

عنوان مقاله:

Study the SSR damping characteristics Using TCSC for Mitigation of Sub-synchronous Oscillations

محل انتشار:

همایش ملی تولید و بهره برداری از انرژی های نو سازگار با محیط زیست (سال: 1394)

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خلاصه مقاله:

The Linear Observer Method was adopted in this paper to study the SSR damping characteristics with TCSC. The study system was modified from the IEEE Second benchmark model by changing a part of the fixed series capacitor to TCSC. It is tried to stable torsional modes of turbine – generator units and improve their damping by using optimal linear control, with an practical viewpoint. In some of genuine applications, measurement of all state variables is impossible and uneconomic. Therefore in this paper, a novel approach is proposed by using optimal state feedback, based on the reduced – order observer structure. It was shown also that the Linear Observer Method can mitigates Sub synchronous Oscillations (SSO) in power systems. The proposed method is applied to the IEEE Second Benchmark system for SSR studies and the results are verified based on comparison with those obtained from digital computer simulation by MATLAB

کلمات کلیدی:

TCSC, Sub synchronous Oscillations, SSR, Linear Observer Method

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