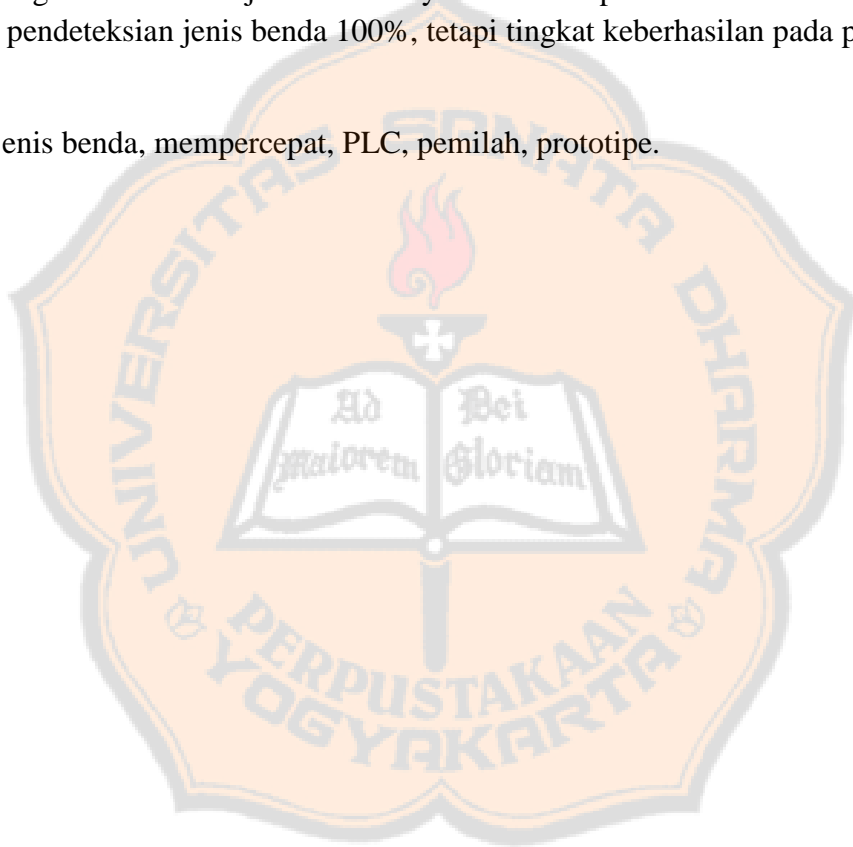


## INTISARI

Untuk mempercepat hasil produksi pada suatu perusahaan daur ulang maka dibutuhkan alat yang dapat memilah jenis benda yang mana benda tersebut dapat diproses kembali. Maka penulis merancang dan membuat prototipe mesin pemilah barang berdasarkan jenisnya. Prototipe mesin ini dapat memilah 4 jenis benda (kaca, plastik, logam, dan kayu). Alat ini berbasis *Programmable Logic Controller* (PLC). Pendeteksian jenis benda pada sistem *scanner* menggunakan 2 sensor optik dan 1 sensor induktif. Dan sistem *stopper* untuk pemilahan menggunakan plat alumunium yang digerakan oleh *solenoid*. Prototipe mesin pemilah barang berdasarkan jenis bahannya sudah dapat di buat dan diuji. Tingkat keberhasilan pendeteksian jenis benda 100%, tetapi tingkat keberhasilan pada pemilahan baru 45%.

Kata kunci: jenis benda, mempercepat, PLC, pemilah, prototipe.



## ABSTRACT

In order to speed up the manufacture in a recycling company, a tool able to sort out various types of objects, which can be recycle, is needed. For that reason, the writer designed and made a prototype of a sorting machine which is able to sort out objects by types. This prototype machine is able to sort out four types of objects, i.e. glass, plastic, metal, or wood. This machine is Programmable Logic Controller (PLC) based. The detection of objects in the scanner system uses two kinds of sensors, i.e. optical and inductive sensors. The stopper system uses an aluminium plate which is driven by a solenoid. This prototype sorting machine has been able to be made and tested. The success rate of detecting the types of objects is 100%. Yet, the success rate of sorting types of objects is still 45%.

Keywords: types of objects, to speed up, PLC, sorter, prototype.

