Fault Current Analysis Considering Frequency Response of Feeding Circuits

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Correct analysis of feeding circuits requires correct line constants of overhead lines and rails. We should consider the frequency response of self-impedances and mutual impedances on steady state analysis, because they affect the calculation results. However, there are only a few reports on transient analysis of feeding circuits considering the frequency response. This paper suggests a transient analysis model of overhead lines and rails with approximated frequency response, and shows the results of transient analysis on a simplified DC feeding circuit.