

The electrical behaviour of polymer insulator under different weather conditions

ABSTRACT

This paper presents the behavior of 33kV polymer insulator under nominal voltage and impulse by means of lightning activities. The electrical performance of the insulator is translated to electric field under uniform weather conditions which comprises of air humidity and contamination. ANSYS Maxwell modeling software is used to simulate the structure of the polymer insulator based on the real existing insulator's dimension. The trend of electric field increase is discussed in detail.

Keyword: Electric field; Humidity; Lightning impulse; Polymeric insulator