	Quantity	Units	HSN Code	Unit Ex-works price (duly packed) in Figures To be entered by the Bidder (Rs.) P	Total Ex-works price (duly packed) (Rs.) P	Rate of Freight (in % of total ex-works)	Freight Charges	GST Rate (in % of total ex-works + freight)	GST Amount in Rs.	Remarks	TOTAL AMOUNT Without Taxes	TOTAL AMOUNT With Taxes	TOTAL AMOUNT In Words
2.14	Winding Temperature Indicator with all accessories - 11/6.9kV, 6300KVA	382-11888-Bn	5.000	NO.	8504										
2.15	Buchholz relay - 11kV/6.9kV, 5000KVA	382-11888-Bo	5.000	NO.	8504										
2.16	Buchholz relay - 11/6.9kV, 6300KVA	382-11888-Bp	5.000	NO.	8504										
2.17	Pressure relief valve -11kV/6.9kV, 5000KVA	382-11888-Bq	10.000	SET	8504										
2.18	Pressure relief valve - 11/6.9kV, 6300KVA	382-11888-Br	10.000	SET	8504										
2.19	Set of valves - 11kV/6.9kV, 5000KVA	382-11888-Bs	2.000	SET	8504										
2.20	Set of valves - 11/6.9kV, 6300KVA	382-11888-Bt	2.000	SET	8504										
2.21	Gaskets- 11kV/6.9kV, 5000KVA	382-11888-Bu	2.000	SET	8504										
2.22	Gaskets- 11/6.9kV, 6300KVA	382-11888-Bv	2.000	SET	8504										
2.23	Radiator Bank -11kV/6.9kV, 5000KVA	382-11888-Bw	2.000	NO.	8504										
2.24	Radiator Bank- 11/6.9kV, 6300KVA	382-11888-Bx	2.000	NO.	8504										
2.25	MCCB/MPCB/MCB of each type and rating - 11kV/6.9kV, 5000KVA	382-11888-By	3.000	NO.	8504										
2.26	MCCB/MPCB/MCB of each type and rating -11/6.9kV, 6300KVA	382-11888-Bz	3.000	NO.	8504										
3	EXTRA OIL (10%) IN SEALED NON RETURNABLE STANDARD DRUMS (Type & no. of Transformers, as below)														
3.1	5.0MVA, 11kV/6.9kV, 3 phase, 2 winding, outdoor, ONAN, Z=9%, Dyn1, OFF Circuit taps ±5% in steps of 2.5% (with cable box type HV, with bus-duct type LV)	382-11845-Aa	2.000	Nos	85049010										
3.2	6.3MVA, 11kV/6.9kV, 3 phase, 2 winding, outdoor, ONAN, Z=6%, Dyn1, OFF Circuit taps ±5% in steps of 2.5% (with cable box type HV, with bus-duct type LV)	382-11845-Ab	2.000	Nos	85049010										
4	Type Test (Refer notes)														
4.01	5.0MVA, 11kV/6.9kV, 3 phase, 2 winding, outdoor, ONAN, Z=9%, Dyn1, OFF Circuit taps ±5% in steps of 2.5% (with cable box type HV, with bus-duct type LV) - TEMPERATURE RISE TEST WITH DISSOLVED GAS ANALYSIS TEST BEFORE & AFTER	382-11851-Aa	1.000	NO.	998346										
4.02	5.0MVA, 11kV/6.9kV, 3 phase, 2 winding, outdoor, ONAN, Z=9%, Dyn1, OFF Circuit taps ±5% in steps of 2.5% (with cable box type HV, with bus-duct type LV) - LIGHTNING IMPULSE ON HV & LV & NEUTRAL (WHERE NEUTRAL IS RESISTANCE GROUNDED)- FULL WAVE & CHOPPED WAVE	382-11851-Ab	1.000	NO.	998346										
4.03	5.0MVA, 11kV/6.9kV, 3 phase, 2 winding, outdoor, ONAN, Z=9%, Dyn1, OFF Circuit taps ±5% in steps of 2.5% (with cable box type HV, with bus-duct type LV) - VACUUM TEST DURING TANK FABRICATION	382-11851-Ac	1.000	NO.	998346										
4.04	5.0MVA, 11kV/6.9kV, 3 phase, 2 winding, outdoor, ONAN, Z=9%, Dyn1, OFF Circuit taps ±5% in steps of 2.5% (with cable box type HV, with bus-duct type LV) - PRESSURE TEST ON TRANSFORMER	382-11851-Ad	1.000	NO.	998346										
4.05	5.0MVA, 11kV/6.9kV, 3 phase, 2 winding, outdoor, ONAN, Z=9%, Dyn1, OFF Circuit taps ±5% in steps of 2.5% (with cable box type HV, with bus-duct type LV) - DEGREE OF PROTECTION FOR M.BOX & CABLE BOX	382-11851-Ae	1.000	NO.	998346										
4.06	5.0MVA, 11kV/6.9kV, 3 phase, 2 winding, outdoor, ONAN, Z=9%, Dyn1, OFF Circuit taps ±5% in steps of 2.5% (with cable box type HV, with bus-duct type LV) - NOISE LEVEL TEST AS PER NEMA-TR1	382-11851-Af	1.000	NO.	998346										

