

Design and Implementation of a Granulated Sugar Transfer Conveyor with a Metering System Using Autodesk Inventor

Supervised by: Dr.Ir. Nurul Zainal Fanani, S.ST., M.T.

Dhimas Rahmatullah

Mechatronic Engineering Technology

Engineering Department

ABSTRACT

In the processing and packaging industry, the transfer of raw materials such as granulated sugar requires an efficient and accurate system to improve productivity. This study aims to design and implement a conveyor system capable of automatically counting and transferring granulated sugar based on quantity using Autodesk Inventor software. The system is designed to reduce human error in calculating the amount of sugar transferred and to enhance production efficiency. The methods employed include the design of the conveyor system using Autodesk Inventor, simulation of the transfer process, and performance analysis of the system based on parameters of quantity and transfer time. The results show that the developed conveyor system operates optimally in counting and transferring granulated sugar with a high level of accuracy. The implementation of this system is expected to provide a solution for the packaging industry to improve efficiency and reduce raw material waste.

Key Words: *Conveyor, Autodesk Inventor, granulated sugar transfer, industrial automation.*