

PECULIARITIES OF METHODOLOGY OF ELECTROMAGNETIC STUDY IN ENGINEERING

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In Uzbekistan annually scale of electromagnetic study is expanded. In urban conditions there is impact from industry, communications, etc. impact results of these studies. Study is conducted within the cover deposits, which are irregular and non-compacted due to human activity. That is why special methodology was worked out for field investigations, measurements and interpretation.

For hindrances elimination special equipment was used in which transmission and receipt of signals are realized on certain frequency. Additionally stripe filters were developed to receive integrated signal.

Special systems of multi-layer complex electric sounding were developed. Due to optimal disposal of electrodes it is possible to obtain information about vertical and horizontal borders, assess uninterrupted properties changes, breakage of continuity, media anisotropy connected with different coefficients of moisture conductivity in space. Defining the same depths by different electrodes disposal makes it possible to take into account influence of different factors, especially communication networks.

Proposed equipment advantage is limited number of electrodes. This equipment allows to study non-linear parameters of resistance, which is influenced by filtration flow. Developed methodology was successfully used for unique buildings foundations study, different memorials revealing cause of deformation, quality of rock compaction, water losses from channels, depth of natural channels bed, etc.