



JICABLE'07

Rapporteur's Session Report

B1 SESSION : LV / MV SYSTEMS (1)

Chairman : S. SALDIVAR, Condutores Monterrey, Mexico

Rapporteur : Jean-Louis LAPEYRE, ERD, France

This session included six papers and dealt with the Utilities preoccupations, with the support of cable builders and University studies, about reliability, ageing characteristics and network components diagnostic.

Paper B1.1 confirmed the good reliability of CST termination made of silicone rubber in a heavy contamination area. After a practical use since 1996 and accelerated deterioration tests, the insulation performance was not decreased. The life duration of such material under heavy pollution is estimated by the authors to 30 years.

Paper B1.2 presented a statistical method for MV cable joints failure analysis. This method allows to build replacement strategies especially for resin cable joints used in the 1970's which have a heavy contribution in outage time. It's possible to quantify the occurring failures and decide preventive replacement thanks to a comparison with testing DC methods.

Paper B1.3 replaces paper C5.1.8, and this paper shows an EMTP modelling of surge propagations on underground cables. The paper indicates that complements provided by in-situ tests are necessary in order to adjust modelling parameters.

Paper B1.4 showed the behaviour of a medium-voltage XLPE cable with flat strap neutrals subjected to extreme conditions. The results indicate clearly that cables having neutrals with left hand direction are much less physically affected in extreme conditions and give the greatest AC breakdown strength.

Paper B1.5 brought the proof that sheath hardness is a solution to protect underground cables against termite attacks. It described the bases of new specification and illustrated this approach by test results. The use of biocide or repulsive products is now not required to fight against termite damages.