



JICABLE'07

Rapporteur's Session Report

B4 SESSION : HV/EHV CABLES - UPGRADING

Chairman : S. SAKUMA, VISCAS, Japan

Rapporteur : P. MIREBEAU, NEXANS, France

General :

A strong interest is devoted to the upgrading of cable links, and moreover, to the management of remaining life. The room was full, and some people standing up. Presentations were done by French, Canadian, Japanese, Dutch, German and Swedish experts.

Remaining life management :

Papers B4.1, B4.2, B4.4 were addressing remaining life management. The principle is to find technical parameters, and weight them to get a "health index" of the cable link. They target the management of oil filled and pipe type cables. Canadian and French are ranking many parameters, while Japanese insisted on the ageing model of the fatigue of the metallic sheath (cables laid in ducts). There is no extension of life strategy, the goal of the Remaining life management is to give priority to actions, not to define the actions.

Upgrading :

Papers B4.3, B4.5, B4.6. were devoted to the upgrading of existing assets. B4.3 reported about the CIGRE work that should be concluded by 2008. B4.5 reported about the derating of an oil filled cable due to soil thermal resistivity measurement as compared to the design value 40 years ago. B4.6 showed how 110kV pipe type cables can be replaced by modern XLPE ones with 10% more power transmission capacity.

DC vs AC cables :

Paper B4.7 addressed the development of 320kV HVDC extruded cable. Prequalification test according to CIGRE recommendation is in progress. More power transmission can be achieved using the same size of cable using DC instead of AC. However the decision has to be made considering the system view, including converter stations and contingency plans.