



11/2/1  
Engineering  
Experiment Station  
Subject File, 1909-61

The materials listed in this document are available for research at the University of Illinois Archives. For more information, email [illiarch@illinois.edu](mailto:illiarch@illinois.edu) or search <http://www.library.illinois.edu/archives/archon> for the record series number.

Box 1:

Departmental Cooperative Research

Aeronautical Engineering

2 Experiments 1945-47, one on aerodynamic design in cooperation with the Navy Department, and one on airfoil design in cooperation with General Motors Corporation.

Ceramic Engineering

19 research projects 1924-52 (primarily 1933-44) on enamels and clay and feldspar linings - primarily in cooperation with private companies and trade associations. One project on boiler furnace refractories (1928-33) was in cooperation with the Utilities Research Commission.

Chemical Engineering

Experiments on electrolytic reductions (1939), partial oxidation (1929), air pollution in Chicago (1936), metastable boiling (1953) and the chemical reduction of Methane (1931). Sponsored by the National Science Foundation, the City of Chicago and private companies.

Extension files of research in cooperation with the Utilities Research Commission (an association of private power producers and bulk users). 5 folders contain general correspondence (1920-36) regarding the terms of contracts, remittances and suggestions. 11 folders contain records of individual experiments concerned with flue and boiler lining, gas corrosion, water solubility and stack and chimney gas.

Box 2:

Chemical Engineering

Utilities Research Commission (2 folders)

Civil Engineering

47 research projects 1926-62 (primarily 1938-52), on steel rollers, septic tanks, axle stresses, cylindrical shells as columns, rivets and joints, thermal stresses, metal fatigue, welding, joint expansion, reinforced concrete stresses, timber arches and floors, ship cracks, sewage aeration and structural stresses in aircraft. Sponsored primarily by manufacturing firms and associations, also by railroads, the Illinois State Highway Commission and the State of California.

Electrical Engineering

20 research projects 1927-58 (primarily 1944-57) on magnetic moment of hydrogen, pavement reflectance, radio direction finding, glass insulation, crystal oscillator circuits, magnetron tubes and summer cooling (1936-37). Sponsored by Utilities Research Commission, U. S. Army Signal Corps, Office of Naval Research and private firms.

### Mechanical Engineering

2 projects on steam and hot water heating. Sponsored by the INstitute of Boiler Radiator Manufacturers.

### Box 3:

#### Mechanical Engineering

6 research projects on steam heat (1931 and 1936-49), air conditioning research (1942-49), warm air furnaces (1919-39), thermocouple systems (1943) and Hudson River vehicular tunnel investigation (1921-23, 1941) by Maurice K. Fahnestock, A.P. Kratz and C.R. Richards. Sponsored by the College of Medicine, the National Association of Warm Air Heating and Air Conditioning, the New York State Bridge and Tunnel Commission and the Institute of Boiler and Radiator Manufacturers.

#### Mining and Metallurgical Engineering

5 research projects on the weldability of steel (1940), armor plate tests (1942), methods of coal cleaning (1933), failure in copper-beryllium alloys (1947) and investigation of Illinois coals (1928), sponsored by the Chicago ordinance district and private companies. The files also include a Cooperative Coal Mines Investigation (1911-29, 1933) in cooperation with the U.S. Bureau of Mines.

#### Physics

5 projects on mass spectroscopy research (1942), cathode ray indicators (1944) and absorption of sound (1932-37), sponsored by Stanolind Oil and Gas Company, U.S. Navy Bureau of Aeronautics and the U. S. Gypsum Company. There are 2 projects sponsored by the Office of Emergency Management (1943-45) on fog dispersion and atomic energy.

#### Railway Engineering

7 research projects including 3 on chilled iron car wheels sponsored by the Association of Manufacturers of Chilled Iron Car Wheels (1916-37), Steel Brake Shoes (1939) (Tennessee Coal and Iron), Nicholson Thermic Syphon (1930) (Illinois Central).

#### Theoretical and Applied Mathematics (T.A.M.)

35 research projects on reinforced concrete, metal fatigue, plastic fatigue, strength of light-weight beams and the bonding properties of clay 1925-56 (primarily 1933-46). Sponsored by manufacturers and manufacturer's associations.

### Box 4:

General folders, 1935-58, 1942-45, 1949-53.

Correspondence, including contracts, discussions of contracts, invitations to representatives from industry and cooperating agencies to visit campus, letters of transmittal, discussions and

arrangements for professional meetings and conventions.

Tests and proposals and tentative proposals (1934-44, 1951-53) including correspondence and covering letters.

Regulations governing tests and cooperative investigations (1932-34, 1937-40), statements and correspondence on procedure, protocol and legal and financial questions.

Research projects, arranged by sponsoring company or association:

- American Gas Association, Simplifying Air Duct Systems, 1947-56  
proposals and correspondence, 1952, 1955-56 (2 folders)
- American Iron and Steel Institute, Reinforced Concrete Footings, 1944-48
- Association of American Railroads, an extensive series of research projects on wheel loads, joint bars and rail web tests, rail investigations and girder stresses, 1913-59 (primarily 1935-52)
- Consolidated Feldspar Corporation, Feldspars for Whiteware industry, 1950-52
- Copper and Brass Research Association, Series of three experiments on copper joints and pipes, 1942-53
- Edison Research Committee, Tests on air to air heat pump, 1954
- Enameled Utensil Manufacturers Council, projects, 1946-56
- Illinois Division of Highways, projects, 1947-58
- Johnson Service Company, damper operation research, Part 1, 1953-57

Box 5:

- Dampers, Part 2, 1953-57
- National Science Foundation, Correspondence and proposals, 1952-60 (3 folders)
  - Behavior of Structural Metal under slow and rapid reversal of loading, 1959
  - Investigation of the engineering properties of Illite and Illitic Soils, 1960
  - Research on Vehicle Behavior Patterns Underlying Highway Design, 1960
  - Development of Demonstration Equipment for Structural Engineering, 1960-61
- Northern Illinois Gas Company, Project #3, 1955-57
- Ohmite Manufacturing Company, Development of Ceramic Resistors, 1951-55
- Panama Canal, Sandstone tests, 1930
- Reinforced Concrete Research Council, 3 projects on Strength of reinforced concrete, 1948-57
- State Water Survey Division (Illinois), Research in sewage Treatment, 1934-44
  - Hydraulic Engineering, 1945-46
- Technical Board of the Wrought Iron Steel Wheel Industry, causes of failure of wrought steel wheels, 1938-53
- Timkin Roller Bearing Company, Friction type roller bearings on railroads, 1948-53
- Utilities Research Commission, 4 projects on electrical topics and a folder of general correspondence and proposals, 1928-58
- Welding Research Council, Fatigue Strength of Welded Structural Joints, 1954-56
  - Steel Plate Subjected to Repeated Loads, 1951-55

## Patents:

General Correspondence and reports including descriptions of work, legal counsels' statements, patent summaries for registration purposes and transmittals, 1920-23, 1932, 1943

Babbitt, Harold E., 1929, 1933, 1935

Badger, A. E., 1940  
and King, B. W., 1948

Johnstone, H. F., 1929-38

Kerst, Donald W., 1940-45

Knipp, C. T. and Brown, H. A., 1922-25

Kunz, Jacob, 1918-25, 1929

Parr, Samuel W., Coking of Coal, 1915-27, 1934

Straub, F. G., 1929, 1935, 1937, 1940

Tykociner, Joseph T., Photoelectric Cell, 1937-38  
Talking Motion Picture, 1921-22

Yensen, T. D., 1914-16

Box 6:

## Department of Defense

List of Government Contracts, New and Amended, 1951-54

## Department of Army

Office of Ordinance Research, 1951-54, general correspondence

Proposal for a research program to be sponsored by Protective Construction Branch, Engineering Division, Military Construction, Office of the Chief of Engineers, U.S. Army (N. M. Newmark, E. K. Sinnamon), 1954

D. A. 240 (N. M. Newmark), 1958

D. A. 11-022 ORD 171, (1955) Mining and Metallurgy

D. A. 11-022 ORD 401, (1951-54) Theoretical and Applied Mathematics

D. A. 11-022 ORD 535, (1951-54) Mining and Metallurgy

D. A. 11-022 ORD 602, (1952-53) Mining and Metallurgy

D. A. 11-022 ORD 939, (1951-57) Physics

D. A. 11-022 ORD 995, (1953) Theoretical and Applied Mathematics

D. A. 11-022 ORD 1121, (1952-56) Mechanical Engineering

D. A. 11-022 ORD 1212, (1952-56) Physics

D. A. 11-022 ORD 1527, (1954) Theoretical and Applied Mathematics

D. A. 11-022 ORD 1707, (1954-60) Chemical Engineering

D. A. 11-022 ORD 2080, (1956-58) Mechanical Engineering

D. A. 11-022 ORD 2835, (1958-60) Aero (M. Z. Krzywoblocki)

Krzywoblocki and Ordinance Research Project at China Lake, California, 1954-58

M. Z. Krzywoblocki, New Program, Fluid Mechanics, High Altitude Flight,

## 1955

- D. A. 18-064-CML 445, (1951) Chemical Engineering
- D. A. 18-064-CML 4789, (1954) Chemical Engineering
- D. A. 20-089-ORD-3500, (1953-54) Mechanical Engineering
- D. A. 20-089-ORD-36546, (1953-55) Mechanical Engineering
- D. A. 22-079 Eng. 228, (1958)
- D. A. 33-017-CIV Eng.-56-6, (1957)
- D. A. 33-017-CIV Eng.-57-2, (1957)
- Signal Corps, D. A. 36-039-SC-205, (1950-52) Electrical Engineering
- D. A. 36-039-SC-52670, (1953-56) Electrical Engineering
- D.A. 44-009-eng-20, (1951) Civil Engineering
- D.A. 44-129-eng-239, (1953-54) Civil Engineering
- D.A. 44-129-eng-248, (1953-54) Civil Engineering
- D.A. 44-129-eng-312, (1952-55) Civil Engineering
- D.A. 44-129-eng-324, (1952) Civil Engineering
- D.A. 44-129-eng-344, (1958-59) Civil Engineering
- D.A. 44-129-eng-393, (1956-59) Civil Engineering
- Department of the Air Force
  - Air Force Proposals for Additional Research, 1946-53
  - Wright-Patterson AFB - cooperative research correspondence and materials, 1951-54
  - W33-038-ac 14520, (1946, 1953-54) Ceramic Engineering
  - W33-038-ac 20778, (1948-52) Electrical Engineering
  - W33-038-ac 21089, (1947) Theoretical and Applied Mathematics
  - W535-ac-40114, (1944-46) Ceramic Engineering
  - AF 18(600) 392, (1952-58) Mechanical Engineering
  - AF 18(600) 1018, (1955-57) Electrical Engineering
  - AF 19(122) - 5, (1948-50) Electrical Engineering
  - AF 19(604) 524, (1952-57) Electrical Engineering
  - AF 29(601) 464, (1957-59) Civil Engineering
  - AF 29(601) 1185, (1959) Civil Engineering
  - AF 29(601) 2151, (1960) Civil Engineering
  - AF 30 635 1406, (1957) Electrical Engineering
  - AF 31 616 2753, (1956) Theoretical and Applied Mathematics
  - AF 33 038 15677, (1952) Theoretical and Applied Mathematics
  - AF 33 038 20922, (1952-57) Electrical Engineering
  - AF 33 038 21251, (1951-55) Aeronautical Engineering
  - AF 33 038 21255, (1952-57) Electrical Engineering
  - AF 33 038 21587, (1953) Theoretical and Applied Mathematics
  - AF 33 038 28634, (1958) Theoretical and Applied Mathematics
  - AF 33 600 31319, (1956-61) Civil Engineering
  - AF 33 603 28, (1955-57) Ceramic Engineering

AF 33 616 52, (1951-55) Aeronautical Engineering  
 AF 33 616 87, (1952-53) Ceramic Engineering  
 AF 33 616 170, (1947-57) Civil Engineering  
 AF 33 616 Supplement to above, 1956

Box 7:

AF 33 616 291, (1952-53) Aeronautical Engineering  
 AF 33 616 3203, (1958) Civil Engineering  
 AF 33 616 3780, (1956-57) Civil Engineering  
 AF 33 616 5081, (1957) Theoretical and Applied Mathematics  
 AF 33 616 5658, (1958) Electrical Engineering  
 AF 49 638 212, (1958) Electrical Engineering  
 AF Electrical Engineering Unnumbered

Department of Navy

Office of Naval Research, General correspondence, 1944-54 (2 folders)  
 Proposals, 1951-57  
 Chemical Engineering correspondence and proposals, 1946-51  
 Theoretical and Applied Mathematics correspondence and proposals, 1946

NOBS 65789, (1954-57) Civil Engineering  
 NOBS 65790, (1954-58) Civil Engineering  
 NONR 177(00), (1952-54) Physics  
 NONR 1834(01), (1955-56) Civil Engineering  
 NONR 1834(08), (1949-57) Electrical Engineering  
 NONR 1834(10), (1958-59) Theoretical and Applied Mathematics  
 NONR 1834(14), (1954, 1958-59) Theoretical and Applied Mathematics  
 N6ori-71 Task IV, (1947-58) Theoretical and Applied Mathematics  
 N6ori-71 Task V, (1948-54) Civil Engineering  
 N6ori-71 Task VI, (1947-55) Civil Engineering  
 N6ori-71 Task VIII, (1946-48) Theoretical and Applied Mathematics  
 N6ori-71 Task IX, (1946, 1951-53) Aeronautical Engineering  
 N6ori-71 Task XI, (1951-53) Chemical Engineering  
 N6ori 07129, (1951-57) Physics  
 N6ori 07131, (1954-56) Physics  
 N6ori 07134, (1951-52) Civil Engineering  
 N6ori 071 Task 40, (1951-57) Electrical Engineering  
 N6ori 071 Task 49 (1953) Theoretical Engineering  
 N6ori 071 Task 50 (1955-58) Chemical Engineering  
 N6ori 071 Task 54 (1954-58) Physics  
 ONR 336(00)NR119-075 (1952-57) Electrical Engineering - Bio.

Sandia Corporation, 1949, 1954, 1958-59 Aeronautical Engineering  
 Office of the Associate Dean, 1894-1961

American Ordinance Association, newsletters, applications for honorary student membership, correspondence, national association bulletins, 1949  
 local post, 1949  
     bulletins, correspondence, photograph of members (including H. H. Jordan)

Armed Forces Student Training, including Army ROTC, Navy College Training Program, bulletins and curricula, 1943-49

Armed Services Technical Information Agency, book catalogs, bulletins, 1953

General Education, Bulletins and essays:  
     Proceedings of the 42nd annual convention of Association of Land-Grant College and Universities, 1929  
     News Bulletin of Institute of International Education, 1931  
     "Significant Facts on California Schools", 1931  
     "Educational Myopia" in School and Society, 1932  
     Economic Problems Confronting the Engineering Industries, 1935  
     "The Social Adjustment of Education" in School and Society, 1935  
     "Journalistic Education Under the Third Reich", 1935  
     Rev. John Evans, Higher Education, 1937-38  
     Coordination of Accrediting Activities, October 1939  
     Civilian War Service Opportunities for College and University Students, 1943  
     Proceedings of the Association of Land-Grant Colleges and Universities, 1945

Honor and Professional Societies and Fraternities:  
     Minutes of the Semi-Annual Meeting, the Institute of Boiler and Radiator Manufacturers, May, November 1953; June, November 1954  
     Institute of Boiler and Radiator Manufacturers, 9th Short Course on Hot Water and Steam Heating and Summer Cooling, June 1955, program, syllabus, correspondence  
     American Society of Heating and Ventilating Engineers, correspondence and research proposals, 1953  
     American Society of Refrigerating Engineers, correspondence, programs of meeting, 1952-54  
     Phi Eta Sigma, Phi Kappa Phi, banquet programs, manuals, initiation ceremonies, 1933-50

Box 8:

Harvey H. Jordan Papers

University of Illinois

Correspondence, with employers regarding student interviews, 1951-52  
     on student and professional affairs, memorial to Edward H. Waldo, 1943-50

Curiosities, strange correspondence to Deans Jordan and Everitt, 1927-60

Dedications of Buildings  
     General correspondence, 1947-50  
     Architecture Building Dedication, 1928  
     Ceramic Building, cornerstone, 1915

- dedication, 1916
- Engineering Hall, dedication, program, 1894
- Materials Testing Laboratory, cornerstone, 1928
  - dedication, invitations, program, 1930
- Physics Laboratory, opening, 1909
- Transportation Building, dedication, 1913
- Engineering, College of, Affairs
  - General file, curriculum, ranking among engineering schools, student problems, correspondence, 1950-51
  - Annual Report, Assistant Dean, College of Engineering, 1928
  - Committees, reports, organization, 1943-48
  - Controls System Laboratory, cost, reports, reorganization, 1950-51
  - Engineering Experiment Station, Statement of needs, 1917
    - Minutes of executive staff meetings, 1939-47
  - Library, organization of engineering library and correspondence, 1912-38
- Engineering Curriculum
  - English in Engineering Education, record of symposium at Columbus, Ohio, October 1932, reported by Robert L. Blair
  - Proposed Engineering-Law curriculum, correspondence and comment, 1940
- Student Affairs, College of Engineering
  - Investigation of rate of undergraduate students, studies and tabulation, 1923-43
  - Charles Kiser Student Loans, Champaign-Urbana Kiwanis, delinquent files, 1932-43
  - Freshman Psychological Exams, exam, correspondence, 1930-32
  - Study of grades of excessive cutting, D. M. Larrabee, 1935-36
  - Regulations of Military Withdrawals, 1943
  - Professional Engineering degrees, lists of candidates, 1939-43
- Testimonials and Memorials
  - Dean Milo S. Ketchum, decade of service, 1932, addresses, correspondence, lists of attendance
  - Arthur N. Talbot, convocation, April 1938, program, correspondence
  - Arthur C. Willard, testimonial dinner 1957, and correspondence regarding other testimonials, 1939-57



Box 9:

## Office of the Dean, College of Engineering

- University of Illinois, Bulletins, survey, policies, curriculum plans, reports

- Administration, primary reports relating to retirement and death benefit system, 1940-41

- Curricula:

- Proposed curriculum in Transportation

- Syllabus for College of Hygiene, 1947

- Physical Education for Women

- Illinois Defense Training Manual, 1941

- Lectures, series on curricula at UI, primarily in architecture, 1951

- Regulations and Statutes, University of Illinois, Student Affairs and engineering college

- Survey Report, University of Illinois, by a commission of the American Council on Education, 1943

- University and Departmental Reports

- Department of Chemistry, special circular, 1927

- Galesburg Undergraduate Division, history, 1946-49

- Report of Committee of Admissions from Secondary Schools, 1942

- University of Illinois Future Programs report, 1945

- President's Report - George D. Stoddard, 1946-50

- Program for University of Illinois Alumni in Chicago, 1939-40

- Constitution, University Club, 1907

- H.H. Jordan - pamphlets on South American and United States technical assistance to Uruguay and Chile, 1950-55

## College of Engineering 1917-18 War Activities

- Report from Assistant Dean H.H. Jordan to David Kinley, February 7, 1933

## American Society for Engineering Education

- Newsreleases, publications, minutes, memoranda (2 folders), 1963-64

## ASEE Executive Board

- Minutes, agenda, publications, correspondence, annual reports, newsreleases (4 folders), 1960-64

Box 10:

- ASEE Annual Meetings, programs, constitution, "ECPD Accreditation of Graduate Work in Engineering - the Industrial Viewpoint," by Monroe W. Kriegel, 1962

- ASEE General Council, minutes, reports, 1961-62

- Committee on Objective Criteria in Nuclear Engineering Education, Dragoman #8, 1960-62

- Committee on Relations with the Atomic Energy Commission, 1962-63

- ASEE-AEC Summer Institutes, information, reports, evaluations (6 folders), 1956-63

Agreements with University of Illinois relative to the services of W. Leighton Collins and  
 Paul T. Bryant, 1954-55, 1958-59  
 Industrial Fellowship Committee, 1959-62  
 Membership applications, 1962-65  
 Representation on National Research Council,  
 Division of Engineering and Industrial Research, 1960-63  
 Engineering College Research Council,  
 Executive Committee, 1951, 1953-55  
 United Nations Special Fund Reports, 1961  
 ASEE, Project Operating Unit,  
 Executive Board minutes, annual reports, grant proposals (2 folders), 1963-65

Box 11:

ASEE, Project Operating Unit, "A record of present projects and Proposals", 1964  
 Completed projects and proposals, executive board minutes, 1964-65  
 Active Projects, 1964-65  
 Inactive Projects, 1964-65  
 Executive board reports, summer fellowship programs, 1964-65  
 Associated Midwest Universities Council, minutes, reports, correspondence, membership (2  
 folders), 1964-66

Box 12:

Associated Midwest Universities Council, 1966-67  
 Criteria Committee, 1966  
 Engineering Experiment Station, correspondence (2 folders), 1952-61  
 Fellowship board, applications for Argonne National Laboratory Fellowships, 1964-65  
 Nuclear Engineering Education Committee (2 folders), 1961-62, 1966-67  
 Martin Sub-Committee, 1964  
 Sixth Annual Conference, 1964-65  
 Argonne Photos, 1964  
 Vincent Bendix Award Committee, (3 folders), 1956-59

Box 13:

Building Plans and Allocation, 1967  
 Campus Planning Committee (2 folders), 1960-61, 1963  
 Campus Neighborhood Plan  
 Cooperative Industrial Assistance Program, Central America, 1963  
 Chicago Area Research and Development Council, 1962-65  
 Laboratory Mechanic Negotiations, 1949-55

Laboratory Mechanic Union, Arbitration, University Brief, 1958  
Laboratory Mechanics Negotiations, 1958-59, 1959-61, 1967-69  
Land-Grant Universities, annual convention, Division of Engineering, committee meetings (3 folders), 1962-65  
Engineering Library Remodeling, 1967-68  
Long-Range Plans (2 folders), 1962-63, 1969-73, 1977  
Preliminary Estimates of Physical Facilities, 1969-1976, 1980  
Long Range Planning Committee, Preliminary Report, 1970

Box 14:

Committee for Non-Recurring Appropriations, 1955-59  
Committee on Objective Criteria for Nuclear Engineering Education, 1960-64  
Nuclear Science and Engineering Fellowship Board, ORINS (2 folders), 1961-62  
Ad Hoc Committee of Nuclear Research in Universities with Atomic Energy Commission support, 1962  
Remodeling Jobs, Completed, 1966-68  
Space and Buildings, Office on the Use of Space, 1960-62, 1965  
Space Projects, 1967  
Storekeeper and Lab Assistant, Negotiating Committee, 1959  
Sociological and Technological Realization of International Development of Education, (STRIDE), 1966-68  
Water Resources Center, 1961-66

4" of space available