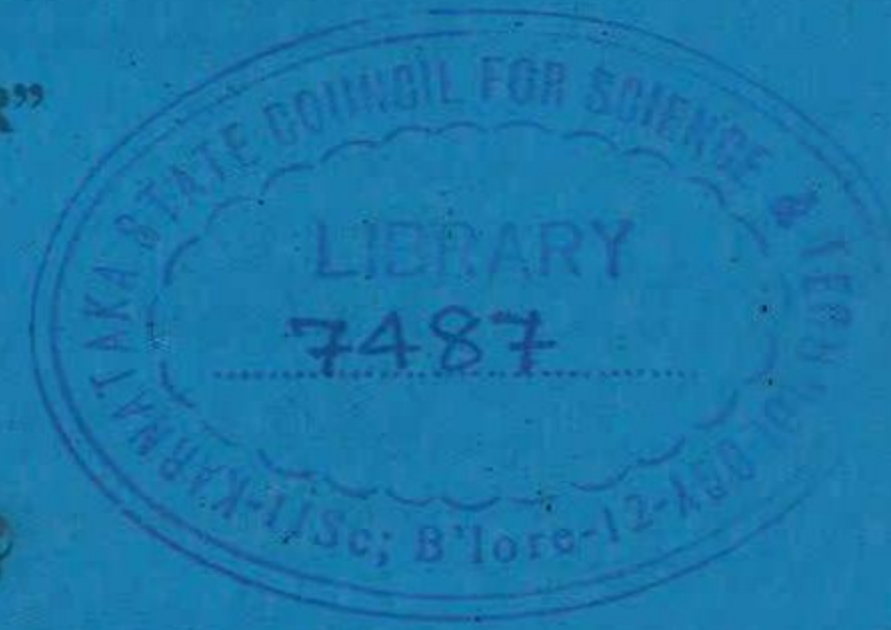


"SOLAR BASED PESTICIDE SPRAYER"

Project Report
Submitted to



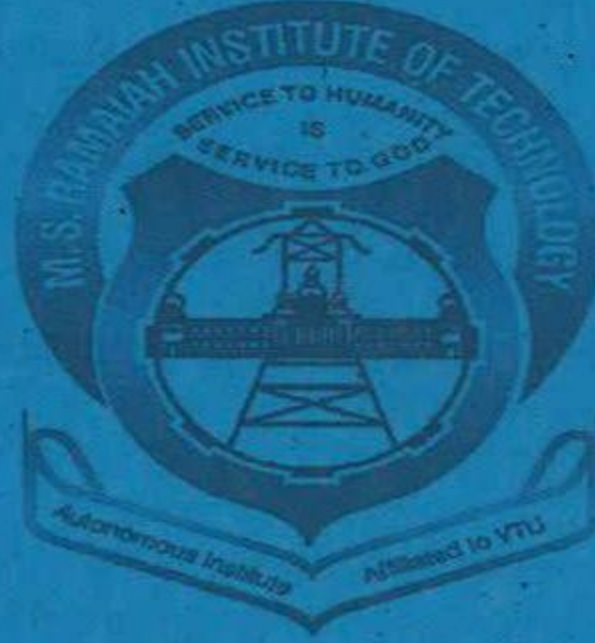
ಕರ್ನಾಟಕ ರಾಜ್ಯ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರವಿದ್ಯಾ ಮಂಡಳಿ
Karnataka State Council for Science and Technology
Indian Institute of Science Campus, Bangalore 560 012

Submitted By

IRANNA IJERI	1MS11IT403
KARTIKEYA BHAT	1MS11IT404
MOHAN BADIGER	1MS11IT405
RAVIRAJ KALAKERI	1MS11IT409

Under the guidance of
J. V. ALAMELU

Assistant Professor



DEPARTMENT OF INSTRUMENTATION TECHNOLOGY

M.S. RAMAIAH INSTITUTE OF TECHNOLOGY

(Autonomous Institute Affiliated to VTU)

May 2014



ABSTRACT

Sun is the source of all energy on the earth. It is most abundant, inexhaustible and universal source of energy. All other sources of energy draw their strength from the sun. India is blessed with plenty of solar energy because most parts of the country receive bright sunshine throughout the year except a brief monsoon period. India has developed technology to use solar energy for cooking, water heating, water dissimulation, space heating, crop drying etc.

Solar based pesticide sprayer is one best example which uses solar energy to operate. It is one of the advanced version in pesticide sprayer pumps. It is vastly used in the agriculture field & also for many purposes. It can also be used as home appliance. It is having more advantages over the model like petrol based pesticide pump, electrical pesticide sprayer. Its cost is less compare to petrol engine pump. Maintenance is very easy and cost effective.

In today's scenario the cost of the fuel increased day by day. It should be reduced by the modified model which works on the principle of solar energy. The operating cost of power sprayer for one hour operation is calculated and its value is compared with the operating cost of solar sprayer. It is found that there is no need of operating cost for solar sprayer but, the initial investment towards the charging unit is a one-time investment with a life period of Twenty years which is almost equal to the unit cost of the power sprayer with twist of petrol engine.