

ABSTRACT

In material handling, the movement or transport of work parts or other materials is the most crucial aspect. Here, work part can be referred to the raw material under processing/operation, a finished product or other heavy loads. Material transport equipment should be standardized within the limits of achieving overall performance objectives and without sacrificing needed flexibility, modularity, and throughput. The designer should select an equipment that can perform a variety of tasks under a variety of operating conditions and in anticipation of changing future requirements. We have developed a efficient material transport equipment, which moves forward by converting the potential energy of the load into kinetic motion of model. Our project is designed for applications in industrial area for distributing material in manufacturing plants around a manufacturing facility

The objective and scope of this project is to create an material transfer model that can advance forward on a flat surface horizontally This model obtains the drive to move forward by the potential energy of the load to be carried. In other words, the vertical downward movement of the load rotates a shaft by means of rack and pinion mechanism, thus the rotation of pinion is converted into linear motion of the model The model is a four- wheeled carrier that has the ability to move along a straight line. There are four wheels including two driving wheels driven by a chain drive and two free wheel in front that are constrained to move in one direction. This project consists of two main stages, which are theoretical design and mechanical fabrication followed up by project closure.

This paper is mainly based on for material handling, it not required external power Le, electricity on account of this, a machine and its physical description is covered here,

Keywords: Less Cost, Less Maintains, Material Handling. No Power Required