



Increasing Efficiency of Transmission Lines by Simultaneous AC-DC Power Transmission Scheme and their Performance at Fault Operation

Om Prakash Verma
opksverma@gmail.com

Abhijit Mandal
abhijitmandal1986@gmail.com

Amit Goswami
amit.goswami23feb@gmail.com

Abstract -This paper presents the method and operation of simultaneous ac-dc power transmission system. We know that in Transmission system if long extra high voltage (EHV) ac lines loaded to their thermal limits so large amount of power loading results large instability occurs in transmission system that affects the whole power system. It is very difficult operation to load transmission lines to their sufficient margin of thermal limits. By using this method of proposed in this paper, it will be possible to load transmission lines to maximum values of their thermal limits. In this method transmission lines are allowed to carry ac along with dc supply superimposed on it. The conductors' bears ac along with the dc supply. This system gives conversion of double line ac transmission into composite parallel ac-dc transmission system thus having the advantage to transient ability, dynamic stability and damp out oscillation. In this paper the Simulation operation perform in MATLAB software package having Simulink software.

Keywords— EHVAC Transmission, EHVDC Transmission, Facts Power System Stability, Transmission Efficiency, Alternating Current and Direct Current Calculation, MATLAB, Simultaneous ac-dc Power Transmission.