



# AIUB DSpace Publication Details

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## Abstract

Presently, Series compensation technique is being used to increase the load carrying capability of long AC transmission system. Series compensated AC system has a limitation due to sub-synchronous resonance and it can be avoided by converting the pure AC system into simultaneous AC-DC system. In simultaneous AC-DC system AC and DC both form of power can be transferred through same transmission line. Loadability of a transmission line can be improved using both the techniques. A comparative loadability analysis between these two techniques is presented in this paper rigorously. The real behavior of these two techniques is compared through numerical simulation by considering two different power systems. A critical analysis is also presented in this paper by exposing a relationship of the line parameters with its performance in loadability point of view.