iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 10 **Issue:** III **Month of publication:** March 2022

DOI: https://doi.org/10.22214/ijraset.2022.41108

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International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 10 Issue III Mar 2022- Available at www.ijraset.com

A Review on Faulty Product Detection and Separation System for Measuring Accurate Weight of SOAP

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Abstract: ***Wireless sensor networks have become a new information collection and monitoring solution for variety of product such as soap. All product manufacturing unit need to have a faulty product detection and separation system in order to maintain good product accuracy by using conveyor belt system. This proposed system detect faulty product according to required weight by using load cell and proximity sensor, thus with the help of electric actuator faulty products are separated according to the weight. This system is powered by a DC Geared motor, and the system consist components Rollers (nylon) and silicon belt are used to develop a conveyor belt system. This paper deals with a review on faulty product detection and separation system***
Keywords: Conveyor systems, proximity sensor, load cell, Fault detection.

I. INTRODUCTION

The weight of soap is the important aspect for a soap manufacturing industry . Industry need to have high class equipment and skill worker, but this will increase the cost of product and that can lead loss to the company or manufacturing industry to over come this problem quality department is set in all industry for checking the weight of product.

In this proposed system packed products soap move on conveyor belt mechanism we are using proximity sensor and load cell, proximity sensor used for detection of the product and load cell is programmed in a such a manner that the product with required weight (i.e below 100 grams), such product is only allowed for further packaging and the product which does not satisfy the required weight will be rejected automatically by means of electric actuator. Here we use roller (nylon) and silicon belt to develop a conveyor belt system and is operated by DC geared motor.

II. LITERATURE REVIEW

This paper deals with advance industrial technology and automation in manufacturing world. industries are adopting more aspects of automation to increase product accuracy and cost. This proposed system uses automated conveyor system by detecting the size of the material using ultrasonic senso [1]

The according to this paper we concluding with automation process for best performance of industrial process. Image processing has led to a great role in the applications of robotics and embedded systems. Sorting of objects are usually done by humans which takes a lot of time and effort. Detection of object is achieved using image processing technique and suitable sensor and hence robotic arm can be used to sort various objects [2]

This paper giving idea with automatic sorting machine by using conveyor belt for manufacturing industry in many fields. This is an industrial automation based application. It shows the concept of normal conveyor belt, but with some intelligence. It has the ability to sort the object of different sizes. The FPGA is used in PLC and controls the relay and drives relay according to output of photo interrupter [3]

This paper says with importance of automation process for the growth of industry For precise output and accuracy this proposed system use robots with sophisticated sensors This paper present colour based object sorting system which uses the machine vision and the operations of image processing[4]

This paper deals with Sorting of products in an industry which is generally carried out manually. Continuous manual sorting creates quality consistency issues. Segregation based on different characteristics like weight, colour. It requires different equipment for weighing and then separating. This system proposed an efficient method which uses load cell, inductive sensor and TCS 230 colour sensor for identifying and segregating on the basis of weight, colour and type (metal or non-metal) of object and Siemens 300 Series PLC to control the overall process of sorting two types of objects [5]

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This paper conclude idea with automated conveyor system works by detecting the size of the material in the conveyor using proximity sensors. The microcontroller analyses the data from the proximity sensor and then directs the pneumatic cylinder material to different directions, depending on the height of the material[6]

This paper getting with microcontroller and sensors to automatically sort out organic and inorganic waste materials to be recycled. This helps to reduce the time taken to sort out organic and inorganic waste materials manually and to save cost involved in processing waste. This proposed system further escribed a sophisticated technique in sorting the waste based on the microcontroller unit that use gas sensors to separate the organic and raw wastes. The gas detection system was incorporated within the conveyer that passed in front of the gas sensor and sent data to controller through analogy to digital convertor [7]

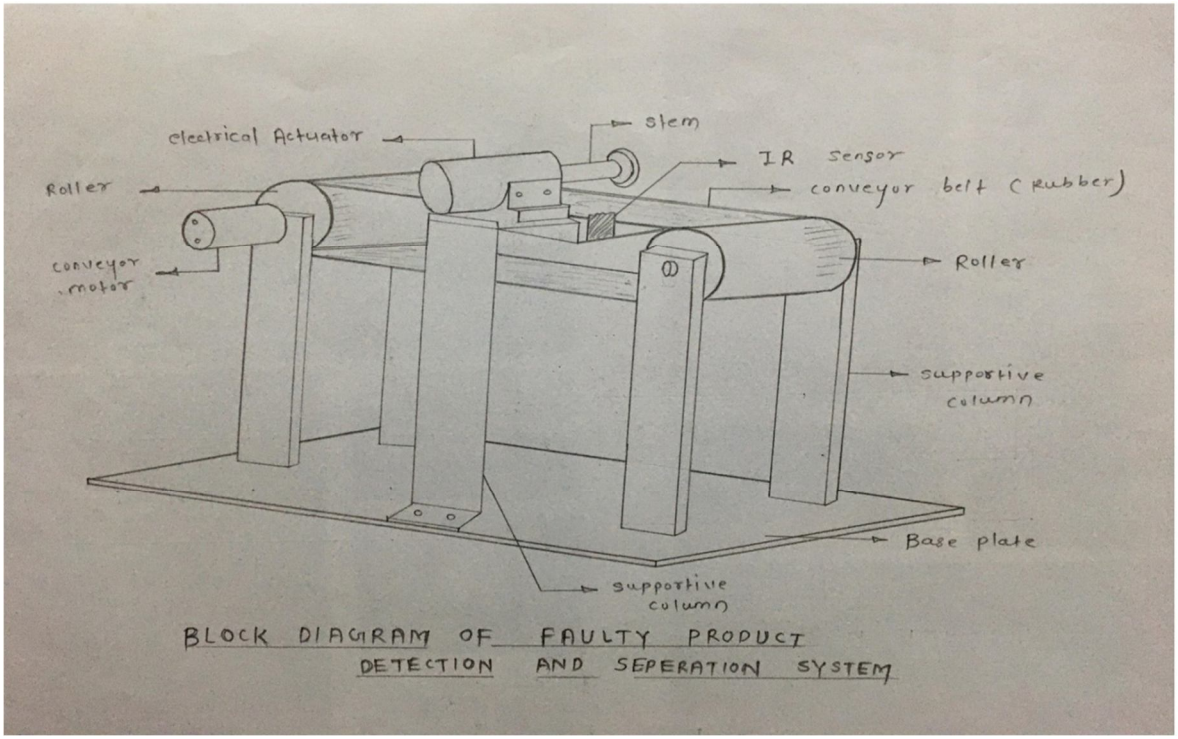
A paper review on Improved Automated Conveyor with Auto Separated System for Oil Packaging Industry

This paper get with sorting of the defective oil cans on the basis of their weight because of improved quality of products, improved production rate, reduce cost of production. Today high speed of the operation and accurate weighing of packages during crossing a conveyor belt has been getting more important in the food and distribution industries. Automation is the use of control system like a computer or robot for handling different process and machinery to replace a human being and provide a mechanical assistant [8]

A paper review on Automatic convey or System with In Process Sorting Mechanism using PLC and HMI System.

This paper concludes with Programmable logic controllers It is widely used in many manufacturing process like machinery packaging material handling automatic assembly. These are special type of microprocessor based controller used for any application that needs any kind of electrical controller including lighting controller and HVAC control system. Automatic conveyor system is a computerized control method of controlling and managing the sorting mechanism at the same time maintaining the efficiency of the industry & quality of the products [9]

This paper deals with automation conveyor system by sorting of object according to size of the material This proposed system uses ultrasonic sensor by detecting the size of the material The microcontroller analyses this data from the ultrasonic sensor and then directs the pneumatic cylinder to separate depending on the height of the material [10]



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III. CONCLUSION

This paper conclude automatic faulty product separating conveyor system by detecting weight of soap This proposed system is highly useful in weight control to reject faulty product and accept finish goods, after reviewing the above papers this paper reviews on fa We are utilizing above papers for review on faulty product detection and separation system for measuring accurate weight of soap utilized product detection and separation for accurate measurement weight of soap has tested.

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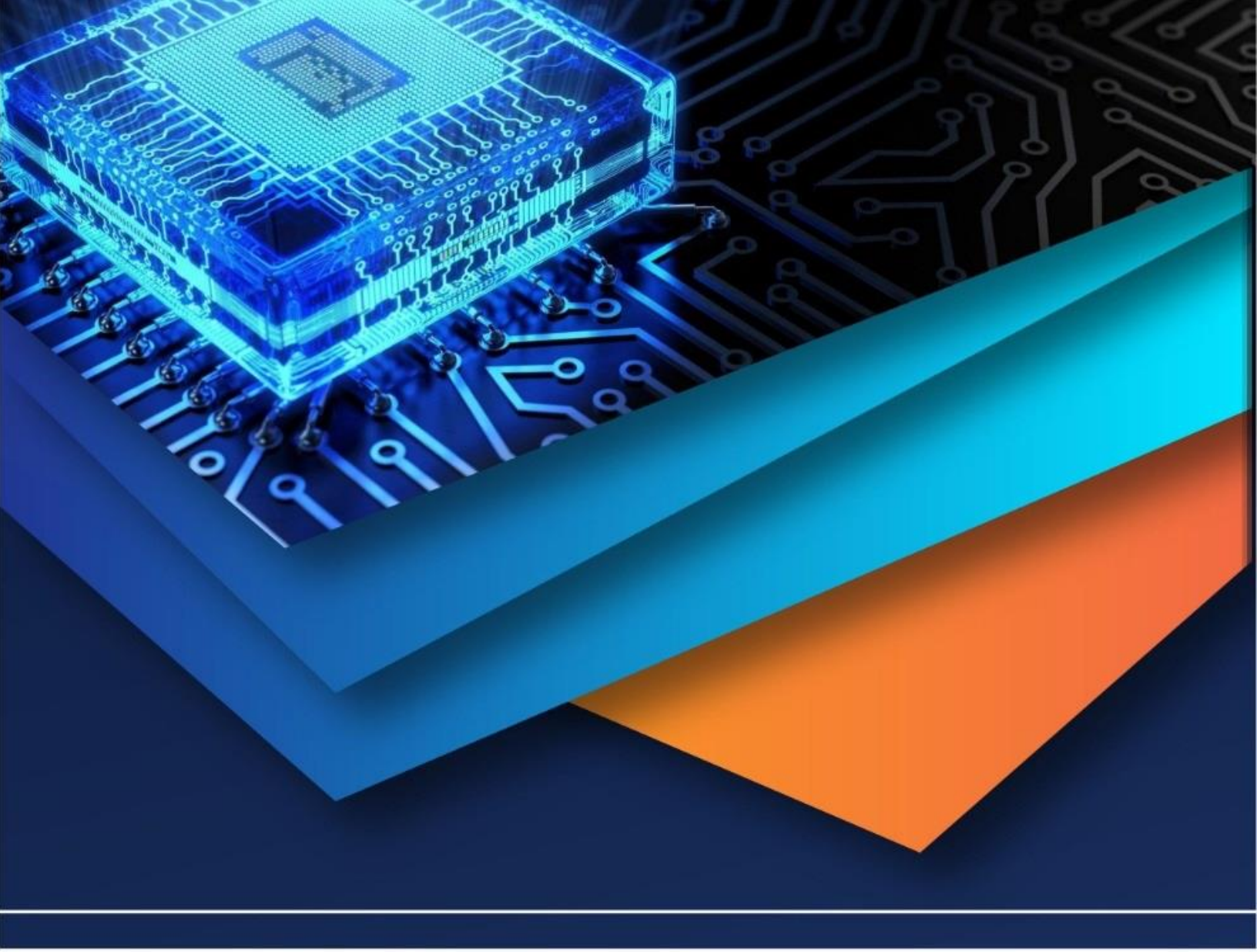
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