



KERALA STATE ELECTRICITY BOARD LIMITED

(Incorporated Under the Companies Act, 1956 (No.1/1956)

Corporate Identity No.U40100KL2011SGCO27424

Registered Office: Vydyuthi Bhavanam, Pattom, Thiruvananthapuram-695004, India,

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Abstract

Validity Period of Type Test(s) conducted on Major Electrical Equipment in Power Transmission System and Extension of validity date of Type Test Certificate up to 30/09/2021 according to CEA Guidelines – Adopting in KSEBL – Orders issued.

Corporate Office (Supply Chain Management)

B.O.[FTD] No.736/2020 (SCM/TA/GI./2020-21) Dated, Thiruvananthapuram 14/12/2020

- Read:- 1) B.O(FTD)No.473/2019 (SCM/XT/AEE3/General) Thiruvananthapuram dated 22/06/2019
- 2) Letter No.CEA-PS-14-80/1/2019-PSETD Division/195-271 dated 11/05/2020 of the Deputy Director, Central Electricity Authority, Ministry of Power, Government of India.
- 3) Letter No.CEA-PS-80/1/2019-PSETD Division-Part(2)/564-640 dated 16/10/2020 of the Deputy Director, Central Electricity Authority, Ministry of Power, Government of India.
- 4) Note No. SCM/TA/GI./2020-21 dated 20/11/2020 of the Deputy Chief Engineer (SCM) in charge submitted to the Full Time Directors (Agenda Item No.2/12/20).

ORDER

KSEB Limited as per order read 1 above had accorded sanction to modify the tender documents related with submitting and acceptance of the bid by including the following conditions.

- 1) *The firms which do not have the complete type test certificates of the bided item shall be considered only if the firm submit 80% of the type test certificates prescribed in the bid documents obtained from CPRI/ERDA/KERI/and Government of India/ State Government/ NABL accredited laboratories along with the bid documents. Balance type test certificates shall be produced before offering the inspection of the first lot without affecting the delivery schedule. Necessary undertaking shall be submitted along with the bid documents.*

- 2) *The validity of the type test certificates should be within 5 years from the time of opening the bid for equipments other than EHV, HV and MV breakers. Type test certificates report within a period of 7 years will be considered for EHV, HV and MV breakers subject to the Pre-qualification decision if no change is made in the design/model.*

The Central Electricity Authority as per paper read as 2 above have published uniform guidelines for Validity Period of Type Test(s) conducted on Major Electrical Equipment in Power Transmission System across the utilities in the country in consultation with various utilities, manufacturers, testing agencies, IEEMA and other stakeholders. Hence KSEBL is also bound to adopt the guidelines at par with KSEBL's requirement.

The validity period of type tests conducted on various equipment is also specified in the Central Electricity Authority guidelines as per letter read 2 above.

In this regard, the Deputy Chief Engineer (SCM) in charge as per note read as 4 above has pointed out that many firms such as M/s.BHEL, M/s.GE, M/s.ABB etc. who are regularly supplying Transmission Equipment such as Instrument Transformers, Lightning Arrester, Circuit Breaker etc. to KSEBL have also pointed out the CEA report regarding the period for which Type test reports shall remain valid and requested to consider the same in KSEBL also.

For Power Transformer, Distribution Transformer, Composite Insulator Shunt Reactor & PLCC/FO cable/ OPGW, the validity period of type tests insisted by KSEBL and CEA Guidelines are one and the same. But for Energy Meter (including smart meters and ABT Meters) validity period of type tests insisted by KSEBL is 2 years instead of 5 years as per CEA guidelines. Considering the frequent technical updation of Energy Meters, the Deputy Chief Engineer (SCM) in charge recommended to continue the validity period of type test for Energy Meters as 2 years. Also recommended to adopt the validity period of type tests conducted on the equipment as per CEA guidelines except for Energy Meters in KSEBL.

The Deputy Chief Engineer (SCM) in charge also recommended that the type tests should be conducted by Central Power Research Institute (CPRI)/ Electrical Research and Development Association (ERDA)/ KERI/ State Government or Central Government owned NABL Laboratories/ Laboratories of Foreign Country accredited by National Accreditation Body of that Country such as PHELA/KERI/KEMA/CESI etc., if testing facility is not available in India as per IS/IEC relevant Standard. Also recommended to amend the B.O read as 1 above to the above extent regarding submission of Type test certificates.

The Deputy Chief Engineer (SCM) in charge also recommended that submission of 80% type test reports as mentioned in the B.O read as 1 above, shall be limited to Transmission Equipment/ Generation side Equipment. The Distribution equipment manufacturers normally will do type test only after an assured order since type test costs are high and they cannot afford to do type tests without a firm order. The Materials like Distribution Transformers are unique in design and hence type testing for the same is futile if firm Purchase Orders are not with the manufacturers. In lieu of type test an undertaking that type test will be submitted without affecting delivery schedule is to be insisted, in case the firm doesn't have readily

available type test of the bid item. Hence Distribution materials may be exempted from the purview of this Board Order.

Keeping in view the difficulties being faced by Indian manufacturers due to COVID -19 pandemic, the Central Electricity Authority as per the paper read as 3 above have further decided as follows:

- a) *The Type test reports, which could not be re-validated due to lock down in the country since 23rd March 2020, shall be treated as valid upto 30th September 2021.*
- b) *The extension is a onetime measure and shall not be extended further. The manufacturers are advised to get such equipment type tested before 30th September 2021.*

The Deputy Chief Engineer (SCM) in charge recommended that the above may be adopted in KSEBL tenders. The Director (Transmission & System Operation) also recommended to admit the proposal.

The matter was placed before the Full Time Directors as per note read as 4th above.

Having examined the matter in detail the Full Time Directors in the meeting held on 02/12/2020 resolved to adopt the following decisions of the Central Electricity Authority, communicated vide the letter No.CEA-PS-14-80/1/2019-PSETD Division/195-271 dated 11/05/2020 and letter No.CEA-PS-80/1/2019-PSETD Division-Part(2)/564-640 dated 16/10/2020 in KSEBL tenders.

- a) KSEBL shall adopt the validity period of type tests conducted on the equipment as per CEA guidelines except for Energy Meters. The type tests should have been conducted by Central Power Research Institute (CPRI)/ Electrical Research and Development Association (ERDA)/ KERI/ State Government or Central Government owned NABL Laboratories/Laboratories of Foreign Country accredited by National Accreditation Body of that Country, such as PHELA/KERI/KEMA/CESI etc., if testing facility is not available in India as per IS/IEC relevant Standard. The B.O(FTD)No.473/2019 (SCM/XT/AEE3/General) Thiruvananthapuram dated 22/06/2019 shall be amended to the above extent regarding submission of Type test certificates. The revised validity period is as per Annexure.

Also, the Distribution materials shall be exempted from the purview of B.O(FTD)No.473/2019(SCM/XT/AEE3/General) Thiruvananthapuram dated 22/06/2019 and the Board Order may be amended to the above extent. In case a bidder doesn't have readily available type test certificate of the bid item, an undertaking shall be obtained from the bidder to the effect that type test certificates will be submitted in the event of a firm order, without affecting the delivery schedule.

- b) The Type test reports, which could not be re-validated due to lock down in the country since 23rd March 2020, shall be treated as valid upto 30th September 2021.

- c) The extension is a onetime measure and shall not be extended further. The manufacturers are advised to get such equipment type tested before 30th September 2021.

Orders are issued accordingly.

BY ORDER OF THE FULL TIME DIRECTORS

Sd/-

(Lekha.G)

Company Secretary (in charge)

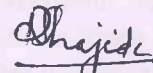
To

The Deputy Chief Engineer (SCM) in charge

Copy to:-

- 1) All Chief Engineers.
- 2) The Legal Advisor & Disciplinary Enquiry Officer.
- 3) The Deputy Chief Engineer (IT), KSEB Limited.
- 4) TA to Chairman & Managing Director/ Director (Distribution, HRM & IT)/ Director (G-E & SCM)/ Director (Transmission & System Operation)/ Director (Generation-Civil)/ Director (Planning, Safety & REES)
- 5) PA to Director (Finance)/ Senior C.A. to Secretary (Administration)
- 6) The Fair Copy Superintendent, Board Secretariat
- 7) The Library, KSEB Limited/ Stock file.

Forwarded/ By Order



Assistant Executive Engineer

**Annexure to B.O.[FTD] No.736/2020 (SCM/TA/GI./2020-21) Dated, Thiruvananthapuram
14/12/2020**

Sl.No.	Name of Equipment	Validity period of Type test (in years)
i.	Power Transformer	5
ii)	Distribution Transformers (33kV and below)	5
iii)	Shunt Reactor	5
iv)	OLTC	10
v)	Power Transformer Bushing / Reactor Bushing	7
vi)	Transformer/ reactor fittings and Accessories	10
vii)	Circuit Breaker	10
viii)	Isolator	10
ix)	Lightning Arrester	10
x)	Wave Trap	10
xi)	Instrument Transformers	7
xii)	LV and MV Switchgear	10
xiii)	GIS & Hybrid Switchgear	10
xiv)	Cables and associated joints	10
xv)	Capacitor	10
xvi)	Relays	7
xvii)	Energy Meter (including smart meters and ABT Meters)	2
xviii)	Battery and Battery Charger	7
xix)	Conductors and earth wire	10
xx)	High Temperature (HT) / High Temperature Low Sag Conductor (HTLS) Conductor	7
xxi)	Insulators (Porcelain/ Glass)	10
xxii)	Composite Insulator	5
xxiii)	PLCC/FO cable/ OPGW	5
xxiv)	Transmission Line insulator hardware fittings, and accessories for conductor and ground wire	7

Note:-

- 1) The type tests reports shall be valid as on the last date of submission of bid.
- 2) The period of validity of Short Circuit test (a special test) conducted on transformer shall be as per CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations.

- 3) Type test reports of 220kV voltage class equipment shall be valid for 230kV voltage class equipment as the highest system voltage is same in both cases provided Basic Insulation Level is same.
- i) The type tests of the equipment shall be repeated during its validity period, if there is change in technology or basic design or generic materials employed or manufacturing process or combination of any of above. However, minor changes, which have no effect on functionality & reliability of the equipment, may not require repetition of type tests. Minor changes do not include change in electrical stress, thermal stress, mechanical stress, change in construction, change in dielectric material, impregnating oil, thickness of electrode & internal fuse design in a capacitor, enclosure materials (magnetic, non-magnetic like stainless steel, Aluminium) etc.
 - ii) If relevant standard (IS/IEC) of the equipment is revised or amended, fresh type test is warranted even if equipment has not changed in design/ material etc. However fresh type testing will be limited to only those tests for which test procedure/ method, any technical requirement or test levels have been changed in the revised standards. In such cases, enough time should be given to manufacturer to comply with revised provision in standards.
 - iii) The utilities should co-relate the need of repeating type test(s) to changes in design/ technology and may emphasize/ insist for stage inspection to check workmanship, manufacturing process and to ensure quality of the component/ material used in the manufacturing of the equipment.
 - iv) The change in the make of component(s) of the equipment shall not be the criteria for repetition of type tests provided that the component of new make has been successfully type tested and its use shall not affect the, functionality, performance & reliability of the equipment. The type test reports of the component of new make shall be submitted.
 - v) Repetition of short circuit test on transformer is not required due to change in make and type of bushings and/ or make of OLTC provided bushings and OLTC of supplied make have same or better rating and have been successfully type tested as per relevant IS/IEC.

Sd/-

Company Secretary (in charge)