

Induced voltages on crossing underground communications.

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The task of evaluation of the voltages between screens of the crossed underground cables or other long lasting technical systems (water pipes, gas pipes, railway and streetcar rails) induced by high-voltage line located near to is considered. The analytical relations for the required voltage depending on the soil properties and mutual location of cable lines and the high-voltage line are given. An approach to calculation of induced voltages alternative to the one presented in M. V. Kostenko's works is proposed and substantiated in the paper. The proposed approach makes it possible to estimate induced voltages using relatively simple analytical expressions.

Key words: induced voltage, crossed cables, EMF, buried cable, high-voltage line.