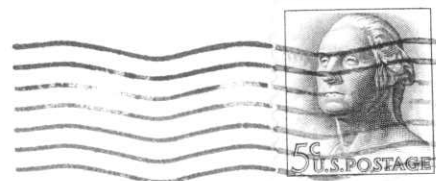


DECELERATOR TECHNOLOGY COMMITTEE

P. O. BOX 1451

EL CENTRO, CALIFORNIA



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JUL 27 1964

MR. PHIL DELORGIO
IRVIN PARA-SPACE CENTER
GLENDALE, CALIF.

DECELERATOR TECHNOLOGY COMMITTEE
A CONTINUATION OF THE 1964 EL CENTRO SYMPOSIUM ON
PARACHUTE TECHNOLOGY AND EVALUATION

Newsletter No. 2

EARL C. MYERS
EXECUTIVE SECRETARY

July 1964

P. O. BOX 1451
EL CENTRO,
CALIFORNIA

AIAA IS REQUESTED TO ESTABLISH COMMITTEE ON
AERODYNAMIC DECELERATOR TECHNOLOGY

In accordance with the resolution passed by the participants of the El Centro symposium, your secretary has, by letter dated 21 July 1964, petitioned the American Institute of Aeronautics and Astronautics to establish a committee on Aerodynamic Decelerator Technology. The petition was drafted to reflect, as closely as possible, all of the expressed wishes of our committee members. It was also drafted to avoid any possible appearance of conflict with or duplication of the work of existing AIAA committees. In addition to the comments and letters sent by many members, the work of Dr. Helmut G. Heinrich in preparing a draft of the petition is greatly appreciated. Your secretary also wishes to acknowledge the efforts of Mr. William H. Freeman in making informal contacts with some of the AIAA Technical Directors regarding procedures for establishment of committees. William J. Chagaris, David Gold, Wilfred Kenyon, T. W. Knacke, Peter A. Leonard, T. C. Raudebaugh, and Kenneth Wilson also deserve thanks for the special assistance they gave in arranging the petition to AIAA.

A copy of the letter to AIAA is attached to this newsletter. It is expected that the question of establishment of a new committee will be referred to the Technical Directors of AIAA: Raymond L. Bisplinghoff, Alfred J. Eggers, Jr., Samuel Herrick, S. S. Penner, George Schairer and Ernst Stuhlinger.

PROCEEDINGS OF EL CENTRO SYMPOSIUM

The Air Force reports delays in preparing master plates for printing of the Proceedings. Estimated publication date is now 1 September 1964. Distribution will be made to all El Centro symposium participants and others who have submitted requests.

NEXT PARACHUTE SYMPOSIUM PLANNED

The date for the next symposium on parachutes and related devices has been tentatively set for the fall of 1965. Should an AIAA committee be established, it is possible this symposium will be jointly sponsored by the committee and the Department of Defense. If so, the symposium would again be held in El Centro.

DECELERATOR TECHNOLOGY COMMITTEE
A CONTINUATION OF THE 1964 EL CENTRO SYMPOSIUM ON
PARACHUTE TECHNOLOGY AND EVALUATION

EARL C. MYERS
EXECUTIVE SECRETARY

P. O. BOX 1451
EL CENTRO,
CALIFORNIA

July 21, 1964

Dr. Cortland D. Perkins, President
American Institute of Aeronautics and Astronautics
1290 Sixth Avenue
New York, New York 10019

Subj: Petition to the American Institute of Aeronautics and Astronautics to
Establish a Technical Committee on the Subject of Aerodynamic Deceleration

Dear Dr. Perkins:

With the advance of the technology of aeronautics and astronautics, a special field of science and engineering has come into prominence frequently called "Aerodynamic Deceleration." The common use of this term encompasses all procedures which serve to decelerate moving objects in the atmosphere by means of specially arranged drag producing devices. In general, this encompasses such methods as deceleration by means of subsonic and supersonic parachutes, subsonic and supersonic balloons, rotating blade arrangements, etc. Frequently the matter of absorption of the impact landing shock has also been added to this field of interest.

The people working in this field are concerned with the respective trajectories and aerodynamics of the decelerators, with aerodynamic heating, problems of dynamics involving the initiation of deceleration processes, and stress analysis. The questions of flexible materials in view of strength and heat resistance, and the aerodynamic drag of porous screens are usually also handled by this group.

The number of engineers and scientists working in this field cannot be closely estimated. However, it may be mentioned that the organized parachute industry, sections of the balloon manufacturers, fabric research institutions, aircraft companies, governmental and university research teams and other commercial organizations are involved. As examples of the commercial organizations, a list of the company affiliations of the industrial representatives present at the Symposium on Parachute Technology and Evaluation held in El Centro, California, 7 to 9 April 1964, is enclosed. The Government maintains specialized decelerator research and development organizations within the structure of the Department of Defense, the National Aeronautics and Space Administration and the Department of Agriculture. As a rough estimate of people involved in all of these activities, a figure on the order of 8,000 to 10,000 appears to be quite reasonable. Many of these people are active AIAA members.

In view of the fact that Aerodynamic Deceleration as a special field of aerospace sciences is relatively new and deals with the unconventional subject of flexible and/or deployable aerodynamic objects, it has as yet not achieved the professional recognition of the more classical disciplines such as aerodynamics, propulsion, structures, life sciences, etc. This is clearly expressed through the fact that the classical objectives are represented in the AIAA structure through committees, whereas the people working in the field of decelerators do not have such representation. By the people involved, it is felt that this is a considerable handicap for the further development of their professional interest and the related science and technology.

Because of the lack of official representation, organizations and people working in this field have helped themselves through the arrangement of symposia, university summer courses, working group meetings and publication of technical papers. The last event in these efforts was the symposium at El Centro sponsored by the Joint Parachute Test Facility of the Department of Defense. It was attended by more than 350 scientists, engineers, and technologists intensely interested in decelerators. Thirty-nine technical papers covering scientific and engineering aspects of decelerators were presented. (See enclosed Program.) These papers are now being published by the Air Force in the form of proceedings of the Symposium (more than 700 pages).

The El Centro Symposium and other similar technical gatherings have been considered very valuable. However, it was suggested at the El Centro Symposium that a separate professional society should be organized which would be permanently in charge of the arrangement of symposia, screening of papers and publication of proceedings. It is felt that such a society could accomplish more than the various agencies acting intermittently and independently. In a general discussion on this subject, it was proposed by Professor H. G. Heinrich, University of Minnesota, to delay the organization of an independent professional society until the presidency of the AIAA had a chance to consider the establishment of a Technical Committee concerned with Aerodynamic Deceleration within the structure of the AIAA. Further comments were made and the general idea was accepted. Mr. Earl C. Myers, Technical Director of the Air Force Parachute Facility at El Centro, was directed by the symposium participants to draft a petition to the AIAA to establish a technical committee on decelerators. The objective of this committee would be the advancement of the science and technology of aerodynamic decelerators and related devices.

In response to this request, the undersigned, acting as the designated representative of the group of people present at the El Centro parachute symposium, hereby submits the following petition:

"In order to promote the aspects of science and engineering related to the problems of aerodynamic deceleration, a petition is respectfully submitted that the presidency of the AIAA consider the establishment of an AIAA Technical Committee on the subject of Aerodynamic Decelerator Technology."

The objectives of the committee would be:

- a. The advancement of engineering knowledge and practice in the art and science of decelerators. This would be accomplished through meetings, conferences, symposia and published papers.
- b. The cultivation of friendly relations among all persons engaged in the design, research, development and utilization of decelerators.
- c. The cooperation with other AIAA committees, other associations and governmental organizations with a view to promoting the general welfare and objectives of the committee.
- d. The encouragement of the establishment and maintenance of university level short courses in aerodynamic deceleration and academic courses leading to degrees with options in aerodynamic deceleration.
- e. The interchange of scientific information in the field of aerodynamic deceleration.

The undersigned is authorized to carry on negotiations with AIAA. Through the facilities of the Decelerator Technology Committee, the individual participants of the El Centro symposium and the interested governmental and industrial organizations will be informed of the progress made on this subject.

Respectfully submitted,


EARL C. MYERS

- Enclosures: (1) List of Commercial Organizations represented at El Centro Symposium
(2) Program - Symposium on Parachute Technology and Evaluation