



Study Committee B3 “Substations”

Working Group No. B3.20

Convenor: Wolfgang Degen

Title of the working group: Mixed Technologies Switchgear MTS

Scope of the work

A lot of new switchgear devices have been developed based either on AIS switchgear or on GIS switchgear or on a combination of both of them. Assemblies of all kind of different high voltage devices are introduced into the high voltage market as a possible solution between air insulated substations (AIS) and gas insulated substations (GIS). These solutions are often used to replace and upgrade air insulated substations in a smaller space. Deregulated energy markets are accelerating these replacements because of downgrading of engineering and maintenance staff in the companies of power delivery. Environmental aspects, electromagnetic fields and safety of substations are additional drivers of this technology.

Assemblies of high voltage devices are now in use since a few years world-wide so that enough experience for standardization is available.

This proposed activity is intended to provide basic guidance for the use of improvements of new switchgear technology into already existing substation design.

New technology – either insulation technology or compact or combined design technology, which describes different substation technology concepts (not yet standardized), used recently by utilities as well as by manufacturers in different ways, can create confusions.

The aim of the common activity of B3-02 and B3-03 is to provide proposals to make the terminology clear and precise and to prepare a base for its introduction into standardization documents.

Deliverables

1. The work will start with a definition of “Mixed Technologies Substation MTS”.
2. Prepare a guide in which differences in substation layouts, advantages and disadvantages of AIS, GIS and MTS are determined, procedures for comparisons are determined and LCC considerations are mentioned.

Time Schedule

The first stage of work can be finished in 2006, the second part will take appr. 2 years, a publication in ELECTRA can be proposed at the beginning of 2008.

Further publication as separate CIGRE brochure first half 2008.

Target groups

Top management, operators, consultants, asset management, CIGRE organization, Environmental Groups

Approved by TC Chairmen : Aldo Bolza

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