

“FABRICATION OF CENTRIFUGAL PUMP FOR REGENERATION ENERGY”

Swapnil V. Ganthale¹, Rakesh R. lambat², Aniket E. Samrit³, Akush J. salkhurwade⁴, Santosh P. Alone⁵.

¹BE Department of Mechanical MPCOE Bhilewada, Bhandara, India

²BE Department of Mechanical MPCOE Bhilewada, Bhandara, India.

³BE Department of Mechanical MPCOE Bhilewada, Bhandara, India.

⁴BE Department of Mechanical MPCOE Bhilewada, Bhandara, India

⁵Assistant Professor, Department of Mechanical, MPCOE Bhilewada, Bhandara, India.

Abstract:

The cost of electric power is a great concern to common man. Convectional energy is also a great concern for environment. More attention of the people is diverted towards use of other form of energy other than conventional energy. Water pump is the most useful machine every days and are the commonly used in the industrial equipment after electrical motors. The centrifugal pump is the mechanical pump which runs on kinetic energy and its convert into pressure energy. This type of pump is a blessing to rural areas and farmers. This paper deals with fabrication and analysis of water lifting device without using electricity and fuel. Analyses have been done by varying various parameters to analyse flow rate and delivery head. The electricity mostly used in daily life more device or equipment made by any one is operated by electricity these is very dangerous for us, because for producing electricity very much.

Keywords — centrifugal pump, dynamo, Dc motor, solar panel.

I. INTRODUCTION

In general centrifugal pump lift water by using electricity, fuel or man power. There are many technologies are analysing to lift water without using electricity. As fossil fuel one of the most energy Crises in the world. Solar Powered Water Pump (SPWP) is an eco friendly water pump system. The SPWP works on mechanical energy without electricity. SPWP is the pump that runs without use of any fuel like petrol, diesel, kerosene, etc. SPWP provides drinking water and irrigation in remote areas where electricity is not available. SPWP is free from pollution. SPWP reduces the rising energy costs. SPWP consists of a regenerative turbine pump operated by solar power. The regenerative turbine pump is positioned on its stand and the driven shaft of the regenerative turbine pump is connected to the motor drive on solar power through the battery. By solar power battery will charge and motor rotates, thereby rotating the

centrifugal pump which in turns discharges water from the sump

Its acts by “1st law of Thermodynamics” its state that, “Energy is neither be created nor be destroyed, it just transfer from one from of energy into another form”

Dynamo works on faraday’s law its state that, “The motion of wire within the magnetic field creates an electromotive force which pushes on the electrons in the metal creating an electric current in the wire”.

The objectives of the project include:

- To minimize the used of fuel, coal and human efforts.
- To introduce a new and simple way of water transfer.
- Day by day increasing cost of electricity and fuel.
- Where the source of electric energy is absent.