ABSTRACT

ANALYSIS OF THREE PHASE INDUCTION GENERATOR (SQUIRREL CAGE ROTOR) AS INDUCTION GENERATOR WITH VARIATION CAPASITOR CONECTION FOR EXITED

Three phase induction motor can be operated as a three phase induction generator. The preference to use induction generator (squirrel cage rotor) as substitute of synchronous generator is increase, especially for small microhydro power with resistive load. It's because of difficult maintenance, hard to find, and the high cost. Self excited induction generator has many advantage over the synchronous generator such as brushless (squirrel cage rotor), reduce size, low cost. But the induction offers poor voltage regulation and its value depend on prime mover speed, capasitor, and load. In this experiment, used squirrel cage rotor three phase induction generator 0,9 KW, 2,7 A, pf 0,84, 50 Hz as induction generator with variation of capasitor connection. Star with capacitance 25μF, Delta 8μF, dan C-2C 8μF and 16μF for variety R-RL load. The result of experiment show the performance of three phase motor as generator on constant voltage delta connected and C-2C has lower speed than syncronous speed about 1285 – 1413 rpm. And constant frequecy, the voltage in all connection about 373 V – 164 V. Star connection with capacitance 25 μF is the best from all those capasitor connection.

Key words : *induction motor, induction generator, capasitor, star, delta, C-2C, three phase, self-exited*

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