

ABSTRACT

An acoustic anechoic chamber is a room whose walls can absorb acoustic waves, so this room is free from reflected noise. In other words, this anechoic chamber is an echoless chamber designed to prevent the reflection of acoustic waves. The quality of the anechoic chamber is influenced by the size and material of the absorber used. Therefore, planning is needed regarding the size and type of absorber used. To overcome this, optimization of absorber geometry is needed. In this research, the size optimization of the absorber geometry is carried out with the Nonlinear GRG optimization method and the spreadsheet application as the program. The angle of incidence of the wave and the width of the absorber are used as input parameters for absorber optimization. Optimization results will produce optimum peak angle and absorber length. The width of the absorber used in this study is 0.2 m. The best peak angle obtained through optimization is 13° with a length of 0.8777 m. The average absorption coefficient obtained is 0.8802.

Keywords: *Anechoic Chamber, Absorber, Optimization, GRG Nonlinear, Microsoft Office Excel.*