

**Pre-Bid Meeting(AEML/MDb/2019-20/01) -Cast Resin Dry type DTs and 250 kVA natural ester filled DTs(7th May 2019)**

**Technical Query**

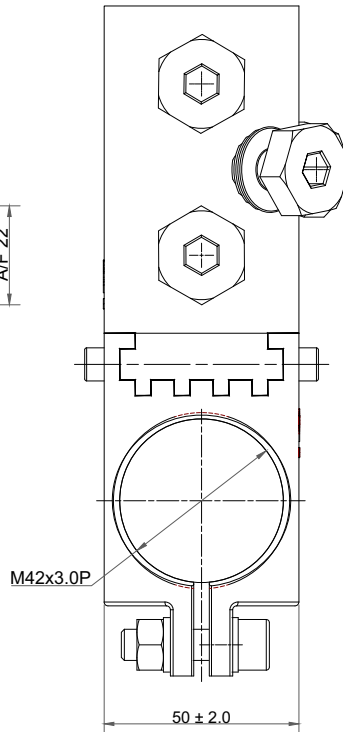
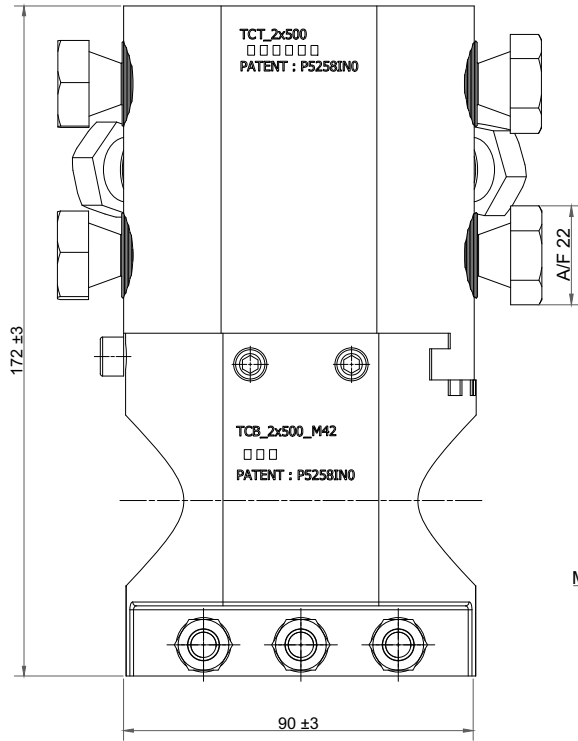
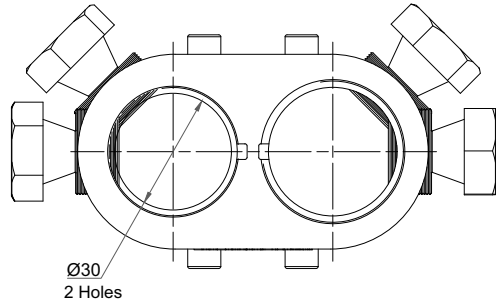
**Participants:**

1. Toshiba -Sanjay B Mogre
2. Energypac - Sambodhi Goswami
3. Cargill - Arpan Parikh
4. AEML- Ashwini Jain, Damodar Sahasrabudhe, Tanu Srivastava, Deep Muntode, Devendra Mahajan

**MOM:**

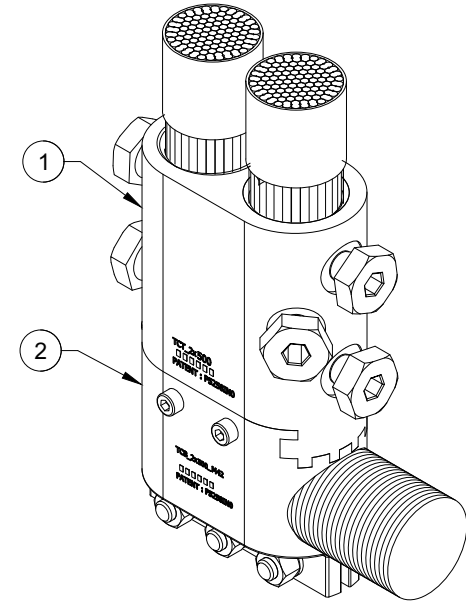
1. AEML explained the scope of supply, Technical Specification requirements to Bidders.
2. During pre-bid meeting, Bidders raised queries, response of which is attached herewith.
3. In case Bidders wish to send additional Technical queries, they can send mails to CES Dept. with a copy to CPG.

Sr. no.	Document	Clause no /Sr.No of BOQ	Clause	Description	Query	Query raised by	AEMLRemark	Inclusion in Corrigendum
1	NIT		-	Item description 630kVA, 11/0.433kV 3 ph dry type -16 Nos. 1000kVA, 11/0.433 3ph dry type - 41 Nos. 1500kVA, 11/0.433 3ph dry type - 6Nos. 250kVA, 11/0.433kV 3ph natural ester oil filled transformer -55Nos	1. Currently we are not manufacturing Dry type transformers. Hence, we request you to kindly allow to quote only for 250kVA Natural ester filled Xmer. In addition, as we are quoting for only 250kVA oil filled, we request you to kindly reduce the EMD amount to Rs.2 lakhs	M/s Toshiba	1. Technical offer for NE DT can be considered separately. 2. EMD Values for only DRY DT Transformers package is Rs.7.5 Lakhs & for 250 KVA Ester filled DT is Rs.3.6 Lakhs	Yes
2	NIT , Scope of work, & Specification - NE DT SP-CES-EL-NEDTR-R0	Scope of work, Clause No 2 Spec: Clause No.11	-	The scope shall include design, manufacture, testing at works conforming to the technical specifications/IS along with packing, forwarding, transportation and unloading and proper stacking at Purchaser's stores/site	Kindly remove the unloading from OEM scope.	M/s Toshiba	NIT Scope & Specification clauses to be followed.No deviation.	Yes
3	Specification - NE DT SP-CES-EL-NEDTR-R0	Clause No. 3.5	-	Class B (Thermally upgraded kraft) class H(as per enquiry) or Hybrid Nomex	1. Please clarify the exact insulation level requirement	M/s Toshiba	Insulation shall be TUP (Thermally upgraded kraft paper ) with class B Insulation suitable for 50/55 Deg Temperature rise.	Yes
4	Specification - NE DT SP-CES-EL-NEDTR-R0	Clause No. 3.8	-	Ester(Synthetic/Natural) immerses, Core type, Step down	1. Please clarify the exact requirement whether synthetic ester or natural ester. Please note BIS is not applicable for ester oil filled transformers as on date.	M/s Toshiba	Natural ester filled Hermetically sealed transformers(Corrugate Fins) with DMCR/DGPT relay are specified in current NIT.	Yes
5	Specification - NE DT SP-CES-EL-NEDTR-R0	Clause No. 4.2.8.1 & 4.2.8.2	-	Termination on LV & HV side	Some clauses of 4.2.8.1 is calling for terminal connector and clause no. 4.2.9 is referring for cable box/Trafoconnector as per enquiry. Hence we request you to kindly confirm the termination on both HV & LV side whether it of cable box or Bare bushings. In addition, we shall offer bushings of side/top mounted bases on the feasibility which we request you to take note of the same.	M/s Toshiba	1. HT side - Cable Box along with cable support arrangement required. 2. LT side - Bare bushing with Trafoconnectors(Raychem Make) along with cable support arrangement required.(Drwg of Trafoconnector attached).	Yes
6	Specification - NE DT SP-CES-EL-NEDTR-R0	Clause No.4.1	-	Type Double copper/AL wound	Kindly confirm the winding of the transformer whether it is of Aluminum or copper	M/s Toshiba	Winding material shall be Copper.	Yes
7	NIT AEML/MDb/2019-20/01 Qualification criterion	Clause 2.0, Sub Clause 4	-	4. The Bidder should have supplied at least 100 Nos of similar rating or higher to any major utilities/SEB's/other reputed companies in last 5 years. Out of which 50% of the supplied quantity must be in successful operation for at least 2 years for which performance Certificate shall be furnished	If performance certificates of Dry type Transformers can be considered for 250kVA Natural ester filled DT	M/s Energypac	NE DTs have different construction and applicable BIS. Performance certificate for both Dry DTs and NE DTs to be submitted separately if bidding for both type of DTs.	Yes
8	Specification - NE DT SP-CES-EL-NEDTR-R0	Clause 10.2,10.3	Testing	Routine and Type Tests	Test requirements shall be as per the specification.	Clarification	Routine Tests can be conducted at OEM works. Type Tests and Special Tests as per Technical Spec. shall be conducted at OEM works in case of having NABL accreditation. In absence of NABL, Type Tests and Special Tests to be conducted in Third Party lab(ERDA/CPRI).  For Dynamic Short Circuit Test, Type Test of similar Transformer can be considered.In case of non-availability of report, Dynamic Short Circuit Test to be conducted by OEM.	Yes
9	Specification - Dry DT SP-CES-EL-DRDTR-11-R1	3.13.7	Overload capability	Overload capability : As per IEC60076-10	Correct it to IEC 60076-12, instead of part 10	M/S ABB E-mail Query	IEC 60076-12 to be considered.	Yes
10	Specification - Dry DT SP-CES-EL-DRDTR-11-R1	3.14.8	Flux Density	Flux density : 1.6T at rated voltage and 1.73T max at 110% rated voltage	10% of 1.6T is 1.76 tesla, so correct the clause below as below 1.6T at rated voltage and 1.76T at max at 110% rated voltage	M/S ABB E-mail Query	Technical Specification to be followed	Yes
11	Specification - Dry DT SP-CES-EL-DRDTR-11-R1	3.19	IP Class	Ip class requirement : IP34	For outdoor requirement it is recommended to have IP44 and for indoor it is IP23.	M/S ABB E-mail Query	Technical Specification to be followed	Yes
12	Specification - Dry DT SP-CES-EL-DRDTR-11-R1	4.2.3 & 14.5.1	Lamination Thickness and Grade	Lamination thickness with insulation :0.23 mm max Core grade M3 or better	Please modify the thickness as 0.27 or better, as M5 core grade thickness of 0.3 mm. There is a contradiction with core grade. We shall proceed with M4 or better	M/S ABB E-mail Query	Consider Core Grade M4 or better subject to meeting the ICore losses as per Technical Specification.	Yes
13	Specification - Dry DT SP-CES-EL-DRDTR-11-R1	4.3.1	Winding	For HV shall be layer type & LV shall be with foil type.	HV winding shall be either layer type or foil type and LV shall be with foil winding	M/S ABB E-mail Query	As per manufacturer standard subject to compliance with Technical Specs	Yes
14	Specification - Dry DT SP-CES-EL-DRDTR-11-R1	Annexure A	Scope of Supply	Lugs,Glands, Gland Plates, Cable supports in Oem scope	Apart from above please allow, it is once again stating that, cables,lugs,glands and terminals lugs are not in ABB scope of supply.	M/S ABB E-mail Query	In OEM scope other than cable. Technical Specification to be followed.	Yes



**TECHNICAL DATA :-**

1. Trafo connect is suitable for 2Nos. of 500Sq.mm Cable.
2. Trafo connect kit is inclusive of 4 connectors (3P + 1N) and insulation kit with accessories.
3. Factory grease applied in bores and grease to be applied at stud and sliding area during installation.



5	NEUTRAL CONNECTOR KIT	1 SET
4	INSULATION COVER	4 SET
3	INSULATION KIT	1 SET
2	BOTTOM CONNECTOR ASSEMBLY	4 SET
1	TOP CONNECTOR ASSEMBLY	4 SET
SR.NO.	PART DESCRIPTION	UNIT

<b>DO NOT SCALE</b>		<b>SCALE :</b> N.T.S.	
<small>THIS DOCUMENT IS THE PROPERTY OF RAYCHEM RPG PRIVATE LIMITED, VADODARA. IT MUST NOT BE LOANED, COPIED OR REPRODUCED WITHOUT WRITTEN PERMISSION.</small>		<b>TITLE:</b> TRAFO CONNECTOR 2x500 (M42x3.0P STUD)	
<b>REV.</b> <b>REVISION RECORD</b> <b>DATE</b>   <b>DWN</b>   <b>APD</b>	<b>DRAWN BY:</b> SANDEEP SHINDE <b>CHKD BY:</b> SARAVANAN T. <b>APPR. BY:</b> RAVI ANEKAR	<b>ISSUE DATE :</b> 25-04-2018 <b>REFERENCE :</b> -	<b>REV. DATE</b> -
<b>WEIGHT (MIN.):</b> - <b>MATERIAL:</b> Ref. Notes	<b>DRAWING NO.:</b> <b>C- TRAFO/ 2X500</b>	<b>RESTRICTED TO :</b>	<b>REV</b> 0