

# Pedal Powered Water Pumping and Purification

Netradip Kene, Ayush Tingne, Sushant Sambhe, Gaurav Ghane, Shantanu Metkar

Department of Mechanical Engineering

Dr. Rajendra Gode Institute of Technology & Research, Amravati, Maharashtra, India

**Abstract:** This paper presents fabrication and experimentally investigates the working of Pedal Powered Water Pump (PPWP) along with its purification which had used for pure drinking water supply and garden irrigation. PPWP will consist of a centrifugal pump operated by pedal power. The centrifugal pump is positioned on its stand in such a way that driven shaft of the centrifugal pump was butted to the bicycle wheel. By pedaling the bicycle, the bicycle wheel rotates, thereby rotating the centrifugal pump which in turns discharges water from the sump. PPWP provides drinking water and irrigation in remote areas "here electricity is not available. PPWP is not only free from pollution but also provide healthy exercise. PPWP reduces the rising energy costs. PPWP will design as a portable one which can be use Wrigation in various places. The experimental investigation was eacute and performance ofthe PPWP had carried out at different rpm. The results indicate that the PPWP will give a considerable amount of discharge and head. The PPWP requires only manual power thereby reducing the utility bill considerably. Experimental result shows that discharge of about 0.0025m can be obtained around 14(h-pm).

**Keywords:** centrifugal pump, pedaling, pre-purifier, r.p.m