

DESIGN AND FABRICATION OF HYDRAULICALLY OPERATED COCONUT DEHUSKING MACHINE

A PROJECT REPORT

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ABSTRACT

Anybody involved in growing and selling coconuts would vouchsafe for the fact that husking them is certainly one of the more tedious part of the job. Problems usually faced by coconut dehuskers are, it became increasingly difficult to get people to dehusk nuts, Injuries sustained by dehuskers to their hands and other parts of their body were very common, it is more time consuming, Productivity gets affected.

Generally, coconuts are dehusked manually using either a machete or a spike. These methods require skilled labour and are tiring to use. Attempts made so far in the development of dehusking tools have been only, partially successful and not effective in replacing manual methods.

This project work, 'Coconut Dehusking machine' is a mechanical device that efficiently and conveniently dehusks coconuts to get rid off labour problem and also to enhance the productivity. This machine is extremely beneficial for coconut traders and industries. The present work involved the design, development and testing of a hydraulically operated coconut dehusking machine which overcomes the drawbacks of the previously reported implements. The design and development stages called for a closer look at the magnitude and direction of the dehusking force and their generation mechanisms. Details of a simple sturdy and efficient hydraulic dehusking unit, financially beneficial to labourers and producers are given here.

Comparative assessment of this unit in relation to those reported in the literature is provided. Test results and assessment of the present unit in both laboratory and field condition are also reported. Safety aspects are incorporated. The unit can dehusk about 300 coconuts per hour compared with about 40 nuts per hour from a skilled worker using the spike method. It can be operated by trained labourers. Cost benefit analysis indicates that it should be commercially viable.