

11/11/24

Engineering

Theoretical and Applied Mechanics

James O. Smith Papers, 1934-70

Box 1:

Biographical data, 1953-54, 1960, 1969-70

Memorial to James Ohrea Smith

Appointments, 1938-70

Statistical reports, 1965-70

Correspondence, A to W, 1935-37

Letters received while at Alabama: information on equipment and supplies, orders, information sheets and other communications. Folder F includes a paper on The Farm Home and The World Today.

Letters, 1934-36

Mostly 1935-36, about entering graduate school at Cornell, requests for information and quotations, letters about tests made, letters of recommendation. He was then Instructor in Mechanics and Testing at Alabama.

Correspondence, University of Illinois, 1938-39

Letters received and rough drafts and carbon copies of letters sent, in chronological order.  
Letters of recommendation: letters about theses, concerning publications, about materials and testing, communications about tests for clients, requests for equipment and travel expense vouchers and records

1940-42

1946-47

1948-49

1950-53

1954, 1963-68

Army affairs, 1950-52

Army forms, information and announcements. 5000th ORC R&D Unit. Illinois Military District, Navy Pier, Chicago/5000th USAR Research & Development (TNG), James O. Smith, Lt. Col. Ord D. Commanding

1952

About his promotion--list of OR R&D Unit locations and commanding officers and other items related to the Reserve Unit

Student Officer Education, 1964

From Student Detachment (5002) Headquarters, Fifth U.S. Army, Chicago. About Student Officers Consolidated Report of Program Completion (Civil Engineering and City Planning), with curriculum schedule, comments on T. A. M., and comments by Louis B. Wetmore, Department of City Planning and Landscape Architecture

Bowling, 1937-40

Faculty Bowling League, records, standings, rules and letter of information

Calculations

6th grade artwork, October 1953

English papers of Nancy Smith, 1959  
 Problem solutions, T. A. M. 426, 1970  
 T. A. M. 114, Theory of Elasticity, class notes, 188 p., 1941-42  
 Class notes and calculations for T. A. M. 112  
     Mechanics 103  
     1946-48, 1951  
         T. A. M. 118 materials, calculations, quizzes, also, T. A. M. 41, 321, 116 (1946-48),  
         117, 1 and 3. 1951 announcement of T. A. M. Department dinner meeting  
 T. A. M. Department, 1947-49, 1966  
     Information on student wages (1949), list of T. A. M. staff (1947-48). Items related to the  
     nomination of Ralph J. King by the Honor and Awards Committee, 1966  
 T. A. M. 221  
     "Elementary Mechanics of Deformable Bodies" or "Resistance of Materials," material about  
     course content and construction, ca. 1957  
 War Armament, Defense Research Committee, 1950-51  
     Schedule of visit of officials of the Office of Air Research (1951) and related  
     announcements. 1950 recommendations regarding University defense research  
     policy. Minutes of related Engineering Experiment Station Committee meetings.  
 University affairs, 1938-49  
     Mimeographed announcements, letters and executive committee meeting minutes, especially  
     material related to the Engineering College  
     1952  
         Mimeographed reports, especially related to the University Senate  
     1951-66  
         University Senate, committee reports, letters, announcements and report of the  
         committee on Long Range Plans, February 15, 1962  
 Engineering College, Policy and Development Committee, 1943-46  
     Minutes, letters, notes and related information  
     1946-50  
         Minutes, letters, notes and related information  
     More notes, minutes, announcements and reports, 1947-70  
 Buildings, late 1940's  
     Plans & requests for improvement, includes consideration of Ceramics, Electrical  
     Engineering, Mechanical Engineering, Metallurgical Engineering, Physics  
     and Talbot Lab (T. A. M.)  
 Long range plans, 1961

Box 2:

Proposed doctoral programs, 1969-70  
     Xerox copies of proposals for new University of Illinois programs and related articles,  
     including Economics, Chemistry, Physiology and Social Work

## Engineering Education ECPD, 1961

- Copies of editorials and articles, 1964

- ASEE (5 folders)

- Goals of Engineering Education, by Smith and Curtis. Various reports and editions, early drafts, corrected copies, annotated copies for other people and related material. Appendix is "Engineering as a General Preparation for Life."

- 3 folders, 1964-70

## Engineering, Subcommittee on Humanities and Social Sciences, 1962-64

- Letters, minutes, drafts, reports

## Engineering/Humanities/Social Science

- Draft reports (result was required sequences of elective courses)

- Final drafts, undated material

- Related publications

## Committee on Continuing Engineering Education, 1966-70

- Report and related material

## Ford Foundation correspondence, 1958-67 (4 folders)

- Loans, 1962-70

- Applications for people to work in T. A. M. Information about the Ford Foundation program

## Student loan applications, 1962

## BUILD Conference on "The Role of the University in Continuing Engineering Education," related material

Box 3:

## Continuing Engineering Education

- Related publications

## Alabama and North Carolina

- Information on their engineering education programs at the state universities

## Missouri--Rolla

- A report by the Department of Engineering Mechanics at the University of Missouri, in support of its request . . . to offer graduate work leading to the PhD (Smith assisted in evaluation)

## Ohio State and Wisconsin

- Information about their programs

## Tennessee State University, Nashville, 1970

- Reports of consultants on their engineering program

## Report on Education Needs of Rockford Area Engineers, 1964

## Quad-cities, graduate study center, Rock Island, 1969-70

- Information and papers on proposed programs in T. A. M. and E. E.

## Engineering extension, 1970

## Manuscript, The Beam Formula, 8 pp.

- Math Bulletin, "Internal stress due to the pressure of one body upon another. Including original mathematical analysis"
- "Plastic Bending of Mild Steel Beams subjected to Unsymmetrical Loading" (Introductory material only), 1951
- "Historical Developments in the Relationship between Mechanical Engineering and Engineering Mechanics," (copy with marginal notes), presented, ASME meeting, December 1964
- Publication, "The Effect of Range of Stress on the Torsional Fatigue Strength of Steel," with manuscript, 1939
- "Fatigue and Static Load Tests of a High-Strength Cast Iron at Elevated Temperatures," manuscript and preprint, 1941
- Notes Preparation Bul. 334
- Publication, "The Effect of Range of Stress on the Fatigue Strength of Metals," bulletin 334, includes manuscript, 1942
- "The Notch Sensitivity of Alloyed Cast Irons subjected to Repeated and Static Loads," 1942
- "Stresses due to Tangential and Normal Loads on an Elastic Solid with Application to some Contact Stress Problems," 1952
- "Axial Tension and Bending Interaction Curves for Members loaded Inelastically," 1952
- "Critical Review and Interpretation of the Literature on Plastic (Inelastic) Behavior of Engineering Metallic Materials," 1952 (see also Plasticity Project, under "Research")
- 1961-68
- "A Resolved Shearing Stress Energy Theory of Failure by Slip of a Polycrystalline Metal with Face-centered Cubic Lattice Crystals," 1961
- "Non-linear Aspects of Mechanics of Material," 1962
- "Compromise and Decision Making: Humanities and Social Sciences Education in Engineering and other Professional Fields," 1964
- "Experimental and Analytical Investigation of the Film-conductance Coefficient Boundary Condition for Thermal Shock of a Conical Shell," 1965
- "Buckling of Inelastic, Tapered, Pin-ended Columns," 1968
- 1970
- "Torsonial Analysis of Heavy Box Beams in Structures"
- "Modern Engineering and its Relationship with Engineering Education"  
Includes historical information (theory and technology), examples and present curriculum
- Discussion of "Fatigue of Metals" by I.A. Oding and V.S. Ivanova
- South African Society of Civil Engineers, minutes of proceedings, 3rd and 4th meetings, 1941
- Also, Engineer, v. 4, no. 3, autumn 1963
- Research, W.L. Everett: "Engineering Research in the Universities"  
Cumberland Steel Company, 1947-50
- Diagrams, graphs, reports, letters and report: "Stresses in Shafting Due to Contact with Feed Roll"

English College, annual reports, 1948-52

Plasticity Project, 1950-53

Letters to Wright Air Development Center about contract and reports. Brochure on material (ALCOA) and order for material. Drawings, calculations, notes, draft of: "Axial Tension and Bending Interaction Curves for Members Loaded Inelastically" by D.P. Bruch, O.M. Sidebottom and J.O. Smith. Original proposal: "An Investigation of the Behavior of Overstrained Thick-walled Cylinders"

SR-4 Strain Gages

Price lists, information about, orders & instructions for use of gages (used in research), 1949-53

Land Grant University Centennial, 1960-68 (2 folders)