

# **AN ABSTRACT OF A THESIS**

## **SINTERING OF CLASS F FLY ASH**

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**Master of Science in Chemical Engineering**

The sinterability of a class F fly ash was investigated as a function of processing conditions, compaction pressure (65.8 MPa-100.9 MPa), sintering temperature (1050 °C-1200 °C), and sintering time (0 min-90 min). Density, shrinkage, splitting tensile strength, and water absorption were evaluated as measures of sintering efficiency. Scanning electron microscopy (SEM) and x-ray microanalysis were used to examine both microstructure development and micro chemical changes due to sintering. Backscattered electron images combined with post image analysis show that extensive 2-D percolation networks are readily formed once a threshold sintering temperature and time are achieved.

# **SINTERING OF CLASS F FLY ASH**

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A Thesis

Presented to

The Faculty of the Graduate School

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by

Anil Kumar Vazrala

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In Partial Fulfillment

of the Requirements of the Degree

**MASTER OF SCIENCE**

Chemical Engineering

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# CERTIFICATE OF APPROVAL OF THESIS

## SINTERING OF CLASS F FLY ASH


by

Anil Kumar Vazrala

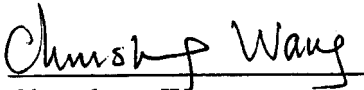
Graduate Advisory Committee:

  
J. J. Biernacki, Chairperson

9-27-06  
Date

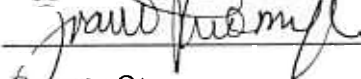
  
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