Lazan file

BENJAMIN J. LAZAN

1917 - 1966

Benjamin J. Lazan, Professor and Head of the Department of Aeronautics and Engineering Mechanics, died on June 29, 1966, at the age of 49. He was born in 1917 in New York, New York; and his elementary and high school education were completed in Freehold, New Jersey.

He graduated from Rutgers University in 1938 with the degree of Bachelor of Science in Mechanical Engineering. In 1939, he received the degree of Master of Science in Applied Mechanics from Harvard University where he was a Gordon McKay Fellow. He received the Ph.D. degree in 1942 from Pennsylvania State University at which time he was appointed Assistant Professor of Engineering Mechanics. His thesis, "The Mechanical Properties of Metals and Plastics Under Sustained Vibrations" was his first research in the area of the damping properties of materials, a field in which he was to become an international authority.

In October, 1942, he became a project engineer with the Sonntag Scientific Corporation, an affiliate of the Baldwin-Lima-Hamilton Corporation. The following year, he became Chief Engineer of that company; and in 1944, he was promoted to Vice President in charge of engineering. In 1946, his interest in the academic profession led him to resign and to take an appointment as Associate Professor at Syracuse University. In 1948, he was appointed Professor and Head of the Department of Materials Engineering.

Professor Lazan came to the University of Minnesota in 1951 and joined the staff of the department of Mathematics and Mechanics. In 1952, he became Director of the Engineering Experiment Station; and in 1953 he was appointed Head of the new Department of Mechanics and Materials. In 1958, that department was merged with the Aeronautical Engineering Department, and Professor Lazan was named Head of the combined departments. He held that position until the illness which preceded his death. He served as Associate Dean of the Institute of Technology, in addition to his other duties, from 1956 to 1959.

Professor Lazan's professional growth and development were rapid and extensive. At Syracuse University, he launched a vigorous and intensive research program in the mechanical behavior of materials under dynamic stress conditions. This program was extended and enlarged under United States Navy and Air Force sponsorship when he came to Minnesota. As a result of this research, he published more than 80 technical papers and reports. He became internationally known for his work in the area of material and structural damping. This work has culminated in a monograph which will soon be published and which is eagerly awaited by engineers throughout the world.

His ingenuity resulted in a number of patents granted in his name. Some of these machines and devices have received extensive use in the field of material and structural testing.

He became affiliated with many scientific and technical societies, including The American Society of Mechanical Engineers, The American Society of Metals, The American Society for Testing and Materials, The Acoustical Society of America, The American Society for Engineering Education, and The Society for Experimental Stress Analysis. Typically, he was not content to be just a member of an organization, but he assumed responsibilities of leadership. He was an active member of numerous committees. During his term as national President of the Society for Experimental Stress Analysis, that organization took a major step in expanding its activities by launching the publication of a new journal, "Experimental Mechanics." This publication now ranks as one of the leading journals in the field of applied mechanics.

He was the recipient of numerous awards and honors. Among these are the Alfred Noble prize in 1943 for the most meritorious of the papers published by five leading technical societies; the Charles Dudley medal given in 1949 for the outstanding research paper presented before the American Society for Testing and Materials; and the Henry Howe medal in 1951 by the American Society for Metals. In 1956, he was invited to present the Murray Lecture before the Society for

Experimental Stress Analysis; and in 1964, he gave an invited lecture at the International Congress of Applied Mechanics in Munich. He was a member of Tau Beta Pi, Phi Beta Kappa and Sigma Xi honorary societies.

Professor Lazan was completely dedicated to the University and its academic pursuits. His constant efforts toward excellence were an inspiration to those who were privileged to be associated with him. He created an atmosphere of inquiry, in which any new idea was worth pursuing. Colleagues and students alike were inspired by his enthusiasm for learning and the energy and sheer joy with which he attacked a new problem.

He is survived by his wife, Jeannette, two sons, Gilbert and Douglas, and a grandson, Darren Benjamin.

B.J. Lazan file

University of Minnesota 26 January 1960

1. Name
Benjamin J. Lazan

2. Department
Aeronautical Engineering

3. Age
43

4. Academic Rank
Full-time Professor

5. Degrees
Rutgers University, B. S. M. E., 1938
Harvard University, M. S. in Applied Mechanics, 1939
Pennsylvania State College, Ph. D., 1952, Major Engineering Mechanics

6. Number of years service
Nine years at Minnesota

7. Other teaching experience
Pennsylvania State College, 1939-1942, Assistant Professor, Engineering Statics, Engineering Dynamics, Mechanics of Materials, Materials of Engineering, Materials Testing, Special Problems in Testing, War Training Courses.
Syracuse University, 1946-1951, Professor and Head of Department, Taught all courses listed above except War Training Courses, plus Thesis courses, Properties and Service Behavior of Materials, Experimental Stress Analysis, Non-Destructive Testing.

8. Full-time industrial experience
1942-46, Sonntag Scientific Corp., Project Engineer to Chief Engineer to Vice-President

9. Part-time industrial experience
Not applicable

10. Important consulting work
Minnesota Mining and Manufacturing Company
Budd Company
A. O. Smith Company

11. Principal publications of last five years
See attached publications sheet

12. Scientific and professional societies:
    a) Institute of Aeronautical Sciences, Associate Fellow
    b) Acoustical Society of America, Fellow
    c) Society for Experimental Stress Analysis, President
    d) American Society for Testing Materials
    e) American Society for Mechanical Engineers
    f) American Society for Metals
    g) American Society for Engineering Education
    h) Tau Beta Pi
    i) Sigma Xi
    j) Phi Beta Kappa

13. Subjects or courses taught this year
    MM 150 Rheology and Strength Property of Materials
    Fall Quarter - three hours recitation per week-day
    MM 151 Fatigue of Structural Materials
    Winter Quarter - three hours recitation per week-day
    MM 235 Theory of Strength Property with Engineering
    Applications - three hours recitation per week-day

14. Other duties performed for regular base salary
    Head of Aeronautical Department
    Member of Graduate Committee on Physical Science and Other College and University Committees

15. Other duties performed for extra compensation
    None (except consultation work and honorarium for lectures at M. I. T., University of California, and other Universities and occasionally for industries.)

29. "Dynamic Creep and Rupture Properties of an Aluminum Alloy Under Axial Static and Fatigue Stress," F. W. DeMoney and B. J. Lazan, Proceedings, ASTM, Volume 54, 1954.

30. "Fatigue Failure Under Resonant Vibration Conditions," B. J. Lazan, WADC TR 54-20, March 1954.

31. "Frictional Damping and Resonant Vibration Characteristics of an Axial Slip Lap Joint," J. H. Klumpp and B. J. Lazan, WADC TR 54-64, March 1954.

32. "Mechanical Properties at High Temperatures," B. J. Lazan, Proceedings for Short Course in High Temperature Properties of Materials, Penn State University, June 1954.

33. "The Damping Properties of Materials and Their Relationship to Resonant Fatigue Strength of Parts," B. J. Lazan, General Electric Report No. R556L129, January 1955.

34. "Stress-Rupture, Fatigue and Notch Sensitivity Properties of High Temperature Alloys, Part I, S-816 Alloy," F. H. Vitovec and B. J. Lazan, WADC TR 54-588, February 1955.

35. "Strength, Damping, and Elasticity of Materials Under Increasing Reversed Stress with Reference to Accelerated Fatigue Testing," F. H. Vitovec and B. J. Lazan, Proceedings, ASTM, March 1955.

36. "Fatigue and Damping Properties at Elevated Temperatures," B. J. Lazan, Proceedings for Summer Course in High Temperature Materials, Mass. Institute of Technology, June 1955.

37. "Strength, Damping and Elasticity of Materials Under Increasing Reversed Stress with Reference to Accelerated Fatigue Testing," F. H. Vitovec and B. J. Lazan, WADC TR 55-225, June 1955.

38. "Creep and Creep-Rupture Tests," (with group of non-University Co-Authors) Supplement to Metals Handbook, American Society for Metals, pp. 175-184, August 1955.

39. "Effect of Material Damping and Stress Distribution on the Resonant Fatigue Strength of Parts," Egons Podnieks and B. J. Lazan, WADC TN 55-284, August 1955.

40. "Effect of Prior Creep on the Reversed Stress Fatigue Properties of Temperature Resistant Alloys," F. Vitovec and B. J. Lazan, WADC TN 55-460, September 1955.

41. "Effect of Material Damping and Stress Distribution on the Resonant Fatigue Strength of Parts," E. Podnieks and B. J. Lazan, WADC TN 55-284, August 1955.

42. "Effect of Prior Creep on the Reversed Stress Fatigue Properties of Temperature Resistant Alloys," F. H. Vitovec and B. J. Lazan, WADC TN 55-460, September 1955.

56. "Effect of Changing Cyclic Modulus on Bending Fatigue Strength, B. J. Lazan and A. A. Blatherwick, WADC TR 56-127, October 1956.

57. "The Effect of Changing Cyclic Modulus on Bending Fatigue Strength, A. A. Blatherwick and B. J. Lazan, pp. 1012-1032 in 1956 Proceedings of ASTM, Philadelphia, ASTM 1957.

58. "The Effect of Static Mean Stress on the Damping Properties of Materials," N. L. Person and B. J. Lazan, pp. 1399-1409, in 1956 Proceedings of ASTM, Philadelphia, ASTM, May 1957.

59. "Analytical Method for Determining Specific Damping Energy Considering Stress Distribution," WADC TR 56-44, B. J. Lazan and E. Podnieks, June 1957.

60. "Fatigue Under Resonant Vibrations Considering Both Material and Slip Damping," B. J. Lazan, William M. Murray Lecture, 1956.

61. "Fatigue of Structural Materials at High Temperature," B. J. Lazan, AGARD Report No. 156, NATO, Paris, November 1957.

62. "Acoustic Fatigue and Damping," B.J.Lazan and W. J. Trapp, to be published in Proceedings of Government Sponsored Shock and Vibration Symposium, 1959