

SUN TRACKING SYSTEM

Project Report submitted by G. KOURTELLIS
in partial satisfaction of the award of
Diploma of Technician Engineer in

the field of Electrical Engineering
of the Higher Technical Institute,
Nicosia, Cyprus

My thanks are extended to the following persons
who kindly gave their valuable help.

in part satisfaction of the award of

Diploma of Technician Engineer in
the field of Electrical Engineering
Mr. ACHILLEOS ANDREAS
of the Higher Technical Institute,
Nicosia, Cyprus

Project supervisor: G. Kourtellis

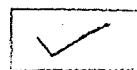
B.Sc Elect. Engineer

Lecturer Argyris Nicosia
HTI

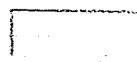
External Assessor: J. Kourtellis

Elect. Engin., E.M.S.

Type of project: Individual



Group



June 1983

A B S T R A C T

This project appointed by the Higher Technical Institute deals with the design construction and testing of a system for the continuous tracking of the sun on the horizontal and vertical planes for the purpose of solar energy collection.

Also it deals with the local irradiation parameters and a study of the cost per unit extra energy collected using the above system. The use of solar energy is

encouraged by the fact that in Cyprus the sun is shining at least 10 months of the year during long and short periods every day, I intent to present a system for control of solar energy collection.

The system is composed of three parts. The sensing element of sun position, the main part and the driving circuit. The main part is composed of a microprocessor which manipulates data input by the first part and some outputs results to the driving part. In appendices another solution is given in details and also a completed drawing of the mechanical structure is attached.

It is considered of importance to give something to information about sun, its energy and its location in the sky annually. In chapter B a description of solar cells is given. Also some hints about future development and applications are included.

Finally there is an electrical approach and analysis in chapter C. Design following great importance was given. It is better to give the project in small integrated parts in order to be more pleasant when it is going to be studied.

I hope that in future time, more serious consideration should be made about solar energy utilization techniques and collect solar energy, which we have so much in Cyprus.

The fact that a percentage of continuous, local irradiation is indeed of great importance the development of such a system.

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ACKNOWLEDGEMENTS

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