

Abstract Submitted
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Ageing processes of the voids in insulating materials MAX GOLDMAN, ALICE GOLDMAN, Laboratoire de Physique de Gaz et de Plasma, CNRS France, REIDAR SVEIN SIGMOND, Phys. Dept. Norwegian University of Science and Technology Trondheim Norway — It is generally agreed that the partial discharges which occur in the voids in insulating materials can be considered as a sign of the beginning of ageing of the bulk material. The gas and surface of electrically stressed voids are not static, but change continuously with time from the first discharge onwards. While one might assume that the first discharge pulses occur in air at atmospheric pressure, the oxygen will rapidly be consumed, the pressure will fall and reactive products will be formed. Acid products will appear on the void surface and react with it. These changes will be reflected in the shape, size and frequency of the observable partial discharge pulses. Properly interpreted, these may serve as useful indicators of the state of the insulating materials.

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