ABSTRACT

Anechoic chamber is a room that is made to resemble the condition of empty space. This room has an absorption rate of of 99%. Absorber is an important part when manufacturing an anechoic chamber. In Anechoic Chamber, absorber affects in terms at absorption and frequency range. Absorbers on the market not always match the specifications that we need. Specification of absorber used depend on the specification of the anechoic chamber to be made. The cost involved is also a problem that arises in the manufacture of the anechoid chamber. In addition, the optimum absorber geometry size is required so that the net volume of the anechoic chamber is maximized. To overcome the problems, it is necessary to optimize the size of the absorber geometry. The size optimization of the absorber geometry has been carried out using a genetic algorithm with MATLAB as the programming software. The angle of incidence of the wave and the width of the absorber are used as input parameters for absorber optimization. Optimization results optimum peak angle and absorber length. The width of the absorber used in this optimization is 0.21 m. The peak angle obtained is 12° with a length of 0.99 m. The average absorption coefficient obtained is 0.885650093.

Keywords: *Absorber, Anechoic chamber, Genetic Algorithm, Optimization.*