

ABSTRACT

In The Existance Of Sound Wave: The Development Of Bessel Horn Waveguide To Focus Sound Wave Energy And Produce Fire Extinguisher Effect

Fire is a particularly feared hazard in confined enclosures such as in spacecraft and others. Therefore a fire extinguisher is very important equipment in spacecraft. Unfortunately existing fire extinguisher was using chemical compound which is dangerous. Therefore a new fire extinguisher method is needed to overcome this problem.

In this paper we proposed a new methods using sound wave to extinguisher fire. Our method was using a speaker and a Bessel horn waveguide to focus the sound wave to overcome the fire energy and thus put the fire down. Using Bessel horn waveguide we can focus the sound wave energy and amplify its energy at about 6.3 dB average at every frequency. Also using this method we can extinguish fire at 30 Hz and 40 Hz frequency with fire energy 2926 joule.

Keywords : Bessel Horn Waveguide, Sound wave, fire extinguisher.