PROJECT REPORT

PHYSICS GROUP -G10

SAQIYA

Introduction

A saqiya is a mechanical water lifting device which uses buckets, jars, or scoops fastened either directly to a vertical wheel, or to an endless belt activated by such a wheel. The vertical wheel is itself attached by a drive shaft to a horizontal wheel, which is traditionally set in motion by animal power

The saqiya is a large hollow wheel, traditionally made of wood. One type has its clay pots or buckets attached directly to the periphery of the wheel, which limits the depth it can scoop water fromto less than half its diameter. The modern version is normally made of galvanized sheet steel and consists of a series of scoops. The modern type dispenses the water near the hub rather than fromthe top, the opposite of the traditional types. It is a method of irrigation frequently met within various parts of the Indian subcontinent.

Saqiya wheels range in diameter fromtwo to five metres. Though traditionally driven by draught animals, they are now increasingly attached to an engine. While animal-driven saqiyas can rotate at 2– 4 rpm, motorised ones can make as much as 8– 15 rpm. The improved modern versions are also known as zawaffa and jhallan.

Materials required:

1. Wheel

2. Plastic jar

3. Adhesive and electrical tape

Procedure and Working

The most primitive sakias are driven by donkeys, mules, or oxen. The animal turns a horizontal wheel, which is engaged with the vertical wheel and so causes it to turn. This causes the buckets of the first type to circulate and lift up water froma deeper well, or with the second type, it causes the vertical wheel to rotate and scoop up water froma less deep well.

Information sources

https://www.google.co.in/url?sa=t&source=web&rct=j&url=https://en.mwikipedia.org/wiki/Sakia&ved=2ahUKEwivtqPUlYPbAhUKuo8KHYbHDpkQFjAAegQIAxAB&usg=AOvVaw19m9mSzkP-nCnoAZC5j4SF

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