

" LC 1121 "

MFPG



PURPOSE, OBJECTIVES, AND ORGANIZATION

MECHANICAL FAILURES PREVENTION GROUP

SPONSORED BY

U.S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
CENTER FOR MATERIAL SCIENCE
WASHINGTON, D.C.

PURPOSE

The purpose of the Mechanical Failures Prevention Group is to stimulate voluntary cooperation among all segments of the national scientific and engineering communities in efforts to reduce the incidence of mechanical failures and to develop methods to predict mechanical failures.

OBJECTIVES

1. Provide a focal point of awareness of mechanical failure problems in areas critical to the national needs.
2. Critically examine the field of mechanical failures and make recommendations regarding areas needing greater endeavor.
3. Stimulate interdisciplinary communication and provide a forum through meetings, conferences, and symposia.
4. Provide advisory recommendations and technical expertise in the fields of (1) Mechanisms of Failure, (2) Detection, Diagnosis, and Prognosis, (3) Design, and (4) Materials Durability Evaluation.
5. Encourage research and development directed toward both prior identification and reduction of mechanical failures.
6. Provide a common meeting ground for those who have mechanical failure problems and those who have the potential for solving mechanical failure problems.

Rationale:

As our society becomes more and more mechanized, as demands on performance become more exacting, and as our technology becomes increasingly complex, the importance of each mechanical failure also increases. In terms of the economy of the country, mechanical failures represent a cost to industry, the government, and the general public of billions of dollars every year.

One can only estimate the seriousness of the impact on our national resources caused by these failures--many of which could have been prevented. Whether one is an engineer designing a new plant, an industrialist or an investor, a housewife or a do-it-yourself repairman--all are affected by mechanical failures, whether they are catastrophic or merely irritating.

Although the problem of preventable mechanical failures is staggering, the problem can be addressed by applying our technological expertise to prevent, control, and predict such failures. It is to this goal that the Mechanical Failures Prevention Group is dedicated.

Background and Activities:

The Mechanical Failures Prevention Group was organized in 1967 under the sponsorship of the Office of Naval Research to focus on mechanical failure technology. Reliability, safety, and improved economics were among the obvious goals to be achieved through a better understanding of mechanical failures. The original objectives continue to

be of paramount significance and indeed form the basis of the current four technical committees.

The MFPG is an interdisciplinary group with a strong application orientation. The membership includes professional personnel representing a wide variety of scientific and engineering disciplines. The individual scientists and engineers are associated with government agencies, universities, research institutes, and industry. The MFPG also cooperates with appropriate committees or units of professional societies.

The National Bureau of Standards has had a long history of interest and activities in the field of failure analysis and prevention. It was natural, therefore, that as the membership and activities of the MFPG grew, ONR asked NBS for assistance. In 1971 NBS assumed the role of primary sponsor of the MFPG and is currently carrying out this function with the support of several other government agencies.

The activities of the organization are directed and administered by the MFPG Council which is composed of a Chairman, Vice Chairman, Executive Secretary, Chairman of the Inter-agency Committee, and the Chairmen of each of the four technical committees. Periodic meetings of the eight Council members permit good communication at all levels of the organization which, in turn, enhances awareness and response to special mechanical failure problems areas.

Communication with the technical community of the Nation is provided through semi-annual conferences or symposia. These meetings include technical talks, informal program reports, and panel discussions that promote an atmosphere conducive to a free exchange of ideas, problems, and solutions. Responsibility for the program of each conference rotates among the four technical committees. The technical papers are published as the "Proceedings" as soon as possible after each conference. Copies of the Proceedings are forwarded to each of the conference attendees and are also made available at a nominal cost to others.

RECENT CONFERENCES SPONSORED

May 17-18, 1977	Symposium on Detection, Diagnosis, and Prognosis
November 1-3, 1977	Symposium on Product Durability and Life
November 28-30, 1978	Symposium on Detection, Diagnosis, and Prognosis: Systems Performance
May 23-25, 1979	Symposium on Advanced Composites: Design and Application
October 23-26, 1979	Joint Conference on Measurements and Standards for Recycled Oil: Systems Performance and Durability

MEMBERSHIP

No formal application is required for membership in the MFPG. Attendance and participation in MFPG activities is open to all, merely, by an expression of interest in this important subject.

Send your name and address (four lines only) to:

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