عنوان مقاله:

Operation of AC Chopper as Downstream Fault Current Limiter and Overvoltage Compensator

محل انتشار:

دومین کنفرانس بین المللی الکترونیک قدرت و سیستم های درایو (سال: 1389)

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خلاصه مقاله:

The ac choppers are usually used as voltage regulators and voltage sag compensators. However, the voltage compensation range is usually limited to %20 of the nominal voltage. Although the ac choppers can compensate deeper voltage sags from the structure point of view, it can be a challenging issue as it is not equipped with energy storage. To compensate deeper voltage sags with a series connected ac chopper it is necessary to boost more power from the faulted grid. This causes considerable increase in the grid current. Consequently, the grid current rating might be violated. Also, the additional voltage drop on the line impedance can be harmful for the adjacent loads. As a result, it seems that application of the series connected ac chopper to compensate voltage sags is really a challenging problem. This paper proposes new applications of the series connected ac chopper. The series connected ac chopper is used as overvoltage compensator and downstream fault current limiter (FCL). The proposed applications are .demonstrated using simulation results in the PSCAD/EMTDC environment

کلمات کلیدی:

ac chopper, overvoltage compensator, downstream fault current limiter