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*"That Sounds Suppressing" The Study of Acoustic Fire Suppression*

This project has been designed according to how a candle works. The wick of a candle absorbs the liquid paraffin which then evaporates from the heat of the flame to create fuel for the flame. When the candle is extinguished a small laminar stream of smoke is apparent. The smoke is made up partially of paraffin. This leads to the hypothesis that if a frequency of 40 Hz and high amplitude can make the smoke turbulent, the acoustics affect the fuel needed for combustion. However, if a 300 Hz frequency and high amplitude can make the smoke turbulent, the acoustics affect something other than the fuel needed for combustion. These two frequencies are important because a 40 Hz frequency is the most effective at extinguishing the flame, but a 300 Hz frequency wave will not. The procedure was to play a sound wave at the smoke burning off the incense first with a frequency of 40 Hz and then with a frequency of 300 Hz. Every time the sound wave with a frequency of 40 Hz was played at the laminar flow, it changed to turbulent. Also when the sound wave with a frequency of 300 Hz was played, the smoke remained a laminar flow. In conclusion, acoustic fire suppression is effective because it targets the fuel required for combustion. In today's world, acoustic fire suppression can be further developed into a fire prevention system. However, acoustic fire suppression is not an effective way to extinguish large fires.