

Electrical strength of linear insulation under DC voltage and artificial pollution.

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A comparison of the discharge voltage results for normal and dirt-resistant line insulators under direct and alternating voltages under artificial pollution conditions is provided. The article addresses issues of electrical corrosion of insulator metal reinforcement under direct voltage and the key principles for selecting DC overhead line insulation levels based on operating voltage, pollution characteristics at the electrical installation location, and operating experience. This publication does not attempt to provide a complete bibliography; references are primarily to works familiar to the author, and these works are not the most recent or most comprehensive studies on each topic. Therefore, the cited sources naturally primarily relate to work conducted in the NIPT High Voltage Engineering Laboratory.

Key words: overhead line, direct current, insulators, pollution, flashover, corrosion.