

Record Series Number



11/8/26
Engineering
Mechanical Engineering
Shao Lee Soo Papers, 1949-2006

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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)

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GENERAL CORRESPONDENCE

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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.

1971

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
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

Box 5:

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
Hayley Shen
Chang Sohn

1993

John Plumpe
James Klausner
Mike Roco
Chao Zhu
Rebecca Silver
Xiaolan Hu
Evangelos Karvounis
Chih Wu
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
Thinkh 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 (22nd)–“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 (3rd)–“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-
 1992
 “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, 2nd 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–Correspondence, 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
 1973
 Wedding, James–Correspondence, 1989-98
 Yarway Corporation, 1967-71
 1973
 Yunchuan Aisinjiro-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 Journal 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 Stratified Flow of a Dense Gas-Solid Suspension"1990
- S.L. Soo et al. "An Improved Correlation for Two-Phased Frictional Pressure Drop in Boiling and Adiabatic Downflow in the Annular Flow Regime" 1991
- S.L. Soo et al. "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 16:

COURSE NOTES AND MATERIALS

- Applied Science 285 – Advanced Thermodynamics, ca. 1949
- Engineering 330b – Structural Mechanics and other courses, 1948-1950
- Engineering 244a – Elasticity and Plasticity (Professor Westergaard), 1949
Manuscript on Theory of Elasticity, Harold Westergaard, 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

Oversize Folder: 49-1

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