

UNIVERSITI TEKNOLOGI MARA

**EXPERIMENTAL INVESTIGATION
ON THE PNEUMATIC LIFTING
METHOD OF DEFORMABLE
OBJECT**

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ABSTRACT

Industries such as agriculture and food have used polypropylene bag widely used as it is cheap and easy to find. Fertilizers industry especially required to use the polypropylene bag that have high protection barrier against the high-level humidity especially for countries such as Malaysia. By layering the polypropylene bag with another polypropylene bag, the moisture problem can be overcome. In general, the polypropylene bag for fertilizers consists of 2 layer which is the woven polypropylene bag and the clear polypropylene bag. However, when combining both polypropylene bags, the worker are required to insert the clear polypropylene bag manually into the woven bag. Indirectly this increases the production time, increasing the number of workers which also increases the number of errors. Furthermore, repetitive works will cause strain to the worker which also increases the number of errors. To overcome this issue, the automated polypropylene bag assembly system is proposed. In this research, we are only focusing on the lifting method of the automated polypropylene bag assembly system via pneumatic method. As a result, the automated polypropylene bag assembly system, can reduce number of worker and avoid repetitive works. This will also give out cleaner and consistent last product.

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