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Study and Experimental Analysis of a Photovoltaic Pumping System under Three Operating Modes

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Abstract : Photovoltaic water pumping systems is considered as one of the most promising areas in photovoltaic applications, the economy and reliability of solar electric power made it an excellent choice for remote water pumping. Two conventional techniques are currently in use; the first is the directly coupled technique and the second is the battery buffered photovoltaic pumping system. In this paper, we present different performances of a three operation modes of photovoltaic pumping system. The aim of this work is to determine the effect of different parameters influencing the photovoltaic pumping system performances, such as pumping head, System configuration and climatic conditions. The obtained results are presented and discussed.

Keywords : batteries charge mode, photovoltaic pumping system, pumping head, submersible pump
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