

# A Comparison of Polymeric Cable Insulation Properties Following Lightning Impulse Ageing

N. L. Dao\*, P. L. Lewin, I. L. Hosier and S. G. Swingler  
University of Southampton, UK  
\*E-mail: nld06r@ecs.soton.ac.uk

LDPE and HDPE are common materials used within high voltage insulation systems. These materials will be aged after working under high voltage for a long time. The ageing process of these materials may be affected by external factors. The application of repetitive lightning impulse over-voltages is one of these factors and will be considered in this paper. This paper includes the sample preparation process, the ageing of samples under identical conditions and finally the analysis of electrical properties after the ageing process. The obtained results are used to compare the effect of repetitive lightning impulses with these two materials. These results are also used to highlight the possible mechanisms behind the lightning impulse ageing process.

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