Symmetrical Component Analysis of Multi-Pulse Converter Systems

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Abstract:

This article describes a new method for dynamic simulation of multi-converter systems. This simulation is based on symmetrical components in time domain analysis and general representation of converter transformers to meet Y/Δ, Y/Y, and Y/Z connections. The simulation is suitable for harmonic analysis of balanced and unbalanced AC voltages. The computed currents and voltages agreed reasonably with those measured and reported in the literature for the characteristic and non-characteristic harmonics.

Keywords:

symmetrical components, multi-pulse converters, harmonic analysis, phase shift transformers

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