



TAMILNADU WATER SUPPLY AND DRAINAGE BOARD

31, Kamarajar Salai, Chepauk, Chennai - 600 005.

Dr. C.N. MAHESVARAN, I.A.S.,

Managing Director, TWAD Board

Lr. No. F. 10802/ sampling procedures /AEE II/SQMS/2017 / Dt 16.3.2018

To

- 1.The Chief Engineer,
TWAD Board
Madurai.
- 2.The Chief Engineer,
TWAD Board
Coimbatore.
- 3.The Chief Engineer,
TWAD Board
Thanjavur.
- ✓ 4.The Chief Engineer,
TWAD Board
Vellore.

Sir,

Sub: TWAD Board – SQMS – MD Review on various activities, pending issues, proposals to be initiated of Scheme and Quality Monitoring Squad (SQMS) Wing under Maintenance of Quality standards in water supply and sewerage works– Testing of materials as per Sampling procedures – **Norms for routine sample collection - Upgraded version - SLTC Resolved** to clear the approval for sampling of **ELECTRICAL CABLE - Communicated to all field engineers-** Regarding.

Ref: 1)SLTC Agenda No: 12

2)Minutes of 52nd State Level Technical Committee Meeting dt 9.3.2018.

In the Minutes of 52nd State Level Technical Committee Meeting dt 9.3.2018, the following Upgraded version of Sample requirement for testing in TWAD LAB ,Norms for routine sample collection and Rules and regulations including Cables, have been approved and communicated to all the field Engineers .

- 1.Upgraded version of sample requirement including cables for testing in TWAD LAB. (ANNEXURE- A)**
- 2.Upgraded version of Norms for sampling procedure including cables. (ANNEXURE- B)**
- 3.Rules and regulations for sampling procedure including cables. (ANNEXURE- C)**

The up graded version of sampling procedures and the current testing charges now in force are also communicated with some more additional instructions to the field Engineers for guidance and strict adherence for effective maintenance of quality aspects at various levels.

Norms for sample collection for Electrical cable:

➤ TYPES OF CABLES:

- a. PVC Insulated Cables
- b. PVC Insulated (HD) Cables up to 1100 V
- c. PVC Insulated (HD) Cables 3.3 KV up to & Including 11 KV
- d. XLPE Cable for voltages up to and including 1.1 KV

➤ Normally the above cables are supplied in drums as specified in IS 10418/1982. The length of cables in each drum will be up to 500 m for cables up to size of 50 sqmm and 250 m for cables above size of 50 sqmm. For sampling minimum 20 m of cable has to be collected for testing at TWAD LAB. Hence the following norms for cables testing in TWAD LAB has been added in the sampling procedure.

Norms for cable:

1. The third party certificates /Pre Delivery Inspection certificates should be verified.
2. The validity of CML by BIS should be in live for operative year of licence.
3. The sample should contain the following :
Make, Brand, ISI, CML No, Size & Core of cable.
4. For all types of cables , one sample (20 m length) for cable of length above 200 m and up to 500m should be collected for sampling.
5. Additional samples 1 No each for cable for every 500 m length or part there off should be collected for sampling.
6. Sampling need not be carried out if supply of cables of length will be 200 m or less than 200 m .
7. Suitable provision for length of cables required for testing based on the no of samples (1 No of sample contains 20m)to be collected should be included in the estimate itself.
8. Testing of cable is being carried out only at Quality Testing Lab, Madurai and the Lab is equipped to do the following tests on cables as per IS Specifications.
 - Visual Inspection, Conductor Resistance Test, Insulation Resistance Test, High Voltage Test, Shrinkage Test, Thickness of Insulation and Sheath, Tensile Strength, Heat Shock.

It is instructed that, the above upgraded version of new norms for routine sample collection should be strictly followed by the field officers without fail.

Encl: ANNEXURE- A, B & C

L. Vijayan
16/3/2018
for Managing Director

16.3.18
TWAD BOARD, Chennai.

1. Copy to the JCE(O&MI) ,JCE (PDC), JCE(PM),JCE(COM),JCE(MEGA), TWAD Board, Chennai for information.
2. Copy to all the Asst. Executive Engineers (QATA) of the territorial Circles for information and necessary action.
3. Copy to Asst. Executive Engineers of 1.QCL,Coimbatore,2.QTL, Madurai 3.MTL , Trichy and MTL, Tidivanam for information and necessary action.