ABSTRACT

CV. XYZ is a company engaged in the industry of animal feed providers, the driving machine used is the D-16 fuso diesel engine with an exhaust system that functions as a drain. The exhaust system has components such as exhaust pipes, catalytic converters, exhaust flange, exhaust manifolds, resonators and mufflers. From observations and interviews it is known that the CV. XYZ has not used catalytic converters in recent years because of the short useful life of catalytic converters. If a catalytic converter CV. XYZ has to spend a lot of money, then the CV. XYZ chose not to use catalytic converters anymore. At this time to overcome this problem CV. XYZ uses stacked tires and a small fan so that the exhaust gas does not enter the office..

Catalytic converter has an important role, namely to reduce exhaust gases so that air pollution does not occur that can harm living things and the environment. The lifetime of the catalytic converter is affected by soot that builds up on the filter, which prevents exhaust gas flow. The filter in the catalytic converter requires cleaning, but the current catalytic converter design cannot support the filter replacement process, so when the filter is filled with soot will be replaced by all the catalytic converter components which will cost a lot, while the lifetime of the catalytic converter body is longer than the filter. From these problems, the design of the body catalytic converter is needed so that the cleaning process can be done using a rational product design method. The catalytic converter body is designed to have a cover with other supporting components so that it can be cleaned or replaced filters, then verified using a computer simulation and prototype to find out whether the catalytic converter body can achieve the design goals and customer needs.

Keywords: Exhaust Gas, Exhaust System, Body Catalytic Converter, Rational Product Design.