



INVESTIGATION ON THE DETERIORATION OF
DROSS SEPARATION SYSTEM

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“I declared that this thesis is the results of my own work except the ideas and summaries which I have clarified their sources. The thesis has not been accepted for any degree and is not concurrently submitted in candidates of any degree”

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ABSTRACT

Aluminum dross recycling is where the dross, which is a product of the melting process in the process of creation of aluminum, can be recycled by separating the residual aluminum metal from aluminum oxide. This aluminum dross separates into three categories, dross A, dross B and dross iron. Dross A and dross iron can be sold to other company for profit while dross B is recycled for another batch production of aluminum. Based on data of total dross input per month, the numbers is decreasing over the time. So, investigation was made through the system to find the cause. Investigation was focused to two critical parts which are the normal conveyor, and bowl conveyor. Then some solution was selected and analyzed before being suggest to the company for implementation. Those solution must be cost effectiveness in order to meet the objective by using payback period calculation (PP). During the investigation, one design software and one design analysis used which are CATIA software and ANSYS software. From these analysis, solution is ready to be implemented to the system.