

FABRICATION OF SOLAR POWERED RECIPROCATING PUMP

A Project report submitted

in partial fulfillment of the requirements for the award of the degree of

**BACHELOR OF TECHNOLOGY
IN**

MECHANICAL ENGINEERING

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CERTIFICATE

This to certify that project work is entitled "**FABRICATION OF SOLAR POWERED RECIPROCATING PUMP**" is a bonafide record done by **K. SAI KRISHNA RAJU (15811A0357)**, **E.RAMALAKSHMAN (15811A0334)**, **D.BHARATHPHANINDRA (15811A0332)**, **G. AMAR RAO (15811A0336)** students of final year **B.Tech** in the department of **Mechanical Engineering**, Avanthi Institute of Engineering and Technology, Visakhapatnam. This work was done for the fulfillment of the requirements of the award of **Bachelor of Technology** during the year 2015-2019.

PROJECT GUIDE

HEAD OF THE DEPARTMENT

EXTERNAL EXAMINER

ABSTRACT

In present days, people need more and more power for driving instruments. A solar based reciprocating pump is a pump, running on electricity on electricity generated by solar cell, available from collected sunlight as opposed to greed electricity or diesel run water pump.

Nowadays many types of pump are available such as, positive displacement pump, impulse pump, velocity pump, gravity pump, steam pump, valve less pump, A reciprocating pump is class of positive displacement pump, is used for variety of purpose such as, car washing, irrigation, colour spraying, extraction of oil from bottom of the earth, large foundation, garden water pump, etc. If 50% of the diesel pump were replaced with solar PV pump set, diesel consumption could be reduced to the turn of about 225 billion litre/year

A solar reciprocating pumping systems is believed to be applicable to many remote and domestic irrigations applications without access to electricity relaying diesel power and having insufficient wind for pumping and to be cost competitive, locally manufacturable alternative to photovoltaic This system consists of solar collector, battery, motor, crankshaft, reciprocating pump, valve and tank.