11PE149 A real-time compensation method for MV voltage transducer for power quality analysis

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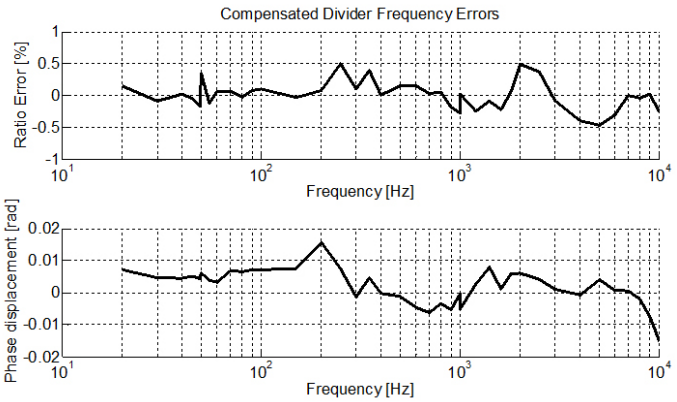
The growing need of power quality analysis in medium voltage grids leads to the employment of transducers with wider and wider bandwidth. This requirement is in contrast with the need of adopting a low cost hardware for capillary monitoring. Therefore, in this paper a technique for the extension of the frequency bandwidth of a MV voltage divider is presented. The performance of the compensated divider is comparable with that of dividers of better accuracy class, but the cost is kept low.



Ratio error and phase displacement of the Compensated Divider

11PE153 Testing of High Current Transformer by Non-uniform Equivalent Magnetomotive Force Method

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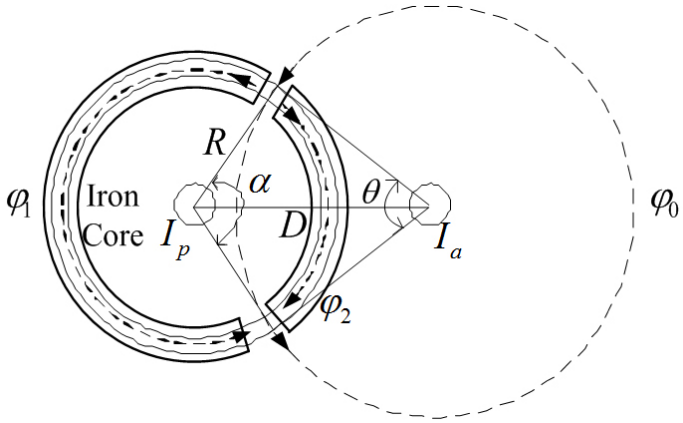
In the testing of high current transformer performance under interference from external current, it is very difficult to reproduce the high current from adjacent bus-bar or eccentric primary bus-bar. To overcome the difficulty, this manuscript presents an effective and original method called Non-uniform Equivalent Magnetomotive Force (NEMMF) Method, which uses a single non-uniformly distributed testing winding to reproduce the adjacent and concentric primary bus-bar simultaneously. The principle of the NEMMF method is verified by Finite Element Method (FEM).



Magnetic circuit model in hypothetical equivalently homogeneous medium