

Synchronous Generator in Case Voltage Sags for Different Loads

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Abstract : This paper studies the effects of voltage sags, both symmetrical and unsymmetrical, on the three-phase Synchronous Machine (SM) when powering an isolate load or infinite bus bar. The vast majority of the electrical power generation systems in the world is consist of synchronous generators coupled to the electrical network though a transformer. Voltage sags on SM cause speed variations, current and torque peaks and hence may cause tripping and equipment damage. The consequences of voltage sags in the machine behavior depends on different factors such as its magnitude (or depth), duration , the parameters of the machine and also the size of load. In this study, we consider the machine feeds an infinite bus bar in the first and the isolate load using symmetric and asymmetric defaults to see the behavior of the machine in both case the simulation have been used on SIMULINK MATLAB.

Keywords : power quality, voltage sag, synchronous generator, infinite system

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