d-r Nikolče Acevski, dipl. el. ing.
Tehnički fakultet - Bitola
d-r Risto Ačkovski, dipl. el. ing.
Elektrotehnički fakultet - Skopje

PROCEDURE FOR HV/MV TRANSFORMER STATION GROUNDING GRID DESIGN

ABSTRACT

The HV/MV transformer station (TS) grounding design in the past was usually performed by using simple empiric and semiempiric formulae based on some assumptions and simplifications. This fact, in combination with the problems relating the lack of good technical rools and national recomendations, makes the engineers designers meeting number of problems while projecting grounding devices of HV/MV TS. In this paper an effort to relief part of these problems is done. A practical analytical procedure for grounding grids design for HV/MV TS is presented. Some other accurate models and practical relations are also presented in the paper. Computer simulation by using some verified computer programme for grounding systems analysis is found to be the most appropriate for that purpose. It enables exact calculations of the main grounding system performances and fast and accurate design of the grounding system. Comparisons of the results for grounding grid design using the proposed simple formulae and computer programme "ZAZEM" from [9], made in the paper, show very good agreement.

Keywords: HV/MV TS, grounding grid, grounding devices design, grounding system.