

LOCALIZATION OF PARTIAL DISCHARGES  
IN ZONES OF LIVE-LINE WORKS  
ON HV OBJECTS

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**ABSTRACT** *Nowadays, the problem of the live-line worker's exposure to the electric and magnetic fields of power frequency (50 Hz) is rather well recognised. On the other hand, the issue of the lineman's exposure to the electromagnetic fields of higher frequencies (including radio frequencies) is not examined as yet. The above-mentioned fields are excited by partial discharges on energised elements. Measurements indicate that strengths of these fields, near body of bare-hand worker, can significantly exceed admissible values imposed by Polish and European regulations. Initialization of partial discharges depends on the strength of the primary electric field of 50 Hz (at the surfaces of energised elements) as well as on the atmospheric conditions. In the paper, the primary electric field (in the bare-hand-working zone) has been analysed in the context of possibility of the partial discharge initialisation. Different lineman's positions are taken into account. The own author's software package (based on boundary-integral methods) is employed for this purpose.*

**Keywords:** *boundary-integral methods, electromagnetic field, live-line works, partial discharges*