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SOLAR PHOTOVOLTAIC FED INDUCTION MOTOR FOR WATER PUMPING SYSTEM USING MPPT ALGORITHM

Chaudhari Sachin[1] & Kaumil B. Shah[2]

[1]Research Scholar, Department of Electrical, Sardar Patel College of Engineering, Visnagar, Gujarat, India

[2]Assistant Professor, Department of Electrical, Sardar Patel College of Engineering, Visnagar, Gujarat, India

ABSTRACT

The work focuses on the photovoltaic array fed water pumping system utilizing induction motor with the model developed in PSIM. The solar panels to absorb and convert sunlight into electricity. Maximum Power Point Tracking (MPPT) is a technique used to maximize output Power from the PV and finally, a 3- phase induction motor is driven by it. The photovoltaic array is used to run an induction motor that drives the centrifugal pump. The PV array connected to induction motor where MPPT technique (p & o) and (Inc.) plays an important role that is developed in PSIM and the outputs are observed. The PV system cost for maximizing the output of a PV system, continuously tracking the maximum power point (MPP) is necessary.

KEYWORDS: *Maximum Power Point Tracking (MPPT), MPPT Efficiency, Boost Converter, Photovoltaic Array, Perturb and Observe (P&O), Incremental Conductance (INC), Induction Motor, Centrifugal Water Pump*

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