Technology of detecting GIC in power grids & its monitoring device

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Abstract: The magnetic storm results in the transmission lines with geomagnetically induced current (GIC). And GIC happening in random has the frequency between 0.001Hz - 0.1Hz, and continues from several minutes to several hours. Based on elaborating mechanism and characteristic of GIC in grids and the influence on china power grids, the article has conducted the research work of GIC monitoring technology, and has investigated the method of sampling data of GIC, the survey algorithm and the new monitoring device. The simulated test shows, the monitoring device can effectively measure GIC which is signal of quasi direct current and randomness, has advantages of having few data to be handled and needing little memory space, etc. © 2005 IEEE.

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