AICHE JOURNAL NOVEMBER 1987 • VOL. 33, NO. 11

The AIChE JOURNAL, a monthly publication of the American Institute of Chemical Engineers, is devoted to fundamental research and developments having immediate or potential value in chemical engineering.

FDITOR

Morton M. Denn

MANAGING EDITOR

Haeja L. Han

EDITORIAL ASSISTANTS

Debra E. Soltanoff Karen M. Simpson

CONSULTING EDITORS

Richard Alkire

Electrochemical Engineering

Bruce Finlayson

Computation Joe D. Goddard

Transport Processes

Louis Hegedus

Catalysis/Surface Science

Sheldon Isakoff

Materials

Roy Jackson

Transport Processes

George E. Keller, II

Separations

John Riggs

Materials

Stanley Sandler

Thermodynamics

John Seinfeld

Aerosols/Atmospheric Science

Reuel Shinnar

Reaction Engineering

Michael Shuler

Biochemical Engineering

George Stephanopoulos

Systems/Design

Larry F. Thompson

Electronic Materials

PUBLICATIONS DIRECTOR Diane Foster

New Symposium Series Title

New Developments in Fluidization and Fluid-**Particle Systems**

Wen-ching Yang, Editor

(AIChE Symposium Series Volume 83, No. 255)

The work described in this volume represents recent developments on the broad application of fluidization technology and related fluid-particle systems. Papers were selected from those presented at AIChE's 1985 Chicago and 1986 Miami Beach Meetings. CONTENTS

Entrainment of Particles from Fluidized Beds of Fine Powders. The Effects of Aeration on the Gravity Flow of Particulate Materials in Vertical Standpipes. Investigation of the Solid Flow Pattern in a Spouted Bed. Development of Reactivity Parameters for Characterization of Coal in Fluidized Bed Combustion. Modeling of Solids Mixing in a Coal-Limestone Fluidized Bed. The Prediction of Kinetic Forces and Kinetic Collision Energy of Solid Particles in Fluidized Beds. Pneumatic Transport of Coal by Steam. Solids Pressure Reduction Without Lockhoppers. Electrostatic Desulfuruzation of Coal in Fluidized Beds and Conveyors. Fluidization Process for Ortho-Cresol and 2,6-Xylenol. Processing Waste Gypsum in a Two-Zone Fluidized Bed Reactor. The Kinetics of the Fast Pyrolysis of Cellusose in a Fast Fluidized Bed Reactor. Initial Studies of Particle Trapping in Impeller Fluidizers.

1987 118 pp. ISBN 0-8169-0412-X LC87-14387

Pub S-255

AIChE Members \$18 Others \$36

SEND BOOK ORDERS to: AICHE Publication Sales Dept. 345 East 47 Street, New York, NY 10017.

Prepayment in U.S. currency is required. Prices subject to change. All sales are final.

AIChE Journal (ISSN 0001-1541) is published monthly by the American Institute of Chemical Engineers, 345 E. 47th St., New York, NY 10017. Manuscripts should be submitted to Editor Morton M. Denn, at the Dept. of Chemical Engineering, University of California, Berkeley, CA 94720, Phone (415) 643-6591. The statements and opinions in the AIChE Journal are those of the contribtutors, and AIChE assumes no responsibility for them. Annual subscription rates: \$275 for nonmembers, \$40 for members; outside U.S., add \$13 for postage. Single copies: \$30; outside U.S., add \$2 for postage. Second-class postage paid at New York, NY and additional mailing offices. Copyright 1987 by the American Institute of Chemical Engineers. Subscribers are requested to give prompt notification of any change of address. Postmaster: Send changes of address to AIChE Journal, 345 East 47th St., New York, NY 10017.

Authorization to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted by AIChE for libraries and other users registered with the Copyright Clearance Center (CCC) Transactional Reporting Service, provided that the \$3.00 per copy fee is paid directly to CCC, 21 Congress St., Salem, MA 01970. This consent does not extend to copying for general distribution, for advertising or promotional purposes, for inclusion in a publication, or for resale. Articles published before 1987 are subject to the same copyright conditions and the fee for each article is \$2.00. AIChE Journal fee code: 0001-1541/87 \$3.00.