Society for Experimental Stress Analysis

New Affiliate of the American Association for the Advancement of Science

The Society for Experimental Stress Analysis is the outgrowth of the very successful New England and Eastern Photoelasticity Conferences held between 1935 and 1943. These Conferences were developed to provide a forum for the discussion of the theory, techniques, and applications of this form of stress analysis. By 1943, other methods of measuring stresses and strains had developed, and interest in this subject had overflowed from the educational institutions into industrial organizations.

The first step toward the formation of the Society was the broadening of the Seventeenth Eastern Photoelasticity Conference, held in Detroit, May, 1943, into a general symposium on experimental stress analysis. This meeting was attended by 275 persons, more than twice as many as had attended any previous conference, and resulted in the formal organization of the now flourishing Society for Experimental Stress Analysis.

From these beginnings, SESA has grown to approximately 1400 individual and 80 corporation members. The membership is international in scope and includes representation in more than 30 foreign countries. Local Sections of the Society are active in 11 of the principal cities in this country.

The purposes of the Society encompass the extension of knowledge pertaining to experimental stress analysis; the holding of conferences, meetings, and symposia for the exchange of ideas, exhibiting of equipment, and reading of papers; and the publication of papers presented at meetings and other useful materials. SESA brings together all groups interested in the measurement of stresses—skilled engineers, metallurgists, designers, and others concerned with the application of the knowledge of stress and its distribution in structures of all kinds. By the correlation of ideas from representatives of these related, but sometimes widely separated, fields of endeavor, it is hoped to reach a better understanding of the distribution of stresses and their influences on the parts and structures that must withstand them.

Two meetings are scheduled each year, and the papers presented cover a wide range of topics, dealing with results of experimental research, techniques, instruments, design data, mathematical studies and testing. Experiences with electrical, mechanical, optical, and x-ray strain measurements, brittle laquer, photoelasticity and photo-grid methods are described. Applications are made to machinery, engines, structures, aircraft, vehicles, ships, foundations, and even human skeletal members. The Society schedules symposia and panel discussions. In addition, to the publication of two volumes of the Proceedings each year, the Society sponsored the preparation and publication of a Handbook of Experimental Stress Analysis by a distinguished group of 31 authors.

The present officers of the Society are: president, Marshall Holt, Aluminum Research Laboratories, New Kensington, Pa.; vice presidents, S. S. Manson, National Advisory Committee for Aeronautics, Cleveland, Ohio, and M. M. Leven, Westinghouse Research Laboratories, East Pittsburgh, Pa.; secretary-treasurer, W. M. Murray, Massachusetts Institute of Technology. The representative to the AAAS Council is M. Hetenyi, of Northwestern University.

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