

## USE OF SOLAR PHOTOVOLTAIC SYSTEM WITH TRACKING ARRANGEMENT TO BATTERY CHARGING AND SPRAYING OPERATION

Narendra H. Tayade, R. Kuttappan, V.N. Madansure, D.M. Mahalle and V.P. Khambalkar

*Received December 4 2007 and Accepted January 22, 2008*

**ABSTRACT :** The electronic controlled sun tracking system for a photovoltaic module using stepper motor was designed, constructed and used for battery charging and spraying operation. Experimental set up was installed in the college of Agricultural Engineering and Technology, Dr.P.D.K.V., Akola, (latitude  $20.42^{\circ}$  N and longitude  $70.02^{\circ}$  E). The testing was carried out and it was observed that the charging period for two batteries (in series) was 5 hrs. The tracking system ensures a constant 12 V d.c. supply due to battery (12V). The system consumed a very low power of about 6 W only. It was observed that the panel tilted through an angle of  $15^{\circ}$  for every hour.

**Key Words :** Solar photovoltaic system, battery charging arrangement, spraying operation.