

# **Design and analysis of thermoacoustic air conditioning system as environmental friendly device**

## **Abstract**

Thermoacoustic air conditioning system is a new technology design of cooling system which offers the possibility for simple and efficient energy conversion devices. This research is looking an alternative for CFC-contained system that caused severe environmental hazards. The system does not use refrigerant but utilizes sound waves that propagate through the air via molecular collisions. The important element in the system is the secondary thermodynamic medium, stack which provides the phasing between heat transfer and pressure changes at acoustical frequencies. The objective of this research is to observe the cooling phenomenon in this system, which the temperature different above and below the stack are then compared if any changes happened in both sections