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## Investigation Dielectric Materials at Different Frequency Ranges

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In this study, effects of frequency to dielectric parameters and problems are investigated. The various dielectrics like paper, acetate, glass, rubber, silicon are used at experiment. Frequencies range is between at 50-400 Hz. Also the thickness of the dielectrics are changed at 2 and 4 mm. The results of the experiments are given as real and imaginary loss factor, resistance, loss power and loss factor depending on frequency. As a result, while some dielectrics have no problem at 50-60 Hz, the problem begins at higher frequency range. At higher frequency, dielectrics may lose dielectric properties.

### References:

- Chen. G., Tham. C. H., "Electrical Treeing Characteristics in XLPE Power Cable Insulation in Frequency Range between 20 and 500 Hz" IEEE Transactions on Dielectrics and Electrical Insulation" Vol. 16, No.1 2009
- Chiang F., "Effects of High Frequency Voltage Stress on Air Insulation and Solid Insulation" IEEE Symposium on Product Compliance Engineering (ISPCE), Boston, October 2010

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