

TO DESIGN AND BUILD A MODEL OF COMPARTMENT FOR SORTING METAL, PLASTIC AND PAPER FOR RECYCLING PURPOSE

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ABSTRACT

Before going detail into our project body of this project, here we would like to do a very short summary describing the content of the paper in order to give a clearer overview of my project.

This is actually a sorting device which is mainly deal with papers, metal and plastics. We have designed it with few mechanisms lie motors, conveyors, vacuum, electronic control circuit, air blower and AC Magnets.

This system is able to use in all those small factories in which their business line us based on collecting recyclable items in order to sell o the government agency. When they use this system, it will be able to reduce the man-power and safe their fixed cost on the salary pays for the workers.

Our project main objective is to sort papers and metals from a collection of recycling dustbin. First, the Conveyor A will transfer the trash to the AC Electromagnet Magnet in order to sort the Metal out form the trash. Then it will proceed to the second stage which the conveyor is been covered by the Perspex since this conveyor will take up the process of suction. The lighter material like paper will be sorted out through this section.

The last section of this prototype will be the filter part since the item here is just consisting of the non-recyclable materials.

In this project report, we have included the operations of the hardware and software. By the way, it will also include the flow chart for the programming section and block diagram for the circuit used here. Besides, we have added on the mechanical part which it explained the operation of the conveyor and all the formulas required to build the prototype.