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A simplified iteration technique for designing galvanic cathodic protection of metalworks

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Abstract

A simplified iteration technique for designing galvanic cathodic protection, which is sufficiently general, easy, and free from crude errors, is suggested. A required accuracy of calculations is promptly reached since it cannot exceed the accuracy of the preset starting parameters. The descriptiveness of the method makes it useful in training young specialists and students. Several particular solutions are based on an assumption that the polarization resistances of both the anode and the protected structure are independent of current density. This assumption makes the protection current independent of the polarization resistance of the structure and determined by the anode's characteristics, the structure's potential, and the conductivity of the corrosive medium.
