Material Handling Robot

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ABSTRACT: In this paper, material handling based systems used in Flexible Manufacturing Systems . In industry when a manpower are works on some project for that purpose they need a material which is required for project, so we cannot get materials and do the work. for getting material some manpower are there to give the material to workers. but so many times worker have to repeat their task or at some specific time worker get tiered or worker cannot carry heavy weight, so replacement of that we are going to implement a material handling robot(AGV).this robot will transport a material to the destination with accuracy , safety, and speed. so AGV is good for material transporting and material handling process.

KEYWORDS : Raspberry pi, automated guided vehicle, command, material.

I. INTRODUCTION

AGV is a robot which is operated on battery and wireless of computer guided also it is material handling, on the basis of that we gave the name to our project is Material Handling robot. we can also called LGV because some AGV are worked on LASER scanning. Majority demand of AGV is in warehouses. Now a days everyone focuses on the safety ,efficiency, accuracy of the product, that all parameters satisfying in material handling robot. our material handling robot is driverless vehicle which is working properly on fixed path. Its capabilities are receiving command and performing that task in particular time period is very good. Material handling skill are improved by AGV material handling robot. In a traditional warehouse, human safety lead on the productivity. because of navigation module material handling robot works properly in work spaces.

II. SYSTEM AND ASSUMPTION

This section discusses the most closely related, and then provide a service between the related work and our system. material handling robot is like conveyor but our robot is more efficient an also our robot cannot handle a work like conveyor. an material handling robot is a driverless vehicle on factory floor. This can be achieved by a laser scanning, which the vehicle can sense and follow.
It is useful to transport a material on required instruction on the basis of fixed path by controller. our robot have a navigation modules to propagate the route ,and also having a safety sensors for obstacles detection

III. SECURITY

A material handling robot uses in flexible manufacturing systems. robots were mostly used at manufacturing systems, but now a days we can use a material handling robot in various applications. such as warehouses, container terminals and transportation systems. Safety sensors are used here for detecting an obstacle between robot and destination ,that's sensors are in LIDAR also for navigating purpose. This paper discusses literature related to different methodologies to optimize AGV systems for the two significant problems of scheduling and routing at manufacturing, distribution, transshipment and transportation systems .

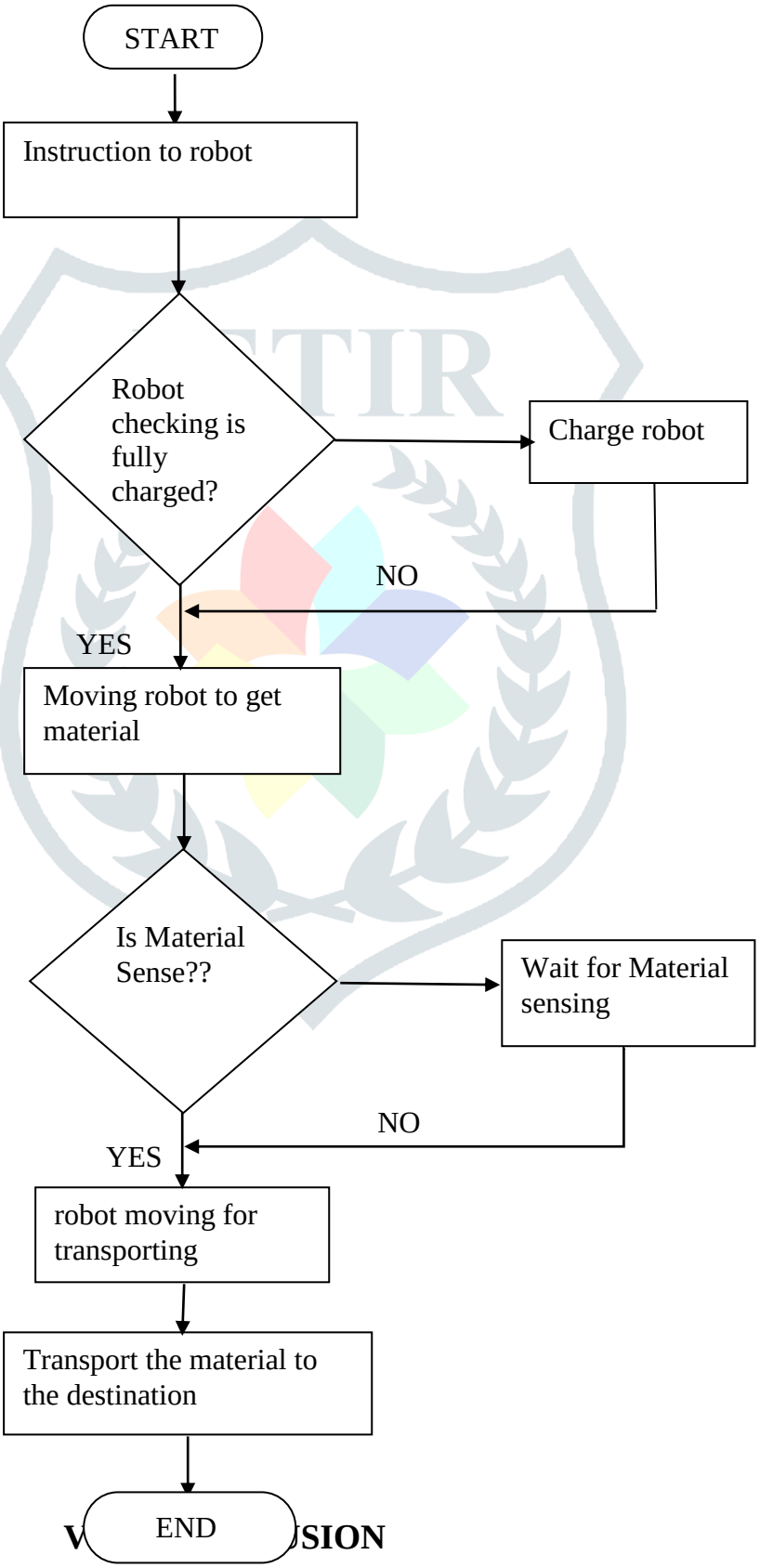
Benefits of Proposed System:

1)Increase safety
2)Increase accuracy
3)Reduce labor cost
4)Increase productivity
5)Modularity

IV. RESULT AND DISSCUSSION

AGV system has developed into branch of logistics system and undergone the trend of industrialization. Hardware and software architecture, at the same time, each module of material handling robot system is designed. Finally, experimental verification of the reliability and stability of material handling robot is carried out, and the result is it meets haul position accuracy in clever warehouse., AGV automatic handling system has the merits of good reliability, high transport efficiency, fully automatic operation, high adaptability for material low labor costs, and convenient interface with other information systems Compared with other material handling systems. As an automatic handling robot in intelligent warehouse, AGV is the automation, intelligent abstract of engineering warehouse, and the link between automated storage area and electronic tag picking constituency. AGV is a necessary tool for the automation of automatic warehouse.

FLOWCHART :



V. SION

Hence from this we conclude that the material handling robot is very efficient for material transportation. within a time our robot is doing his work properly, after getting a command from controller our robot is moving to get a material whenever material is sensed by sensor robot will move for transportation. very accurately with safety.

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