

## C618895 : MAJOR MECHANICAL ENGINEERING

KEY WORD: SOLID WASTE / COMBUSTION / CHAMBER / INCINERATOR

SOUNTAREE THONGPAKNAM : STUDY AND DESIGN OF A SOLID WASTE TWO  
COMBUSTION CHAMBERS INCINERATOR. THESIS ADVISOR : ASSO.PROF.  
SOMSRI CHONGRUNGREONG, Ph.D. 264 pp. ISBN 974-637-185-1

This research aims at studying and designing a solid waste two combustion chambers incinerator with the feeding rate of 50 kg/h. The waste consists of leaves and papers with two feeding rates of 25 and 50 kg/h that are tested from 0% to 80% excess air. Each of batch feeding time holds constant at ten minutes for two hours.

The thermal efficiency of the incinerator is approximately 10%. The best combustion for leaves and papers occur in the ranges of 35-45% and 55-65%, respectively, at the feeding rate of 25 kg/h.

Carbon monoxide generated from combustion of leaves is smaller than that from papers. It was found that the carbon monoxide generated from the two chambers incinerator is 53% smaller than that from the single chamber incinerator. However, the ash from the two chambers incinerator is 70% more than the single chamber incinerator. This is due to the fact that the dust and the fly ash of the two chambers incinerator are setting down in the mixing and the second chambers but fly ash of single chamber incinerator fly away from a stack.

ภาควิชา.....วิศวกรรมเครื่องกล

สาขาวิชา.....วิศวกรรมเครื่องกล

ปีการศึกษา.....2540

ลายมือชื่อนิสิต..... สอนtaree

ลายมือชื่ออาจารย์ที่ปรึกษา..... สอน Som Sri Chongrungreong

ลายมือชื่ออาจารย์ที่ปรึกษาร่วม.....