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11/8/26
Engineering
Mechanical Engineering
Shao Lee Soo Papers, 1950-1998
Box 1:
BOOKS AND PUBLICATIONS
Thermodynamics of Engineering Science–Correspondence, 1954-64 (2 folders)
Analytical Thermodynamics-Correspondence, 1958-68
Direct Energy Conversion-Correspondence, 1965-76
Dynamics of Multiphase Systems-Correspondence, 1965-72
Instrumentation for Fluid Particle Flow - Correspondence, 1985-96
Particulates and Continuum: Multiphase Fluid Dynamics—Correspondence, 1988-92
Particulate Two Phase Flows-Correspondence, 1990-92
Journal Articles, 1955-64 (2 folders)
       1968-70 (2 folders)
       1970-77 (2 folders)
      1970-94 (2 folders)
Box 2:
       1982-93 (2 folders)
       1985-90 (2 folders)
GENERAL CORRESPONDENCE
       1954-95
       1958-65
       1961-62
      1968
      1969
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      1971
      1972
Box 3:
      1973-74
       1974
       1974-75
      1976
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## <u>Box 4</u>:

## RECOMMENDATION LETTERS

Access to a file of an individual named below will only be granted after a researcher has provided either: a) evidence the individual is deceased or: b) a letter from the individual granting permission to access the file.

## 

Gary Morr
Erh Lin
Gerald Colver
Elaine Washington
Dennis Lane
Patrick Alexander Burrell
Stephen Kin-Keung Tung
Larry Rodgers
Thomas Payne

> Andy Hui James Stukel Peter Wolff John Koch

## 1972

Tze-Show Chow

Sang Woo Lee

James J. Stukel

Frank Morrison, Jr.

Abdel El Kouh

R. L. Peskin

A. Ben Huang

Yong Nak Lee

Stephen Kin-Keung Tung

John Koch

David Allman

Sanghee Hong

John Hammond

John Martin Hughes

Fernando Rodriguez Chirinos

Larry Rodgers

Paul Thiess

Norman Warpinski

Donald Lee Fenton

Gary Michael Wegner

Gary Morr

Thomas Petrie

Brian Burdiak

Feng-Nan Lin

### 1973

Frederick Hammitt

G. J. Trezek

Darsh T. Wasan

Henri G. Rigo

Feng-Nan Lin

Donald Vaitkus

Wen L. Chow

Peter Wolff

Stephen Colburn

Goodarz Ahmadi

Douglas Pessoni

Behrouz Oliazadeh

Larry Rodgers

Ron Pape

Stephen Tung

Sanghee Hong

Velma Gadbury

Richard Schulze

Stephen Zahos

Francisco Puleo

Paul Thiess

## 1974-75

Richard Peskin

June Kempka

**Tze-Show Chow** 

R. C. Jordan

George Trezek

Abdel Elkouh

Benjamin Gal-Or

Robine Lee

A. Ben Huang

Ting W. Lee

Larry Rodgers

Paul Thiess

1 aui 1 ilicss

Gerald Colver

Sanghee Hong

G. F. Rowe

Perry Blackshear, Jr.

**Edwin Boston** 

Samuel Pan

James Wedding

Chang-lin Tien

Ralph Benway

Sharon Ho

Marvin Krasnow

Preston McDaniel, Jr.

Jeffrey Wang

Ronald Pape

C. W. Tan

## 1976

Wen-Ching Yang

J. S. Mason

Donald Fenton

Gerald Colver

**Ronald Thomas Gibbs** 

Ronald Pape

Chiang Liauw

James Curry

Craig Dutton

John Wu

Homayoun Ghaffari-T.

Donald Myronuk

John Starkweather

**Paul Thiess** 

James Wedding

James Saunders, Jr.

S. K. Griffiths

Ronald Gibbs

Larry D. Reed

Chang-lin Tien

James Huntzicker

Judy Dahl

Michael Rieber

Sang Woo Lee

Chor-Weng Tan

Zalman Lavan

Stephen Sias

## 1977

Ronald T. Gibbs

William John Meyers

C. H. Chen

M. Nakai

R. O. Buckius

Michael Briski

Lon Ballard

Herman Krier

Kwong-Tsun Ma

Marvin Krasnow

Jacobo Agrest

John Krazinski

Richard Peskin

T. R. Dali

Samuel S. Pan

Homayoun Ghaffari-T.

Donald Fenton
Jim Liu
James G. Daley
Dimitri Gidaspow
Gerald Colver
Donald Watkins
Chiang Liauw
Ronald Pape

#### 1978

S. S. Bharwani Martin Wolff

Itzhak Elperin

David Chato

Alek Chen

Satish Saxena

John David Tyrrel

Saeed Rezakhany

Mohammad Farshbaf

R. O. Buckius

Horacio Perez-Blanco

Tze-show Chow

Ronald Gibbs

James Saunders, Jr.

Marvin Krasnow

B. T. Chao

Lun Shun Yao

David Lohbauer

Robert W. Porter

James R. D. Lee

Andrea Sha

Anna Yu-min Cheng

Song-Chin Lu

Samuel S. Pan

Vipinchandra L. Shah

Wayne Jouse

## 1980

Horacio Perez-Blanco Luigi Fasso Felix Chen David Chato Gerald Colver

J. S. Yu

Ralph Hewitt

Mohamed Benkessirat

Robert Neal Niemeier

Larry Wilson

**Donald Watkins** 

Carl Chow

Brian Duff

Abdel Djemil

Eric Kinder

Abdelkader Benchamma

Hsiao Chu Lin

Haeok Lee

Jeyhoon Khodadadi

Kai Kong

Paul Y. Oh

Matthew Carroll

Ronald Gibbs

Michael Sievers

Alek Chen

James Liljegren

Bruce Boughton

Taeyoung Han

Robert Porter

Sen Nieh

Ali Heydari

Robine Lee

Jeff Creen

Song Cai

Jim Liu

Seraj Bharwani

Chiang Liauw

Chandan Rao

S. A. Ho

Andrea Sha

William Hsiong

Richard Chittenden

David Eisenman

1982

Hisashi Kono

Harold Bergee

Tung-Mao Shih

Felix Litman

Steve Kim

Mitchell Sledge

Mohamed Benkessirat

Jiin-Lang Lee

Patrick McGovern

David Underwood

Chieh Chen

Henry Jung

Sen Nieh

Shantha Ravi Kumar

Michael Rieber

Stephen Sias

Charles Miao

Chivey Wu

Henry Tung

Young-Don Choi

Hamid Arastoopour

Weimin Kwank

Paul Chang

Nan-yan Wang

Albert Rinozzi

A. K. Ghosh

Chang Sohn

Felix Chen

Kyung Shim

**Donald Watkins** 

Ellie Ng

Abdelkader Benchamma

Joseph Prusa

Ronald Gibbs

Mehdi Bahadori

Larry Rodgers

Laurence Wilson

Fadhel Berrahou

Mehdi Bahadori

Carl Chow

Chiang Liauw

# <u>Box 5</u>:

1984

Hisham Naser-El-Din

**Donald Watkins** 

Gerald Colver

Douglas Darling

Zhu Chao

Ikhwan Cho

James Klausner

Qiong Li

Chao-Hsin Lin

Renwei Mei

Seshu Dharmavaram

Joseph Philips

Domenico Maurizio Fenderico

Keng Leong

Tung-Mao Shih

Jim Saunders

Sen Nieh

Henry Jung

Joanne Librande

Chivey Wu

James Henry Saunders, Jr.

Shimao Ni

Liming Chang

Mamoru Ishii

Jian-Wen Li

Davood Moslemian

Marvin Krasnow

R. W. Lyczkowski

**Donald Vaitkus** 

Paul Steranka, Jr.

Michael Frauens

Kai Kong

Raed Sherif

Haeok Lee

**David Chato** 

Jeffrey Norton

William T. Sha

Hamid Arastoopour

M. C. Roco

James Lee

Michael Frauens

Henry Jung

Felix Chen

J. V. S. Prasad

Russel D. Skocypec Hoang Nguyen Chang-Tsan Hua James Klaus Felix Litman Sandanand Gokhale Harold Bergee

## 1987

Hamid Arastoopour

Nigel Clark

Chao-Hsin Lin

Haoming Guo

Leonard Shih

Daniel Brandolino

June Kempka

**Douglas Darling** 

Shyang-Lin Kuo

Jeffrey Norton

Seshasayi Dharmavaram

Rory Flemmer

Marvin Krasnow

Carl Chow

Sen Nieh

Alex Balboa

Hsiao Chu Lin

Nicholas Vlachos

Shimao Ni

James Klausner

Kuan Chen

Craig Langer

Ahmed Busnaina

Maurizio Fenderico

Hisam Nasr-El-Din

## 1989

Hamid Arastoopour Stanislaw Sieniutycz James Klausner K. R. Sridhar Horacio Perez-Blanco Lucia Liljegren Curtis Clark

Yong Nak Lee

Gunol Kocamustafaogullari

Michael Adewumi

Jiangang Sun

**Todd Richard Lucht** 

Chao-Hsin Lin

**Douglas Darling** 

M. K. Desai

Shaojiu Zhou

Darryl Baker

Nigel Clark

Chung-Shin Yuan

Stephen Kim

Christine Im-Sun

**Donald Walters** 

## 1990

Zhuoxiong Mao

Michael Adewumi

Hamid Arastoopour

Leshan Wang

Dandong Wang

David Luerkens

**Tammy Smith** 

Xiaoqing Huang

Henry Jung

K. R. Sridhar

Matt Slaughter

Nick Shin

Chih Wu

Tov Elperin

Jose M. Saiz Jabardo

Aili Ting

Joon S. Lee

Nigel Clark

Chao-Hsin Lin

Horacio Perez-Blanco

Lucia Liljegren

Angie Schroeder

Jeffrey Kautz

**Douglas Darling** 

James Klausner

Tung-Mao Shih

## 1991

Hayley Shen
Shimao Ni
Harsh Patel
Herchang Ay
John Gish
Hamid Arastoopour
Ping Cheng
Bo Mi
John Plumpe

Sen Nieh

Zhou Shuang

Chao Zhu

Dandong Wang

Nicholas Vlachos

Aili Ting Jason Cole

## 1992

James Klausner
Richard van de Wall
Barbara Liu Lin
Linda Hsueh-ling Chiang
Evangelos Karvounis
John Plumpe
Harsh Patel
Xiaoqing Huang
Michael Roco
Chao Zhu
Sen Nieh

## 1993

John Plumpe
James Klausner
Mike Roco
Chao Zhu
Rebecca Silver
Xiaolan Hu
Evangelos Karvounis
Chih Wu

Hayley Shen Chang Sohn

V. Rudolph L. S. Fan Guoqing Zhang Harri Kytomaa Richard van de Wall David Siegel

## 1994

Eric Hiller
Alek Chen
L. S. Fan
Michael Adewumi
Johnny Bao
James Klausner
Baolan Shi
Qiong Li
Amy Lee
Chao Zhu
Dmitry Vedensky
Xiaoqing Huang
V. Rudolph

## 1995

Baolan Shi
L. S. Fan
Kyung Park
Jaikrishnan Kadambi
Tov Elperin
Chao Zhu
Michael Adewumi
Eric Hiller
Richard Peskin
Avi Levy
Alexander A. Shraiber
Thinh Pham
Xiaoqing Huang

## 1996

Lucia Liljegren John Plumpe Johnny Bao Lixing Zhou Andrea Culumber

Douglas Anderson Ping-Wha Lin Baolan Shi J. R. Kadambi Chao Zhu Kelly Homan Wennan Zhang L. S. Fan

1997

Kelly Homan Alexander A. Shraiber Andrea Culumber Lucia Liljegren

#### SUBJECT FILES

American Society of Mechanical Engineers—Air Pollution Control Division, 1968-74
1971, 1974
Fellow, 1973
Argentina Lectures, 1974-78 (2 folders)
Argonne National Laboratory—Correspondence, 1975
1976-78
1983-85

## Box 6:

Fossil Energy Research Implementation Workshop, 1978 Reports–William T. Sha and S. L. Soo, "Multidomain Multiphase Fluid Mechanics," October 1976, revised March 1977

R. T. Gibbs, K. T. Ma, and S. L. Soo, "Experimental Studies on Pneumatic Pipe Transport of Particulates of Dolomites," October 1977

William Sha and S. L. Soo, "Numerical Modeling of Fluidized-Bed Combustor," November 1977

E. I. H. Lin, W. T. Sha, and S. L. Soo, "Stability Considerations and a Double-Diffusive Convection Model for Solar Ponds," April 1979

W. T. Sha, B. T. Chao, and S. L. Soo, "Time- and Volume-Averaged Conservation Equations for Multiphase Flow–Part One: System Without Internal Solid Structures," December 1984

W. T. Sha, B. T. Chao, and S. L. Soo, "Time- and Volume-Averaged Conservation Equations for Multiphase Flow Using Mass-Weighted Velocity and Internal Energy," January 1988

Army Research Office-Workshop, 1978

Atlas Chemical Industries, Inc.-Correspondence, 1970-71

Atomic Energy Commission, 1957-61

Australia Trip-Correspondence, 1988

Biographical Information—S. L. Soo, 1965-73

1992

Birmingham, England-Lecture, 1981

Carbon-Oxygen Fuel Cell-Correspondence, 1972

Research Reports, 1972

Caterpillar Tractor Company, 1963-66

Research Project, 1967

Center for Advanced Computation—Document 163: Michael Rieber, Shao Lee Soo, and James Stukel, "The Coal Future: Economic and Technological Analysis of Initiatives and Innovations to Secure Fuel Supply Independence," May 1975

"Appendix F-Coal Transportation: Unit Trains-Slurry and Pneumatic Pipelines," ca. 1975

"Appendix H-Medium Btu Coal Gasification," ca. 1975

Document 190--Michael Rieber and Shao Lee Soo, "Route Specific Cost Comparisons: Unit Trains, Coal Slurry Pipelines and Extra High Voltage Transmission," May 1976

Document 223–Michael Rieber, Shao Lee Soo, et al, "Comparative Coal Transportation Costs: An Economic and Engineering Analysis–Draft Final Report," May 1977

"Summary and Conclusions I," August 1977

"Coal Slurry Pipelines II," August 1977

"Barge Transport IV," August 1977

"Conveyor Belts V," August 1977

"Truck Haulage VI," August 1977

"Yellow Ball Rail VIII," August 1977

#### Box 7:

Center for Research on Sulfur in Coal, 1984-86

China-Japan Fluidization Symposium—Third, 1988

Clinton (IL) Nuclear Power Plant–Analysis of Steam Turbines, 1982-86 (2 folders)

Coal Desulfurization-Correspondence, 1984-90

Coal Gasification—Correspondence, 1975-82

Soo Process, 1977-81

Coal Research–Correspondence, 1986-89 (2 folders)

Coal Slurry Research-Notes and Papers, ca. 1990

Combustion Institute—"Particle-Gas-Surface Interactions in Pollution Control Devices," 1973

Construction Engineering Research Laboratories (CERL)–Research Proposal, 1973 Correspondence, 1995-96 Report—"Technical Assessment of Advanced Cooling Technologies in the Current Market," 1997

Consulting File, 1970-92

Cooling Technologies-Correspondence, 1995

Cooper-Bessemer Corporation–Report on Gas Generator, 1950

"Report on the Study of Wet-Compression in the Cooper-Bessemer Gas Generator," 1951

"Report on the Study of Supercharging the Cooper-Bessemer Gas Generator," 1952

Correspondence, 1955

Crowe, Clayton–Correspondence, 1976-77

Cummins Engine Company–Diesel Smoke Removal System, 1980-88 1984-85 (2 folders)

#### Box 8:

Detroit Edison, 1970

Dimick, Robert, 1963-64

Engineering College (University of Illinois)-Executive Committee, 1983-91

Engineering Experiment Station (University of Illinois)–Correspondence, 1959, 1961 Reports, 1960, 1967

Federal Energy Administration-Report: Michael Rieber and Shao Lee Soo, "The

Feasibility of Coal Mine Cooperatives: A Preliminary Report and Analysis," April 1975

Shao Lee Soo and Michael Rieber, "Report and Evaluation of the ILOK 4-Micron Coal Grinding Process," December 1975

Film and Cooling Research-Notes and Papers, 1991-92

Fluidyne Engineering Corporation, 1977

Foreign Travel Applications and Correspondence, 1987-89

French, J. L.-Correspondence, 1962-65

Handbook of Powder Technology-Correspondence, 1978-79

Harvard University–Notes for Hydro- and Aerodynamics Class Taught by Professor R. von Mises, 1950 (2 folders)

Hydrogen Energy Conference-2nd World, 1977-78

Illinois Power Company, 1974

Industrial Wastes Conference (22<sup>nd</sup>)–"Collection of Fine Particles: Devices and Their Evaluation," 1975

Institute of Chemical Metallurgy (China)-Chinese Academy of Sciences, 1991-92

International Journal of Multi-Phase Flow-Correspondence, 1973

1973-76

International Telephone and Telegraph Company, 1968-70

Intersociety Conference on Transportation (3<sup>rd</sup>)–"On the Feasibility of Long Distance Pneumatic Pipeline Transport of Coal," 1975

Inventions—System for Removing Free Electrons, 1962-63 Extended Surface Thermionic Converter, 1963-67 Rotary Electrostatic Precipitator, 1966 Inquiries Regarding, 1967-74 Design Notes Heat Flux Tube, 1967-69

## Box 9:

Oscillating Mass Flow Probe, 1971 Jet Propulsion Laboratory–Correspondence, 1984 Journal of Pipelines–Correspondence, 1980 Klausner, James-Correspondence, 1987 Kleinschmidt, R. V.-Power Plants Research Technique

Gas Turbine

Korea Institute of Science and Technology–Correspondence, 1979-80

McGrew, Frank-Correspondence, 1968-73

Mechanical and Industrial Engineering Department (University of

Illinois)-Correspondence, 1975-80

Merriam, Marshall, Shapiro and Klose, Attorneys at Law-Correspondence, 1967-71

1971-72 1975-78

Morgantown Energy Technology Center, 1987-88

Multiphase Mechanics-Correspondence, 1978-79

M. W. Kellogg Company-Correspondence, 1970-71

National Aeronautics and Space Administration (NASA)—Research Projects: "Simulation of Steady, Liquid-Vapor Flow Under 0-G by Using Immiscible, Neutrally Buoyant Droplets in Water," 1983-92 (2 folders)

"Simulation of Frictional Pressure Gradient in Liquid-Vapor Flows at Very High Volume Fraction," 1986-89

"Simulation of Flow of Liquid-Vapor Mixtures at Micro Gravity Conditions in Space," (2 folders)

Research Proposal—"Simulation of Frictional Pressure Gradient in Liquid-Vapor Flows in Zero Gravity," 1991-92

Research Report-B. T. Chao, S. L. Soo et al, "Simulation of Pressure Gradient in Developing Liquid-Vapor Flows and Forced Convection Boiling Heat Transfer at 0-G," 1987-88

Universities Space Research Association—Committee, 1972-73

#### Box 10:

1973-74 (2 folders)

University Space Engineering Research Program, 1987-88 National Science Foundation-Correspondence, 1960-66 1967 1968 1969 1970 1971 1975-78 1980-81 1980-83 1983-85 1986-88 Memos, Announcements, Meetings, and Minutes, 1962-66 Research Projects-"Transport Properties and Processes in Partially Ionized Gas," 1959-66 "Non-Equilibrium Transport Properties of Partially Ionized Nitrogen," 1963-65 1965-67 1966 1966-68 Carbon-Oxygen Fuel Cell, 1969-74 Electrofluidic Generator, 1972-77 (2 folders) "Modeling and Scaling of Dilute Solid-Gas Suspension Systems," 1975-1980 1977-79 1978-80 Electrohydrodynamic Generator, 1976-80 "Fluctuations in Pipe Flow of a Dense Suspension and Transport Parameters," 1987-95 1993-95 Box 11: "Unsteady Motion in Pipe Flow of Dense Gas-Solid Suspensions," 1990-"Effect of Diffusion on Collection and Impaction of a Sphere" Smoot, Ronald-Correspondence, 1963-64 Symposium Workshop--Two-Phase Flow and Heat Transfer, 1975-76 Undergraduate Instructional Scientific Grant, 1964-67 News Items-Soo-Related, 1952-70 Office of Coal Research–Grant Information, 1969 Office of Coal Research and Utilization—Correspondence (University of Illinois)—Correspondence, 1974

Owens-Corning Fiberglas Corporation—Correspondence, 1976-78, 1983

Particle Technology, 2<sup>nd</sup> World Congress-Kyoto, Japan, 1990

Peoples' Republic of China-Peking Lectures, 1980-81

Visiting Scholars, 1979

1979-80

Perez-Blanco, Horacio-Correspondence, 1980

Personnel-Correspondence, 1960-65

1960-71

Personnel Requests-Correspondence, 1960-67

Photo Diodes–Research Notes

Pittsburgh Plate Glass Company-Correspondence, 1962-66

Pneumatic Transport System-Correspondence, 1971-74

Princeton University-Mechanical Engineering Department Project, 1955-62

Project SQUID–Renewal Proposal, 1959

Talks, 1961-63

Outline of Study on Thermal Electrification and Removal of Electrons by Solid Particles, 1964

Final Report, 1964

Proposal Reviews–Correspondence, 1962-98 (3 folders)

Pullman Kellogg Company–Correspondence, 1977-79

Redman Heenan Froude, Limited-Correspondence, 1972-73

Reprint Requests, 1959-60

1961-62

Research-Cottrell, Inc.—Correspondence, 1966

Research Projects-Correspondence, 1953-61

Rheem Manufacturing Company, 1967-69

Science Information Exchange–Research Project Reports, 1962-75

#### Box 12:

Sha, W. T., 1976-85

1977-79

Snyder, Ray–Corresondence, 1966-74

"Steam and Heating Engineer," December 1970

Stearn, C. W.-Correspondence, 1965

Stout, Glenn–Correspondence, 1974-75

Stukel, James J-Correspondence, 1965-71

Superconductivity–Notes by R.C. Dimick

Theory of Turbulence-Notes

Thermal Research and Engineering Corporation—Proposal for the Research and

Development of a System for Producing Extreme High Temperature Air by

Chemical Burning, 1958

Proposal for a System Analysis on Application of Gas-Solid Two-Phase

Suspension in a Gas Turbine Power Plant, 1958

Proposal for a Basic Study on Application of Gas-Solid Two-Phase Suspension for Reactor Cooling, 1959

Correspondence, 1959-60

Thermodynamics Lab-Visitors Book, 1967

Trane Thermal Company-Correspondence, 1978

United Air Specialists, Inc.-Correspondence, 1968-70

United States Army Missile Command—"Preliminary Investigation of Flow Modeling During Solid Propellant Processing," 1988

United States Department of Energy–Correspondence, 1984-86

United States Department of Transportation—Conference on America's Freight System in the '80s and '90s, 1976

United States Environmental Protection Agency–Correspondence, 1978-81 Report: "Wind Blown Dust from Storage Piles–Generation, Dispersion, and Control," 1982

United States House of Representatives, Committee on Science and

Technology-Hearings on Coal Pipeline Transportation, 1976 (3 folders)

University of Hawaii-Correspondence, 1959-61

University of Tennessee–Aerospace Lecture, 1961

University of Toronto-Correspondence, 1969

University Research Board (University of Illinois)-Correspondence, 1960-61

Von Karman Institute for Fluid Dynamics (Belgium)–Lectures, 1972-73

Wedding, James-Correspondence, 1989-98

Yarway Corporation, 1967-71

1973

Yunchuan Aisinjioro-Soo Distinguished Lectureship, 1992-95 (2 folders)

#### Box 13:

#### ADDITIONAL PUBLICATIONS

#### 1961-1963

- S.L. Soo "Gas Dynamic Processes Involving Suspended Solids" *A.I.Ch.E. Journal* September, 1961
- S.L. Soo et al."Transient Measurements by Vacuum Gauge Systems" *The Ninth National American Vacuum Society* 1962
- S.L. Soo "Boundary Layer Motion of a Gas-Solids Suspension" *Proceedings of the Symposium on the Interaction Between Fluids and Particles* 1962
- S.L. Soo et al. "Experimental Study of Thermal Electrification of a Gas-Solid System" Multi-Phase Flow Symposium 1963
- S.L. Soo et al."Measurement of Pressure in an Ultra-High Vacuum" Technical Documentary Report No. AEDC-TDR-63-49 1963

#### 1967-1993

S.L. Soo et al. "A Study on the Measurement of Mass Flow of Pulverized Coal and Concentrations of Fly Ash" A Progress Report 1967

- S.L. Soo "Diffusion in Multiphase Flow" Iranian Journa of Science and Technology 1978
- S.L. Soo et al."Measurement of Electrostatic Charges and Concentration of Particles in the Freeboard of a Fluidized Bed 1982
- S.L. Soo et al. "Generation of Fine Particles of Coal by Compaction" *Journal of Powder & Bulk Solids Technology* 1983
- S.L. Soo et al."Measurement of Local Statistical Properties of Particle Motion in a Dense Gas-Solid Suspension" *Advanced Powder Technology* 1993

## CAC Document No. 223 Vol. 1 (3 folders)

S.L. Soo et al. "Comparative Coal Transportation Costs" Center for Advanced Computation Document No. 223 Vol. 1 (3 folders) 1977

## CAC Document No. 223 Vol. 2 (3 folders)

S.L. Soo et al. "Comparative Coal Transportation Costs" Center for Advanced Computation Document No. 223 Vol. 2 (3 folders)1977

#### Box 14:

### A Steam Process for Coal Gasification

- S.L. Soo "Formation of Bubbles in a Fluidized Bed"1974
- S.L. Soo et al. "A Steam Process for Coal Gasification" 1978
- S.L. Soo et al. "Density and its fluctuation in Startified Flow of a Dense Gas-Solid Suspension"1990
- S.L Soo et al. "An Improved Correlation for Two-Phased Frictional Pressure Drop in Boinling and Adiabatic Downflow in the Annular Flow Regime" 1991
- S.L. Soo et al. "Measurement "Measurement of Local Statistical Properties of Particle Motion in a Dense Gas-Solid Suspension" 1992

#### DOE NSF WHSP

- S.L. Soo et al. "Modeling of Pipe Flow of a Gas-Solid Suspension Electrostatic and Gravity Effects" 1987
- S.L. Soo et al. "Measurement of Velocity of Particles in a Dense Suspension by Cross Correlation of Dual Laser Beams" 1991

## Publications about flow

- S.L. Soo "Pipe Flow of a Dense Suspension" 1986
- S.L. Soo et al. "On Boundary Conditions of Particle Phase and Collection Efficiency in Cyclones" 1991
- S.L. Soo et al. "The Steady Horizontal Flow of a Wall Jet Into a Large-Width Cavity"

1998

S.L. Soo et al. "Laminar Flow Efficiency of Stratified Chilled-Water Storage Tanks" 1998

## A Note on erosion by moving dust particles

- S.L. Soo "Long Distance Pneumatic Transportation" 1984
- S.L. Soo et al. "Statistical Properties of Dense Suspensions in Pipeflow" 1989
- S.L. Soo "Comparative Formulations of Multiphase Flow" 1989

### Steam Coal Pump

Steam Ejector Coal Pump

S.L. Soo et al. "Effect of Electrostatic Charge Distribution on the Dynamics of Solid Particle in a Gaseous Suspension" 1985

Proceedings of the 20th Intersociety Energy Conversion Engineering Conference" 1985 Proceedings Third Annual Pittsburgh Coal Conference 1986

- S.L. Soo et al. "A Corona Discharge Probe System for Measuring Phase Velocities in a Dense Suspension"1989
- S.L. Soo et al. "Development of a Steady Flow of Liquid Film Over a Domed Cylinder" 1993

#### **Loose Publications**

- S.L. Soo "Effect of Simultaneous Diffusion and Fall-Out from Plumes of Stacks and Jet Engines" 1970
- S.L. Soo "A Critical Review on Electrostatic Precipitators" 1971
- S.L. Soo et al. "Generation of Fine Particles of Coal by Compaction" 1983
- S.L. Soo et al. "Generation of Fine Dust Via Compaction of Granular Materials" 1983 Proceedings of the 20th Intersociety Energy Conversion Engineering Conference 1985
- S.L. Soo et al. "Effect of Electrostatic Charge Distribution on the Dynamics of a Solid Particle in a Gaseous Suspension" 1985
- S.L. Soo "Interaction of Gravity and Electrostatic Effects in Pipe Flow of a Gas-Particle Suspension" 1985
- S.L. Soo et al. "A Corona Discharge Probe System for Measuring Phase Velocities in a Dense Suspension" 1989
- S.L. Soo "Challenges in the Fundamentals of Multiple Flow"1990
- S.L. Soo et al. "Thermal Performance of Stratified Chilled Water Storage Tanks" 1996
- S.L. Soo "Diffusion, Reactions, Transport, and Modeling"

## Chinese Books (2 folders)

James Dyson Patent Application 1988 (3 folders)

## Box 15 (Oversize):

27 oversize plans and drawings, ca. 1960s-1980s

#### Box 16:

#### COURSE NOTES AND MATERIALS

Applied Science 285 – Advanced Thermodynamics, ca. 1949

Engineering 330b – Structural Mechanics and other courses, 1948-1950

Engineering 244a – Elasticity cal& Plasticity (Professor Westergaard), 1949

Manuscript on Theory of Elasticity, Harold Wesergaard, ca. 1952

Mathematics, 1949-1950

Nuclear Rockets and Fusion Reactions, ca. 1950s

Jet Propulsion Research Program (Dept. of Aeronautical Engineering, Princeton University), 1957-1958

"High Temperature – High Pressure Test Loop Study" WADC (Wright Air Development Center) Technical Report 57-601, 1957

MIT Notes on Aerodynamics of Compressible Fluids, 1950

Machine Design, ca. 1950s

Heat Transfer, ca. 1950s

Mechanical Engineering 323 & Thermodynamics 222 (Princeton University), 1956-1959

Physics 553 – Modern Mechanics (Princeton University), ca. 1950s

Heat Exchangers, 1958-1962

Cooper-Bessemer Corporation

Free Piston Engine Design, 1956

Engine Cooling, 1952-1955

High Pressure Hot Gas Generator, 1954

Brown Boveri Review, 1954

Gas Turbine Centrifugal Refrigeration for Air-Conditioning, 1955

F.R. Gas Gen. Locomotive, ca. 1950s

Controls – 5500 Plant, 1952-1953

Magnetic Drive and Control of Free Piston Engine, 1955

Report on the Study of Supercharging the Cooper-Bessemer Gas Generator, 1952

## Box 17:

Report on the Study of Wet-Compression in the Cooper-Bessemer Gas Generator, 1951

Straight Gas Turbine, 1952-1955

Project 204-D, 1951

Turbine Design Notes, ca. 1950s

San Jose State College, 1960-1961

Notes, ca. 1950s

Preliminary Report on the Study of the Usefulness of Ruston TA Design in Semi-Closed Cycle Plant, 1955

Power Jets Report No. 2173/AC.19, 1954

Air Conditioning, 1955

Variable Temperature, 1945, 1953

An Analysis of Periodic Flow of Heat in Engines, 1952

Gas Steam Cycle, 1952

Notes on Design of Ducting and Accessories, 1955

Report on the Study of the Pressure Wave Effect of the Free-Piston Gas Generator Turbine Plant, 1952

C-B 185-D, 1951

Cement Plant Gas Turbine, 1953-1957

F.P. Problems, 1951-1954

Two-Cycle Turbocharging, 1954

Wet Compression, 1953

Baldwin Unit, ca. 1950s

Marine Boiler, 1953

The Use of Centrifugal Compressors on Natural Gas Pipe Lines, 1952

Progress Report on the Wet-Compression-Ignition Engine Cycle, Cooper-

Bessemer Project 185-D, Harvard University, 1951

Compound Free Piston Gas Generator Turbine Cycles, 1954

An Analysis of Periodic Flow of Heat in Engines, 1952

Cooper-Bessemer Corporation Market Research Policy, 1955

Axial Gas Compressor, 1953-1955

Pressure Wave Effects Papers, 1952

Market Research Report on the Small Gas Turbine, 1955

Publications and Notes, ca. 1954

Stator Angles-Helme, 1954

Polytechnic Institute of Brooklyn, 1960

High Temperature-High Pressure Test Loop Study, Power Plant Laboratory,

Contract NO. AF 33(616)-3520, USAF Task No. 30124, 1957-1958

Natural Convection over a Flat Plate in an Accelerated System, 1958

National Fuel Energy Survey, 1956-1957

National Advisory Committee for Aeronautics, Technical Note No. 1201,

Performance of Axial-Flow Fan and Compressor Blades Designed for High Loadings, ca. 1950s

"Reversible Heating and Air-Conditioning," a Report to the Cooper-Bessemer Corporation, 1955

Axial Data, ca. 1950s

Small Gas Turbines, Correspondence, Notes, and Figures, 1954-1955

Correspondence re: Gas Turbine II, 1953-1954

Design Data: Continuous Combustion 5500 Horsepower Gas Turbine Market Research, 1955

## Box 18:

#### CATERPILLAR TRACTOR COMPANY

Performance Turbines, ca. 1960s

Wade Gate, ca. 1960s

Nozzle-less Housing, ca. 1961

Data Sheets, ca. 1960s

Supersonic Radical Compressors, ca. 1960s

Gas Engines, 1963-1964

Scavenging, 1962

Valve Flow Areas and Pressure Drops, 1965

Engine Development, ca. 1963

Engine Study Notes, ca. 1960s

Engine Research, ca. 1960s

Fluid Amplification, 1965

Advanced 600 Horsepower Gas Turbine Engine, 1960

Figures and Research Data, ca. 1960s

Notes (5 folders), ca. 1950s-1960s

Notes, ca. 1962-1963

Notes, 1966-1967

Piston Velocity and Acceleration, ca. 1965

Working Notes, 1963-1967

Notes and Articles, 1958-1965

"Builders Report on 600 HP Army-Navy Turbine," Gas Turbine Progress, June 1962

High Power Pressure, 1962

Publications, 1952-1967

American Society of Mechanical Engineers (ASME) Publications, 1965-1967

Final Report – Fluid State Amplifier and Compensation for the Model NV-RI Gimbal Actuator N6523193, 1965

#### Box 19:

Correspondence, Notes, and Plans, 1960

H. H. Korst Engineering Consultants Progress Report

- "Boundary Layer Motion and Separation in Vanless Diffusers," 1961
- "Nozzle-less Housing for Turbines," 1962
- "Notes on Turbine Design," 1962
- "Wavy Spiral Heat Exchanger I," 1963

"Numerical Computation of Scavenging in a Super-charged Engine," 1963
"Annular Diffusers III," 1964
List of Reports to Caterpillar Tractor Co., 1964
Revised Auxiliary Functions," 1965

#### GRADIENT AND SOLAR POND RESEARCH

Research materials from Argonne National Laboratory, 1979

Mechanical and Industrial Engineering Seminar, 1979-1980

On Thermal Energy Storage and the Use of Commix-SA for its Evaluation & Enhancement, ca. 1979

Low Temperature Grain Drying Alternatives (Gene C. Shove), 1978

Solar Pond Proposal, ca. 1979

Grain Conditioning Conference Proceedings, 1975-1979

Stability Considerations and a Double-Diffusive Convection Model for Solar Ponds, 1979

Alcohol, 1979-1980

Proposal, Energy Farming by Solar Ponds, 1979

Drying and Storage Requirements for Grain, ca. 1979

A Double-Diffusive Convection Model for Solar Ponds, 1978

Thermal Energy Storage, ca. 1979

Design and Installation Manual for Thermal Energy Storage, 1979

Characteristics of a Double Diffusive Interface of High Density Stability Ratios, ca. 1970s

Saturated Solar Ponds – Modified Equations and Results of a Laboratory Experiment (Thesis), 1979

Observation and Analysis of a Full-Scale Experimental Salt Gradient Solar Pond (Dissertation), 1979

Fluid and Thermal Mixing in a Model Cold Leg and Downcomer with Loop Flow, ca. 1982

Solar Salt Gradient Ponds (2 folders), ca. 1977-1981

## Box 20:

### THERMAL HYDRAULICS AND SOLAR RESEARCH

Republic Steel, ca. 1978 Solar Energy Science, Atlanta, ca. 1984 Baldwin & Associates/Illinois Power Co. (2 folders), 1984 PFauter Hobbing Machines, 1985 Harris Corporation, 1984 White Sign, 1986 Time-O-Matic, 1986

Caterpillar Tractor, 1984
Caterpillar Tractor (Hobbing Machines), 1985-1986
Ashland Chemical Company, 1982-1986
Gas-Solid, Argonne National Laboratory Test Loop, 1984-1985
Unsteady Turbulent Two-Phase Flow, 1984
Genoble – Soo (2 folders), ca. 1970s-1980s
Genoble – Soo, Groetzbach, Multiphase Flow, 1983
Cryo Cooling, 1986-1987
Hydraulic Flows, 1986
Thermal Hydraulics, 1976-1981
Liquid Metal Boiling Working Group, 1977
Production and Maintenance of Salt Gradient, 1980
Solar Energy Research – Argonne National Laboratory, 1988
Extraction – Solar Pond, ca. 1977-1980

## **CONSULTING**

Kumar Consulting Services, 1984-1987 Coal Storage, 1985

#### GAS TURBINE RESEARCH

General Electric, 1982-1983

## Box 21:

Chicago White Metal Casting Co., 1986 Newton No. 2 CIPS, 1983-1986 CIPS, 1984-1987 Foster, George W., 1986-1987 CIPS-BFPT, 1982-1983 CILCO, 1983-1984 Vinyl Chloride, ca. 1983 CPC Pekin, ca. 1979

#### MECHANICAL SCIENCE AND ENGINEERING LOGO PROJECT

Correspondence and Logos, 2006