

Steady state performance of improvised ufer grounding practice

ABSTRACT

Ufer grounding is an effective method for electrical earthing, especially at highly resistive soil. The main material in ufer grounding is concrete which has moisture-dependent resistivity. In previous work, mixing concrete with Bentonite was done to observe slight improvement during short term measurements. In current study, the detailed results of extended period of measurements have been presented. It was found that the improvement of the proposed mix over the standard concrete mix has increased with time. In addition, mechanical strength of the proposed mix was found to be only 10% lower than the standard mix. Therefore this suggests that the proposed mix may be applicable as the mixture for building foundation as in the case of ufer grounding.

Keyword: Component; Ufer grounding; Bentonite; Concrete; Ground resistance; Resistivity