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THE MAGNETIC FIELD OF UNDERGROUND 330 KV CABLE LINE AND WAYS FOR ITS REDUCTION

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Abstract

The magnetic field of underground double-circuit 330 kV cable line with cross-linked polyethylene insulation is computed. The ways to reduce the field level due to the optimal sequence of cable phases in the cable line, the use of thin and volume magnetic shields made of composite material, as well as the use of thin electromagnetic shield are considered. As shown, with optimal cable phasing in the cable line under study it is possible to reduce 3.3 times the field level on the ground. The efficiency of the magnetic and electromagnetic shields depending on their location and the effective magnetic and electrical characteristics is analyzed.
References 10, figures 8.

Key words: underground cable lines, permissible magnetic field, magnetic shield, electromagnetic shield, composite material, effective characteristics.

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