ABSTRACT

My project title is automatic identification of metallic and non-metallic materials for industrial application. In general, the project is about separating the metallic and non-metallic object from the waste of the factory. For convenient purpose the robot arm will be located at near the conveyor belt where the waste of the factory will pass through it.

Using the principle of conductivity, detection of metallic and non-metallic object can be done. From the conveyer of the factory, metallic and non- metallic will be separated using a robot arm. The robot has to place the metallic and non-metallic material at a specific location that already programmed by the microcontroller.

Few sensors will used to give the feedback to the system that makes the system work more effectively. Not only that, the microcontroller also will control the conveyor belt to works as a complete system. Conveyor has to be cooperating with the robot arm in order enable us to perform the operation smoothly. Some problems were encounter in the progress of construction and in choosing the part to be included into the system.

As the result, the project is going on quite well like those feedbacks from the robot arm and the response that given by the Programmable Integrated Circuit (PIC). Testing stage is successfully done which when certain input is given the expected output is provided. But, it might have some problem in term of the design of robot arm since I was from the electrical and electronic background.