

A STUDY OF TRANSIENT STABILITY OF A MULTIMACHINE POWER SYSTEM USING MODIFIED EULER METHOD

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Abstract

It is widely accepted that transient stability is an important aspect in designing and upgrading electric power system. This paper presents a detailed analysis of a multimachine power system using the Modified Euler iterative technique. The stability has been determined by plotting the swing curves for three-phase fault at different locations in the system. The reduction method has been applied to determine the reduced admittance matrices during and after clearing the fault respectively. Different locations of the fault are chosen to observe the effect of the distance of the fault from the generators on the stability.

Keywords: Modified Euler's Iterative Technique, Critical Clearing Time, rotor angle, Swing Curve, Transient Stability