

عنوان مقاله:

Reduction in VA Rating of the Unified Power Quality Conditioner with Superconducting Fault current Limiters

محل انتشار:

اولین کنفرانس بین المللی الکترونیک قدرت و سیستم های درایو (سال: 1388)

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خلاصه مقاله:

the paper deals with an optimized Unified Power Quality Conditioner (UPQC), which aims at the integration of series and shunt active power filters with minimum rating of the UPQC. In this paper analysis results of a combination the UPQC with a superconducting fault current limiter (SFCL) are presented. SFCL aids on reduction in VA rating of the UPQC with limiting the excessive current in the event of fault. The combination of electrical and thermal model of a designed resistive type SFCL is defined as a component in PSCAD/EMTDC simulations. The proposed scheme can compensate voltage sag and current harmonics at the point of common coupling (PCC) on power distribution systems. Through the results of several analyses and simulations carried out by PSCAD/EMTDC, this demonstrates the signification effect of the control by SFCL on rating reduction of the UPQC.

کلمات کلیدی:

Power quality, superconducting fault current limiter (SFCL), PSCAD/EMTDC, unified power quality conditioner (UPQC)

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