

AUTO GUIDED VEHICAL WITH MATERIAL HANDLING AND OBSTACLE DETECTION

ABSTRACT

In this project automated guided vehicle(AGV) is controlled using RFID. The vehicle moves from source to destination when the RFID tag is read. There are sensors present on the vehicle for obstacle avoidance and overload detection. The GSM module is used to get SMS to help the operator at the control station.

An automated system is one in which a process is performed by a machine without the direct participation of a human worker. Automation is implemented using a program of instructions combined with a control system that executes the instructions. Robots are being used in a wide field of applications in industry. In material handling applications, the robots moves materials or parts from one place to another. An AGV is a material handling system that uses independently operated, self-propelled vehicles guided along defined pathways. AGV has firstly developed and conducted the research and an attempt to use at the Jumbo Truck Manufacturing in Thailand. AGV systems are used in a growing number and variety of applications. Next generation material handling should be highly automated and based on next generation technologies, and should very flexible and able to respond to the manufacturing system. This project illustrates the control of such AGVs using one of the most advantageous wireless technologies available in recent times that is the RFID (Radio Frequency Identification Technology). In radio frequency identification is attached. This tag contains up to 20 alpha numeric characters for identifying the product to which the tag is attached.



